Office of Surface Mining

Reclamation and Enforcement

Western Region

State Calculation of Required Bond Amounts

National Priority Oversight Evaluation

For New Mexico

June 2, 2010

Introduction – Bond Adequacy Oversight Evaluation

The Office of Surface Mining Reclamation and Enforcement (OSM) selected state implementation of bond adequacy as a national priority oversight evaluation topic. The purpose for conducting the evaluation was to review the effectiveness of state regulatory authorities in implementing and enforcing their state rules, regulations, and policy and guidance documents and to determine the adequacy of reclamation cost estimates and the amount of the bond held by the state. OSM's work plan for conducting the evaluation recommended that OSM Western Regional Office (WR) staff evaluate 20 percent of all coal mines up to a maximum of five (5) mines per state regulatory program. The evaluations would include reviewing bond adequacy for new and renewed permits, revisions to permits, phased bond releases and bond forfeitures. The WR conducted evaluations of state regulatory programs in Alaska, Colorado, Montana, New Mexico, North Dakota, Utah and Wyoming.

The evaluation included sites which utilize full-cost conventional bonds for one or more phases of reclamation. In states that allow mandatory alternate bonding systems, the evaluations focused on field reviews of proper reclamation of bond forfeiture sites to assure the sites were reclaimed in accordance with the approved plans.

The bond adequacy work plan entailed three aspects for evaluating bond adequacy. The first aspect was to determine how each state calculated bond amounts for non-forfeited bonds associated with specific permits. The second aspect was to review permit revisions to determine whether the states are properly evaluating bond adequacy as part of the permit revision application process required by 30 CFR 800.15(d). The third aspect was to evaluate recently forfeited sites if the state has experienced any bond forfeitures since the last time that OSM conducted an in-depth study of bond forfeitures or the adequacy of bond calculations in that state.

OSM Directive TSR-1, "Handbook for Calculation of Reclamation Bond Amounts" (OSM Bonding Handbook) was the standard against which a state estimate was determined to be adequate, identifying the costs to be considered, and to be included in each estimate. The WR review focused on new and renewed permits, permit revisions and phased bond releases. For the purpose of this review, WR staff assumed that the reclamation cost estimate is the amount of bond posted by each coal mine permittee. Thus, the bond adequacy work plan use of the term "bond adequacy" infers the amount of bond being posted is at least equal to the amount of the estimated cost to complete reclamation should forfeiture occur within the stated permit term.

Evaluation Methodology Used by the Western Regional Bonding Oversight Team

WR staff engineers began each state bonding program evaluation by reviewing (1) the state guidance documents or policies, (2) each mine's operation plan to determine the mining method and planned progression of mining over both the permit term and the life of mine, the types of equipment being used, and the extent of facilities and other mining-related disturbance, (3) the reclamation plan which should detail each step of the reclamation process

and identify structures approved to remain in place or to be removed after mining, and finally, (4) the permittee's proposed cost estimate and the state's reclamation cost estimate to determine the bond amount to be posted, if available.

WR staff reviewed the types and volumes of material to be moved (although these were not verified), the type and amount of demolition, the types of equipment proposed for use, the costs (labor, equipment, demolition, etc.), and generally looked to see that the costs were reflective of what was detailed in the reclamation plan for the approved reclamation. State costs were determined by OSM to be reasonable for each area, or as required by each the state, and wage rates were comparable to the Davis Bacon wage rates or the state's rates for each area, under the assumption a contract will be let by the state. The amount of each reclamation cost estimate was evaluated either by an independent calculation by WR staff or by the spot checking of costs including hourly costs, wage rates, and demolition costs, as well as the volumes, items or counts associated with each unit cost. The reclamation plan dictated the extent of what costs were included in the overall reclamation cost estimate, including but not limited to, backfilling, grading, topsoiling, type and amount of vegetation, failure rate of vegetation, retention fees associated with a phased bond release, removals or downsizing of structures, long- or short-term monitoring, and other requirements to restore the land to its approved reclamation status once mining has been completed.

For the purpose of a state oversight evaluation, OSM assumed and did not verify that the various types and volumes of material to be moved in each reclamation cost estimate were correct. The same was true for the acres to be covered with topsoil or substitute material, and those which will have various types of vegetation.

New Mexico

The OSM bonding oversight review team reviewed the state's bond cost calculations, and the operation and reclamation plans for the El Segundo Mine, a truck/shovel operation.

Bond Adequacy Findings

The state of New Mexico uses the OSM Bonding Handbook methodology to calculate bond estimates and has a set of guidelines (Guidelines for Bond Calculation) which are used for consistent calculation of reclamation cost amounts. Those guidelines are based on the OSM Bonding Handbook methodology and were followed during the calculation of this bond amount. As of now, the reclamation cost estimates and bonds amounts are regularly reviewed in annual reports, and at mid-term with current topographical maps that show the up-to-date status of disturbance. These can be compared to the approved plan for mining progress and worst-case disturbance. New Mexico has not changed its bond cost calculation methodology since the last comprehensive OSM review.

The reclamation plan identifies costs included in the reclamation cost estimate, including structures approved to be left in place, as well as the types of plants to be established after mining is complete. The reclamation cost estimate includes Indirect costs consistent with OSM's

Bonding Handbook. The reclamation cost estimate also includes a cost to replace 50 percent of vegetation.

No financial assurance is provided for postmining pollutional discharges as none exist nor are expected. There are no outstanding required program amendments or 30 CFR 732 notifications related to bonding, nor have there been any public inquiries regarding bond adequacy. There have not been any bond forfeitures in over 25 years.

The permittee has posted 4 million dollars more than the total estimated cost of reclamation and has fully bonded the entire site for maximum disturbance, even though only half the area has been disturbed. The NM program is in compliance with their bond adequacy regulations.

Review of State Documents

The state of New Mexico uses the OSM Bonding Handbook methodology to calculate reclamation cost estimates, as well as their "Guidelines for Bond Calculation" guidance document. These guidance documents were used to calculate this permit's bond amount.

The state regularly reviews bond amounts, including any updates to the reclamation cost estimates, in annual reports and during permit renewal and mid-term reviews. The annual reports include current topographical maps, which show up-to-date disturbance that can be compared to the approved mining plan to verify mining progress, and against the indicated worst-case scenario disturbance.

On-Site Office Visit

El Segundo Mine, Permit Number 2005-1, Bonding Term 2005-2010, Permit Term 2008-2012

This is a truck/shovel mining operation with loaders to produce a maximum annual production of 7.25 million tons, with a life of mine estimate of 117 million tons. Topsoil is either stockpiled or direct hauled for placement. For the purpose of the bond forfeiture scenario, make up material needed to attain positive drainage in the pit area is assumed to come from spoil areas called "borrow" areas. The cost of moving that material, as well as all associated reclamation, is considered in the reclamation cost estimate.

The cumulative number of permitted acres is 16,213 acres, and the disturbed acreage is 2,484.8 acres (some of which has been seeded, mulched, vegetated). The total bond held in 2008 was $64,420,376, of which Indirect costs are $15,598,336.

OSM reviewed the equipment productivity, and the labor and demolition costs, but did not verify the volumetrics or the acreages which the mine permittee generated using modeling software. However, the state engineer indicated he had done a detailed analysis of this submittal, including all the volumetrics. In addition, OSM reviewed the operation and reclamation plans. The bond amount reflects the worst-case scenario of operation in year 5, though disturbance is only in its 2nd year.

OSM did note that there was no line item to cover the cost for suitable soil sampling before the placement of topsoil, nor for the sealing of 12 wells identified in the reclamation plan. However, the permittee has posted $4 million over the required reclamation cost amount, which should cover reclamation of these activities.

The bond amount covers all disturbances on the property, both east and west of the highway although mining is currently limited to the western area and the facilities areas. There are to be no permanent ponds, and the only remaining roads will be the downsized equipment access road and the pre-existing ranch/ancillary roads. There is no coal waste, no refuse piles, no embankments or impoundments. No AMD is expected. The existing railroad is to remain in place, as it is owned by Gallo Finance Company and leased by BNSF.

*As of Monday, January 25, 2010, the MMD no longer had any staff trained to calculate and verify bond estimates.

<u>Questions from Oversight Work Plan</u>

Background information:

1. Is there a clear understanding by the regulatory authority and OSM as to the methodology that the state is using to calculate required bond amounts?

   Yes, New Mexico is following its "Guidelines for Bond Calculation" which includes using the OSM Bonding Handbook as a guideline. The methodology for the El Segundo bond Calculation followed the OSM Bonding Handbook.

2. Are there any outstanding required program amendments or 30 CFR Part 732 notifications related to bonding?

   No, there are no outstanding required program amendments or 30 CFR Part 732 notifications related to bonding.

3. Has the Field Office or State received any citizen complaints related to bond adequacy in the past 3 years? If so, what was the ultimate outcome of those complaints?

   No.

4. Has the State revised its bond calculation methodology since the last comprehensive OSM review?

   No, New Mexico has not changed its Reclamation Cost Estimate (Bond Amount) calculation methodology since the last comprehensive OSM review, and still uses OSM's Bonding Handbook as the basis for their calculations.

Bond calculation:

1. Has the bond calculation considered all features and structures in the approved plan, including whether roads and impoundments will be permanent?

   The reclamation plan spells out what roads are to be left and what downsizing is required for each, and it states that no permanent ponds are to be left. A cost to modify the approved post mining roads, as well as all pond removal was included in the reclamation cost estimate.

2. Does the calculation include the costs of mobilization, demobilization, engineering redesign, and contractor profit and overhead?

   Yes, New Mexico follows the OSM Bonding Handbook recommendations for the determination of all Indirect costs including mobilization/demobilization, engineering redesign, contingency costs and contractor profit and overhead. These are shown in summary format as part of El Segundo Mine's bond cost estimate submittal.

3. Are the revegetation costs in the bond calculation consistent with the approved revegetation plan?

   Yes, the revegetation costs are based on the cost of obtaining and planting the seeds, shrubs and trees listed in the approved reclamation plan. In addition this operation has assumed, and included the cost of a 50% failure rate of revegetation in its reclamation cost estimate.

4. What type of financial assurance is provided for any postmining pollutional discharges, and how is the amount of that assurance calculated?

   No financial assurance is provided for postmining pollutional discharges as none exist nor or are expected. If discharges occur NM requires a permit revision to address the site specific problem.

5. How does the bond amount compare with that calculated using the OSM Bonding Handbook?

   The current bond amount includes all costs considered in the OSM Bonding Handbook methodology. In addition, the permittee has posted $4 million dollars above the full cost of reclamation including contingency costs, and has fully bonded the entire site for maximum disturbance (even though only half the operation has actually been disturbed).

6. Is the reclamation of bond forfeiture sites being done in conformance with the approved reclamation plan for the site? Are differences due to the inadequacy of the bond or available resources from the alternative bonding system?

   New Mexico has not had a bond forfeiture in over 25 years, long before the last bond oversight evaluation. There are no forfeiture of bonds to review.