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DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

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August 15, 1989

To: Sue Linner, Permit Supervisor

From: Randy Harden, Sr Reclamation Engineer

RE: Reclamation Status, Blazon #1 Mine, INA/007/021, Folder #2, Carbon County, Utah

SUMMARY:

This memo addresses the reclamation as-built report received by the Division on July 21, 1989, and the operator's request for bond release.

ANALYSIS:

The operator was provided a list of deficiencies in a letter from the Division dated June 7, 1989. Those deficiencies are re-listed below with a determination as to the adequacy of each response by the operator:

1. The Reclamation As-Built Drawings will have to be resubmitted to include the following information or details;

   a. A scale of 1"-50' and a contour interval of 2 feet.

      Supplemental cross sections of the areas in question were submitted by the operator. This is considered adequate.

   b. Revised disturbed area boundaries to incorporate all disturbed areas within the permit boundaries, including, road cuts, the access road from the property boundary to the site, the topsoil borrow area, and other areas within the site which have been disturbed as a result of the recent reclamation activities.

Plate 1 and Plate 10 have been revised to incorporate the above and is considered adequate.

c. The location of the water well.

This has been done on Plate 1.

d. The location, extent and depth of the subsoil, substitute topsoil, and topsoil materials.

Sufficient infomation is found in the As-Built Report describing the location and the extent of the soil placement. Soil sample locations are shown on Plate 10.

e. The location of alternate sediment control facilities including berms, straw bales, and silt fences.

This is shown on Plate 1.

f. The location and extent of small area exemptions, those areas which are disturbed but not reporting to the sediment pond.

Small area exemption information is shown on Plate 10 and is considered adequate.

g. The locations of vegetation transects and reference areas.

This information has been provided on Plate 11.

h. The test and sample locations used for soil cover and analysis.

This information has been provided on Plate 10.

i. The location, size and extent of hydraulic structures including culverts, ditches, swales, and sediment pond facilities.

This information has been provided on Plate 1.

j. Vegetation treatments.

This information has been provided on Plate 11.

2. To satisfy the requirements of Stipulation UMC 817.46 - (2) - MDD/RPS, a certification statement needs to be submitted in conjunction with the as-builts of the sediment pond. In accordance with UMC 817.46, the operator must also commit to quarterly inspections of the sediment pond throughout the liability period.

   The certification statement and the commitment to maintain quarterly pond inspection has been incorporated into the text of the MRP and is considered to be adequate.

3. In accordance with Stipulation UMC 817.47 - (1) - RPS, July 6, 1988, the riprap sizing and requirements for the outlet of the 24" culvert from Little Snyder Drainage into Mud Creek was not presented in the as-built designs and needs to be addressed in the plan.

   Refer to Mike DeWeese's technical memo regarding this.

4. A revised plan and design for riprap inadequacies in Mud Creek.

   Refer to Mike DeWeese's technical memo regarding this.

5. Stipulation UMC 817.53 - (1) - MDD/RPS, conditions regarding the well are still outstanding.

   Refer to Mike DeWeese's technical memo regarding this.

6. The Mitigation Plan for the portal slope erosion must include a plan and methodology for replacement of cover and topsoil materials in accordance with the requirements of Stipulation UMC 817.24 - (1) - JSL, and Stipulation UMC 817.22 - (1) - JSL.

   These stipulations have been adequately addressed in the text of the As-built Report.

7. Stability analyses for portal pad slope and Little Snyder Drainage indicate deep seated stability but do not address the apparent shallow surface failure and creep associated with those slopes. The stability analyses for these slopes should be enhanced to allow for these problems and offer a method for monitoring and mitigating any further problems associated with these slopes.

The operator has adequately addressed this section. The operator has indicated that the primary control of surface failure and erosion will be the establishment of vegetation. Until such time as this can be accomplished, the operator will monitor and maintain those areas.

8. Abatement of NOV #89-17-1-2.

   This violation has been abated.

9. A revised and complete revegetation plan, including timetable and implementation dates for the remaining revegetation work. Additionally, the plan must include a noxious weed control plan and a riparian monitoring plan.

   Refer to comments made by Lynn Kunzler's technical memo.

10. The reclamation plan is outdated as a result of the numerous revisions, amendments and field changes to the site as a result of reclamation activities. The Reclamation Plan needs to be updated to reflect those changes. Of primary concern is the inspectability of the site with respect to the reclamation plan. A concise summary of all maintenance, monitoring and future reclamation activities should be incorporated into the reclamation plan, conflicting or erroneous information removed, and new information resulting from reports by ACZ and EarthFax referenced within the text of the Reclamation Plan. A minimum of two complete copies of the reclamation plan need to be submitted to the Division.

    Refer to comments following this section regarding updating and organization of the mining and reclamation plan.

11. In conjunction with the request for bond release, a draft policy on the requirements for bond release is included with this letter. A detailed cost estimate for remaining reclamation and monitoring, including a basis for the earthwork which was performed during Phase I reclamation will need to be supplied in conjunction with the request for bond release.

    The operator has submitted a draft of the public notice for bond release. The Division has reviewed this notice and finds the information correct with the exception of the bond amount being requested for release. Refer to comments following this section regarding the cost estimate for remaining reclamation work to be accomplished.

Backfilling and Grading:

The operator has provided cross sections of areas showing the remaining highwall. The Division has calculated the amount of fill which would be required to completely mitigate the highwall remaining at the portal access road to be approximately 1300 YD3.

Insufficient material was available on site to backfill the cut left by the road. A determination was made in the field by NAE that no material would be imported to complete the backfilling and grading of the road to meet AOC requirements. Upon site inspection of the area, the Division has determined that the area does not meet AOC requirements. However, it should be recognized that the small extent of the highwall area and the cost associated with mobilizing, design and construction to accomplish backfilling and grading may be considered to be cost prohibitive with respect to the possible enhancement of the site. Once vegetation is established in the area it should be difficult to notice the highwall area.

Mining and Reclamation Plan:

As a result of Phase I reclamation work, much of the design information, drawings and test of the mining and reclamation plan conflict with the As-Built Report provided by EarthFax. Rather than completely go through the mining and reclamation plan to correct these changes in the plan, the Division suggests that information in the As-built report be supplemented to include all of the necessary information needed throughout the permit liability period. The information needed to be incorporated into the As-built report would include but not be limited to the following:

1. Legal and financial information including surface and mineral ownership and person(s) to contact regarding the site and reclamation.

2. Any and all continuing monitoring activities, maintenance, and future reclamation work to be accomplished on the site.

3. The Reclamation Agreement as provided by the Division which includes the form and amount of bond and the Certificate of Liability Insurance.

It is recommended that the operator meet with the Division to review that information which will need to updated or incorporated into the As-Built Report so that the plan for Blazon can be considered complete and "inspectible" throughout the remaining reclamation liability period.

Bonding Estimate:

The bond amount required for Blazon has been revised to $42,000 from the current amount of $48,400. Phase I bond release in the amount of $6,4000 can be made by the Division upon completion of public notice procedures for Phase I bond release.

The following calculations were used to determine the bond amount required following Phase I bond release:

Current Bond Amount:

$48,400.00

Reclamation costs remaining based on information provided by EarthFax to NAE and the Division:

$15,500	Annual Monitoring of revegetation success for five years in accordance with the schedule in Section 9.3.2. (YR1 = $2500, YR2 = $3000, YR3 = $3000, YR4 = $3500, YR5 = $4000)
$7,000	Semi-annual monitoring of water in Mud Creek for five years. ($1400/yr)
$12,500	Quarterly inspections of the sediment pond by a registered professional engineer. ($2500/yr)
$5,000	Annual site maintenance of ditches, silt fence, and soil erosion problems. ($1000/yr)
$9,625	Total replacement cost of revegetation (2.75 ac @ $3500/ac)
$49,625	Subtotal costs submitted by EarthFax

Adjustments to Reclamation Costs submitted by EarthFax:

Because Phase I bond release will occur nearly 1 year from the completion of the work, it is reasonable to assume that the first year of monitoring and maintenance will be accomplished by the operator at or near the time of bond release.

The following adjustments have been made to EarthFax's costs based on costs starting from Year 2 of the maintenance and monitoring plan:

$13,000	Annual Monitoring of revegetation success for four years in accordance with the schedule in Section 9.3.2. (YR2 = $3000, YR3 = $3000, YR4 = $3500, YR5 = $4000)
$5,600	Semi-annual monitoring of water in Mud Creek for four years. ($1400/yr)
$10,000	Quarterly inspections of the sediment pond by a registered professional engineer. ($2500/yr)
$4,000	Annual site maintenance of ditches, silt fence, and soil erosion problems. ($1000/yr)
$9,625	Total replacement cost of revegetation (2.75 ac @ $3500/ac)
$42,225	Subtotal costs submitted by EarthFax

No other calculation or contingency costs need to be added into the above costs because of the inherent contingencies already built into those costs. It is considered by the Division that the above estimate reflects a worst case cost estimate based on work remaining at the end of Year 1 following Phase I reclamation. As a contingency to bond release, any supplemental work required for vegetation or maintenance this fall should be accomplished prior to bond release.

Revised cost estimate rounded to the nearest $1000:

$42,000

Amount of bond available for release (Current bond less revised bond estimate):

$6,400

Please note that although the amount of bond release is small in comparison to the current bond amount, that the operator needs to complete the Phase I bond release procedure in order to achieve the above cost estimate. It is apparent that the operator was under-bonded prior to Phase I reclamation activity. In the event that Phase I bond release is not achieved, the above amount would have to be revised upwardly to account for earthwork and other costs which were accomplished during Phase I reclamation activity.

SUMMARY:

The operator has corrected nearly all of the deficiencies found in previous reviews and should proceed with Phase I bond release. However the reclamation plan needs to be revised or incorporated into the As-Built Report to eliminate conflicting and erroneous information and to make the plan useable throughout the reclamation liability period. The bond amount has been reduced from $48,400.00 to $42,000.00 in consideration of cost information provided by EarthFax and as reviewed and adjusted by the Division.

cc: B.Team
BT16/68-75