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

ACT/007/004
#2

Michael O. Leavitt
Governor
Ted Stewart
Executive Director
James W. Carter
Division Director

355 West North Temple
3 Triad Center, Suite 350
Salt Lake City, Utah 84180-1203
801-538-5340
801-359-3940 (Fax)
801-538-5319 (TDD)

July 7, 1995

TO: Daron Haddock, Permit Supervisor
FROM: Sharon Falvey, Senior Reclamation Hydrologist
RE: Review Response to Item #1 of Division Order 94A and Chapter 2 updates, June 12, and April 20, 1995 Submittals and July 5, July 7, Addendums, AMAX Coal Co., Castle Gate Mine, ACT/007/004-95C, Folder #2, Carbon County, Utah

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SYNOPSIS

Item number 1 of Division Order 94A requires AMAX Coal Company to update its Mining and Reclamation Plan to eliminate conflicting information in the plan, to differentiate between existing and proposed facilities and activities, and to ensure that all referenced information is included in the plan. Most changes submitted in response to this part of the Division Order are minor and not substantive.

The submittals received on June 12, 1995, and April 20, 1995 to address DO 94 #1, focused on correctly identifying references to tables, text and table of contents page numbers and include Chapter 2 updates. The Permittee also submitted information on Chapter 12, in the June 12, 1995 submittal and provided an updated surface and mineral ownership map on July 7, 1995. The Chapter 12 information is part of the Willow Creek Plan and is not to be considered approved or incorporated through this analysis. Addendums were incorporated on July 5, 1995 following phone conversations requesting additional clarification.

The Permittee has addressed the issues identified in the May 23, 1995 review memo pertaining to Division Order #1 responses. However, corrections to the bonding information were not completed and the requested copies of the April 20, 1995 submittal were not included. Text, throughout the PAP, still refer to operations that are not expected to occur or are not current operational information. However, the statements of clarification presented in Sections 3.1 through 3.12 are adequate to inform the reader of current site operations or reclamation activities. Since the information provided does not update all text directly, the operator will need to provide current information for those portions incorporated into the Willow Creek permit.

The Permittee has identified the land use maps, previously referenced in the

MRP. These maps indirectly describe the land uses, but are not specific to pre-mining land uses. Information is provided in other portions of the plan to further identify pre-mining land uses. Information to be incorporated into the Willow Creek Mining and Reclamation Plan may require a site specific delineation of the land uses on a map.

ANALYSIS

GENERAL CONTENTS

Regulatory Reference: R645-301-100

Analysis:

On February 16, 1995, the Division received updated ownership and control information for Chapter 2. This information provides the organizational structure of directors and officers and has been resubmitted in the June 12, 1995 application. The AVS check required system updates and is being processed. A complete Technical Analysis for Chapter 2 information is being compiled.

The List of Exhibits for Chapter 2 included correcting Exhibit 2-2, Mining Progression No. map for the No. 5 Mine.

The acreage figures in Table 3.1-2 are updated to correspond with figures for the disturbed areas in Sowbelly Gulch and Hardscrabble Canyon, 21 and 39 acres respectively.

References in Chapters 3.8 and 3.9 have been changed to remove references to the old UMC codes. Table 3.8-1 from the existing PAP, a water monitoring report from station B-5, was re-incorporated in the June 12, 1995 submittal.

The current stage of operation or reclamation was identified in Sections 3.1, through 3.12. to address the portion of this Division Order which differentiates between existing and proposed treatments. Replacement instruction was provided in the June 12, 1995 cover letter, to insert these sections into the first page of each chapter. Portions of the PAP still refer to operations that are not expected to occur. However, the statement of clarification at the beginning of each chapter should be adequate to inform the reader of current operation status. Since the information provided does not update all text directly, the operator will need to provide updated information for those portions of the plan incorporated into the Willow Creek document.

Findings:

Although, portions of the text still refer to proposed operations, no longer expected to

occur, the statement of clarification at the beginning of the chapter should be adequate to inform the reader of current operation status. The submittal will be considered adequate to meet the requirements of the regulation at this time. The areas proposed to be incorporated into the Willow Creek permit will need portions of the operations updated at that time.

REVEGETATION

Regulatory Reference: R645-301-340

Analysis:

Revegetation Methods

AMAX has added species list 5 to its seed/planting mixtures in Chapter 9. The PAP says list No. 5 will be used to seed areas within 20 feet of the edge of reclamation channels.

Species list 3, was originally designated for riparian areas and for those areas near reclaimed channels. However, this list was designed for a perennial stream (the Price River) and not for the intermittent/ephemeral channels in Sowbelly Gulch and Hardscrabble and Crandall Canyons. Species list 5 is more appropriate for non-perennial drainages.

In addition, species list 1 was modified. The amounts of bluebunch wheatgrass and fourwing saltbush seed were increased, thickspike wheatgrass was substituted for salina wild rye, and sand dropseed was deleted. These changes were partly in response to comments from the Division of Wildlife Resources. They were also based on Division observations of first year revegetation in Hardscrabble Canyon and Sowbelly Gulch.

Findings:

This section of the amendment application is considered complete and accurate.

LAND USE RESOURCE INFORMATION

Regulatory Reference: R645-301-411

Analysis:

The Permittee removed the section in the plan referencing 0.005% of the surface disturbances within the total mine plan area. Actual disturbed area is about 177 acres which is about 2.3% of the permit area of 7619 acres.

The mining and reclamation plan is required by R645-301-411.110, to contain a map showing uses of the land at the time of filing the application. A sentence references exhibits

3-22, 7-2, 9-1, 10-1, 12-4-1 and 12-4-2 for providing the land uses.

Land uses are indirectly described on Map 3-22. This map shows utilities such as waterlines power lines, railroads and roads. This map was certified in June of 1989, and is considered representative of the conditions at that time.

Land uses are not provided on Exhibit 7-2 certified 2/18/94. This exhibit has water monitoring points from a spring canyon creek survey (no date identified) and the location of hydrologic test wells. No land uses are indicated.

Exhibit ⁹⁻¹~~7-2~~ is the vegetative map. The only indication of land use categories include areas disturbed by mining prior to 1977 and land disturbed by "roads, ghost towns etc."

Exhibit 10-1 provides the wildlife Habitat inventory and identifies areas of Mule deer winter range, Elk winter range, Bald Eagle winter areas, Golden Eagle aerie's and wetland riparian areas used by numerous wildlife. This map provides an idea of the areal extent of wildlife over the permit area. The identified wetland riparian areas are not specific but, are a rough outline of existing drainages. They may not be reflective of the actual defined wetland or riparian areas at the site.

Exhibit 12-4-1 provides the surface owner information for the School House Canyon and Willow Creek disturbed areas. Other than the location of the cemetery this map does not provide land use information. Exhibit 12-4-2 identifies critical elk winter range, high priority mule deer winter range and the fish ladder in Willow Creek.

The exhibits presented support wildlife land use, and show the cemetery location. Site specific identification of land uses are not identified on these maps. Other historical information can be found in Section 3.7-5(1) (revised September 1991). Information provided in other portions of the plan further identify pre-mining land uses.

Findings:

The Permittee has identified the land use maps, previously referenced in the MRP. These maps provide indications of the land use but are not specific to the pre-mining land uses. Information provided in other portions of the plan further identify pre-mining land uses and were adequate for a determination of uses as determined in the original TA. Information to be incorporated into the Willow Creek Mining and Reclamation Plan may require additional delineation of the site-specific land uses on a map.

BONDING AND INSURANCE REQUIREMENTS

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

The Permittee calculated the reclamation cost for the Castle Gate unit train loadout facility. The reclamation cost was based on the demolition of steel buildings and concrete structures and revegetation costs.

The unit costs for steel building and concrete demolition were based on Means 1982 costs inflated to 1995. The inflated demolition for steel buildings is in line with Means current unit costs.

The Permittee used the Means demolition cost for concrete buildings to estimate demolition costs for concrete removal. Since most of the concrete is solid the unit cost demolition is not relevant. The unit cost for concrete building demolition is \$0.29 per cubic foot with is equal to \$7.83 per cubic yard. The cost to demolish solid concrete items with reinforcement is \$292 per cubic yard. The unit cost used in calculating the reclamation cost is incorrect and must be changed.

There is no mention of disposal cost for the building and concrete. Those costs must be included in the bond calculations, since the disposal cost for building usually exceeds that of building demolition.

The current bond amount is \$4,400,000. The Permittee's estimate for reclaiming the unit train loadout facility is \$70,000. It is unlikely that the adjustment to the unit train reclamation costs would significantly influence the total bond amount (increase it by more than 5%). Once the correct reclamation cost has been determined the Division will determine if any adjustment to the total bond amount is needed.

Section 3.8-5 included a bond calculation change that was not identified in the Application for Permit Change. The information included on this page is not complete or approved at this time. However, the deficiencies identified for this page should be incorporated into the new bond calculations proposed to be submitted.

Findings:

This section will be reviewed for adequacy upon receipt of the complete bond submittal. The Permittee must use the correct unit cost for concrete demolition and include disposal cost for the buildings and concrete.

RECOMMENDATIONS

Division Order 94A, item No. 7, required AMAX to submit bonding information for the entire permit area. A condition of the Division Order included requesting a schedule from the Permittee to meet the Division Order requirements. The schedule, was proposed by the Permittee, in a letter from AMAX Coal Company (September 19, 1994), and indicated the bonding information would be submitted by April 30, 1995. The latest submittal and cover letter dated June 12, 1995 indicates the bonding estimate is in the compilation process and will be submitted soon. A new deadline for submittal of the bonding calculations should be requested. It is recommended that this date be coordinated with the DO 94A requirements for the Crandall Canyon reclamation plan, to be submitted no later than August 15, 1995.

The changes in the submittals received on July 5, 1995, June 12, 1995, and April 20, 1995 to address DO 94 #1 should be accepted and incorporated in the existing plan, except changes to the bonding information should not be considered complete. Since the information provided does not update all text directly, the operator will need to provide current information for those portions incorporated into the Willow Creek permit. The updated ownership and control information for Chapter 2 is under the AVS review process. Information to be incorporated into the Willow Creek Mining and Reclamation Plan may require a site specific delineation of the land uses on a map.

It is recommended, that where the submitted changes in the major portions of text are transferred from double sided printing to single sided printing, the permittee be aware of the potential problem in incorporating the text into the existing volumes as there is a minimum amount of space presently available in each binder in the DOGM library.

According to the Application for Permit Change, Section 3.3 should be replaced. When updating the plan the copies of Exhibit 3.81 and Exhibit 3.82 should not be removed from the plan.

cc: Paul Baker
Wayne Western
Pam Grubaugh-Littig
CGDO#169.5TA