

Document Information Form

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Company AMAX COAL COMPANY

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Explanation:

TECHNICAL ANALYSIS RESPONSE

cc:

File in: C/007, 004, Internal

Refer to:

- Confidential
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Date _____ For additional information

*Permit Binded
Update TA*

**Technical Analysis
Response to DO-94A Item #1**

**AMAX Coal Company
Castle Gate Mine
ACT/007/004**

July 26, 1995

ANALYSIS

On August 19, 1994 the Division issued an order to AMAX Coal Company which required them to submit a permit change to correct permit deficiencies. On April 20, 1995 AMAX made a submittal intended to address Item #1 of the Division Order. The April 20th submittal was accepted with condition that Amax correct deficiencies found in it. On June 12, and July 5, 1995 AMAX provided supplemental information which corrected the deficiencies. This document analyzes all of the submittals.

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.

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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 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 sit 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.

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