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

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May 23, 1995

TO: Daron Haddock, Permit Supervisor

FROM: Sharon Falvey, Senior Reclamation Specialist, Combined Review Staff *SF*
Analysis

RE: Draft Review, Response to Item #1 of Division Order 94A, Castle Gate Mine, AMAX Coal Co., ACT/007/004-95C, Folder #2, Carbon County, Utah

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 submittal focused on correctly identifying references to tables, text and table of contents page numbers. Some of the submitted changes in the portions of the text are transferred from double sided printing to single sided printing in this submittal. Therefore, there may be a problem in incorporating the text into the existing volumes since, there is a minimum amount of space presently available in the plan binders, located in the DOGM library.

SUMMARY OF OUTSTANDING DEFICIENCIES

GENERAL CONTENTS

Regulatory Reference: R645-301-100: Permit Application Format and Contents.

1. The list of exhibits for Chapter 2 includes Exhibit 2-2, Mining Progression No. 2 Mine. The exhibit is the mining progression map for the No. 5 Mine.
2. The acreage figures in Table 3.1-2 should be corrected to correspond with

figures in other parts of the plan.

3. The language used in the permit application must accurately differentiate between existing and proposed facilities, activities, treatments, etc.

LAND USE RESOURCE INFORMATION

Regulatory Reference: R645-301-411

1. The part of the application indicating 0.0005% of the mine plan area surface is disturbed needs to be corrected. This statement could just be deleted.
2. The plan needs to contain a map showing area land uses. A statement in the current Chapter 4 references several exhibits for this information. This statement should be restored except that reference to Exhibit 3-1 needs to be deleted.

BONDING AND INSURANCE REQUIREMENTS

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

1. The Permittee must use the correct unit cost for concrete demolition and include disposal cost for the buildings and concrete.

ANALYSIS

DO-94 A REQUIREMENT:

- 1) *R645-301-100. Permit Application Format and Contents. The information contained within the permit must be updated and organized to ensure that each Figure, Plate, Diagram, Analysis, etc. that is referenced is included within the Permit Application. The language used in the permit application must accurately differentiate between existing and proposed facilities, activities, treatments, etc. The Permittee must update portions of the plan including but not limited to: The Table of Contents; Chapter I; Chapter II, Sections 3.7, 3.9, and 3.10; Chapter VII; and Chapter IX, to reflect changes to the plan and eliminate conflicting information. These requirements apply to the plan and the operations in their entirety and is not limited to the Crandall Canyon area.*

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 has not yet been approved and inserted into the plan. Changes to Chapter 2 in the current submittal are intended to update the February 16, 1995 submittal so, these changes do not correspond with information in the current mining and reclamation plan. The Permittee should re-submit Chapter 2 changes to update the February submittal.

The List of Exhibits for Chapter 2 includes Exhibit 2-2, Mining Progression No. 2 Mine. The exhibit is the mining progression map for the No. 5 Mine.

The acreage figures in Table 3.1-2 do not correspond with figures in other parts of the plan. For example, this table indicates the disturbed areas in Sowbelly Gulch and Hardscrabble Canyon are 16 and 24 acres, respectively, but Sections 3.2 and 3.3 say the areas are 21 and 39 acres. The acreage figures are associated with bonding which is item No. 8 of the Division Order. They should be corrected as part of any submittal to address this requirement.

Revised pages do not have a revision date. Chapters 3.8 and 3.9, still reference UMC codes rather than the new regulatory requirements. Section 3.8-5 included a bond calculation change that was not identified in the Application for Permit Change. The existing Table 3.8-1, a water monitoring report from station B-5, was removed.

The permittee has not addressed the portion of this Division Order which differentiates between existing and proposed treatments. Much of the text in Chapters I, II as well as other sections, incorporates the operational information as was proposed prior to the cessation of mining. The Reclamation schedule and current status of the operations is not clarified in these sections.

Findings:

The permittee has not provided the Permit Application Format and Contents as required in Division Order 94A-#1.

Requirements:

R645-301-100. Permit Application Format and Contents.

1. Correct the list of Exhibits for Chapter 2. Exhibit 2-2, Mining Progression No. 2 Mine is actually the mining progression map for the No. 5 Mine.
2. The acreage figures in Table 3.1-2 should be corrected to correspond with figures in other parts of the plan.
3. The language used in the permit application must accurately differentiate between existing and proposed facilities, activities, treatments, etc. It is recommended the Permittee provide text to clarify identify current site operating conditions (reclamation phase, structure removal, etc.) for each chapter where applicable.

REVEGETATION

Regulatory Reference: R645-301-340

Analysis:

Revegetation Methods

AMAX has added species list 5 to its seed/planting mixtures in Chapter 9. The amendment application 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.

Changes to Chapter 9 should be approved.

Findings:

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

LAND USE RESOURCE INFORMATION

Regulatory Reference: R645-301-411

Analysis:

The current mining and reclamation plan says, "Active surface disturbance within the mine plan area as a result of Castle Gate Coal Company operations will likely not exceed 150 acres total at any time during the projected life of the operation or 0.005% of the surface because of the very limited extent of aerial disturbances within the total mine plan area." One hundred fifty acres is 0.005% of 3,000,000 acres. Actual disturbed area is about 177 acres which is about 2.3% of the permit area of 7619 acres. The proposed amendment substitutes 0.0005% for 0.005%.

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 in Chapter 4 references several exhibits in various parts of the plan for land use information. This sentence has been deleted. The sentence should be restored except that Exhibit 3-1 is no longer in the plan.

Findings:

The Permittee has not met all requirements of this section.

Requirements:

1. The part of the application indicating 0.0005% of the mine plan area surface is disturbed needs to be corrected. This statement could just be deleted.
2. The plan needs to contain a map showing area land uses. A statement in the current Chapter 4 references several exhibits for this information. This statement should be restored except that reference to Exhibit 3-1 needs to be deleted.

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.

Findings:

The Permittee must use the correct unit cost for concrete demolition and include disposal cost for the buildings and concrete.

Requirement:

- 1. The Permittee must use the correct unit cost for concrete demolition and include disposal cost for the buildings and concrete.**

RECOMMENDATIONS

The Division Order required AMAX to revise its mining and reclamation plan and to submit bonding information for the entire area. The Division received a revised plan on April 20, 1995, without the requested bonding information. A letter from AMAX Coal Company indicated this information would be submitted April 30, 1995 (dated September 19, 1994). This letter was part of the Division Order requesting a schedule for meeting the identified requirements. **Therefore, it is recommended the requirements related to this review be included with a stipulated date to provide bonding information. It is recommended AMAX be informed that corrections to Table 3.1-2 are necessary and may involve extensive changes to bonding calculations, and the Permittee must use the correct unit cost for concrete demolition and include disposal cost for the buildings and concrete. A new date for submittal of the bonding calculations required in item No. 7 of Division Order 94A should be identified.**

It is also recommended that the Changes in this amendment be accepted and incorporated in the existing plan, except for Chapter 2. The Division received updated ownership and control information for Chapter 2. However, this information has not yet been approved and inserted into the plan. Changes to Chapter 2 in this submittal are intended to update the February 16, 1995, submittal, and do not correspond with information in the current mining and reclamation plan. **The chapter information should be re-submitted as an addendum to the Chapter 2 changes.**

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. **For clarification, the copies of Exhibit 3.81 and Exhibit 3.82 are not intended to be removed from the plan.**

cgdo#1cm.bta
cc: Paul Baker
Wayne Western
Pam Grubaugh-Littig

007/004 #2
cc: Paul
Pam



Cyprus Plateau Mining Corporation
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September 13, 1994

RECEIVED
SEP 19 1994
DIVISION OF OIL, GAS AND MINING

Mr. James W. Carter, Director
Division of Oil, Gas and Mining
3 Triad Center, Suite 350
Salt Lake City, UT 84180-1203

Re: Amax Coal Company
Castle Gate Mine
Permit ACT/007/004
Division Order #94A

Dear Mr. Carter:

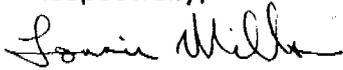
As required by Division Order #94A dated August 19, 1994, Amax Coal Company proposes to use consulting agencies for the required permit changes. We respectfully submit the following schedule for revision of the mining and reclamation permit:

- The target date for release of Bids Requests will be October 31, 1994.
- The target date for awarding Bids will be November 14, 1994.
- The target date for aerial photos November 30, 1994, if weather permits. If weather conditions precludes the completion of aerial photography this year the revised date will June 15, 1995.
- The target date for permit submittal to DOGM for review will be April 30, 1995, if aerial photography is completed this year. The target date for permit submittal if aerial photography is delayed until June of 1995, will be October 31, 1995.
- Collection of field data will be expedited. However, if weather conditions prevent the collection of required data, all sections not dependent upon the field data will be submitted by April 30, 1995. The data will be collected as weather permits and the missing sections will be submitted for review within 90 days after collection.
- The target response time for any DOGM deficiencies will be 45 days. Should the time required to respond to the deficiencies exceed 45 days, Amax Coal will request the appropriate extension.

We hope that our attention to completion of the Division Order and our reclamation activities during 1994 demonstrates our desire to resolve the outstanding permitting issues and reclamation projects at Castle Gate. We will do our utmost to complete the tasks prior to the target dates. However, we must not let our eagerness to complete the projects force us into careless and costly errors. If unforeseen problems arise that prevent us from reaching the current target dates we reserve the right to revise the schedule accordingly, with DOGM's notice and approval of course.

If you have any questions or comments concerning this schedule , please contact me at your convenience.

Respectfully,



Lonnie Mills,
Sr. Environmental Engineer

cc: J. Borla
M. Peelish

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and those areas throughout all phases of reclamation. Information within the Crandall Canyon plan does not specifically address the above requirements for the elimination of all structures and facilities including the mine access road, culverts, ponds, and pad areas. Under R645-301.553, Backfilling and Grading, backfilling and grading design criteria must be described in the permit application. Disturbed areas must be backfilled and graded to: achieve the approximate original contour; eliminate all highwalls, spoil piles, and depressions, except as provided in R645-301-552.100 (small depressions), and in R645-301-553.650 (retention of highwalls); achieve a postmining slope that does not exceed either the angle of repose or such lesser slope as is necessary to achieve a minimum long-term static safety factor of 1.3 and to prevent slides; minimize erosion and water pollution both on and off the site; and support the approved postmining land use. The backfilling and grading plan must include sufficient mass balance calculations to incorporate the amount of material required as backfill for the mine shafts if backfilling of the two mine shafts is proposed for reclamation. Hydrologic impacts regarding groundwater and potential effects on groundwater and stability of the backfilled material in the shafts must also be presented in the plan.

- 6) **R645-301-700. Hydrology.** The operational plan must be specific to the local hydrologic conditions and will contain steps to be taken during coal mining and reclamation operation through bond release. Hydrologic maps and supporting calculations for the Crandall Canyon facilities and the access road must be provided which show the surface hydrology and drainage and sediment control facilities to be used throughout all phases of operations and reclamation. The Permittee shall submit a reclamation plan for all phases of reclamation indicating how the relevant requirements for R645-301-730. through R645-301-760. will be met. The Permittee must correct the plan to include monitoring plans for ground water and surface water during reclamation through final bond release. These monitoring plans should reflect the requirements of R645-301-731.200, and must reflect the language of R645-301-731.212, R645-301-731.233, R645-301-731.214, and R645-301-731-224.

7)

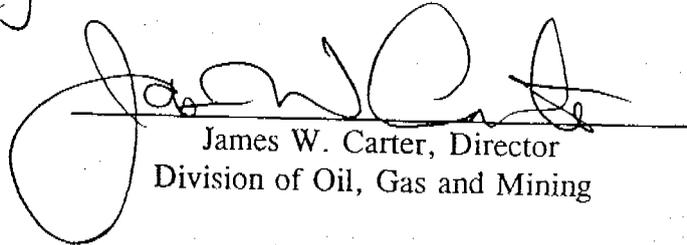
R645-301-800. Bonding and Insurance. The Permittee shall incorporate a copy of the Certificate of Liability Insurance Form into the revised Reclamation Agreement. Bonding calculations do not include the following information: a map specifying each area of land for which bond will be posted; mass balance calculations presented in sufficient detail to show backfilling and grading requirements for distribution and disposal of excess spoil and mine development waste, backfilling to meet AOC requirements, subsoil, topsoil and substitute topsoil distribution and quantities for each sub area of the permit; calculations for determination of quantities, equipment selection and productivity used in determining the bond amount which reflect the quantities determined in the mass balance calculations; determination of Phase I and Phase II reclamation activities including a map showing those facilities to be constructed and/or removed during each phase of reclamation. Cost information must be provided for all reclamation activities, whether proposed or actually accomplished, for all areas within the Permit Area and a reduction in the bond amount required

cannot be reduced until such time as phased bond release is approved by the Division. This cost information must, at a minimum, be provided prior to any application for bond release. This requirement is for the entire permit area and is not limited to the Crandall Canyon area.

ORDER

Castle Gate Coal Company is ordered to make the required permit changes in accordance with R645-303-220 and to submit a complete application for permit change to address these findings of permit deficiency, or to provide an acceptable schedule for providing such permit changes, within 30 days of date of the Order. Approval by the Division of such schedule must be obtained within 60 days of the date of this Order. If approval is not obtained within 60 days, a hindrance violation may be issued.

Ordered this 19th day of August, 1994, by the Division of Oil, Gas, and Mining.


James W. Carter, Director
Division of Oil, Gas and Mining