0013

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

Michael O. Leavitt
Governor
Kathleen Clarke
Executive Director
Lowell P. Braxton
Division Director

1594 West North Temple, Suite 1210
PO Box 145801
Salt Lake City, Utah 84114-5801
801-538-5340
801-359-3940 (Fax)
801-538-7223 (TDD)

April 5, 2001

TO: [redacted]

FROM: Priscilla W. Burton, Reclamation Soils Specialist and Team Lead

RE: Revisions to the Crandall Canyon Reclamation Plan, Plateau Mining Corporation, Willow Creek Mine, [redacted] R01A, Internal File

SUMMARY:

Plateau Mining Corporation has revised Exhibit 20, the reclamation plan for the Crandall Canyon area of the Willow Creek Mine. The revision incorporates a change of post-mining land use from grazing and wildlife to recreational use. This use will be supported by the paved road in Crandall Canyon. (After bond release, a portion of the land in the canyon will be deeded to an adjacent landowner who initiated the request for the road to remain.) As a result of the retention of the paved road, changes were made in plans for backfilling and grading, slope reconstruction and channel design during reclamation.

This review is concerned with the Administrative portion of the Findings Document as well as Soils issues. A brief summary of Environmental Resource Information is provided.

TECHNICAL ANALYSIS:

GENERAL CONTENTS

IDENTIFICATION OF INTERESTS

Regulatory Reference: 30 CFR 773.22; 30 CFR 778.13; R645-301-112

Analysis:

Volume 1, Section 2.1.2 contains information relative to R645-301-112. Figure 2.1-1, dated March 28, 2000, outlines the location of Plateau Mining Corporation (PMC) within the RAG American Coal Company corporate structure. Figure 2.1-1 contains the names of those

operations affiliated with the Applicant. Plateau Mining Corporation is a wholly owned subsidiary of RAG American Coal Company which is a wholly owned subsidiary of RAG American Coal Holding, Inc. All the corporations mentioned above were incorporated under the laws of the State of Delaware. Ownership and control information is listed in Exhibit 1, Volume 4 as required under R645-112.300.

Plateau Mining Corporation(PMC) as the Applicant and Operator, is authorized to do business in the State of Utah, Colorado and Delaware. Section 2.1.2.1 lists the employer I.D. number, address and telephone number of PMC. PMC's resident agent is CT Corporation System; 50 West Broadway; Salt Lake City, Utah 84101. PMC will be responsible for the payment of Abandoned Mine fees. The main MSHA number will be 42-02113; some facilities will have separate MSHA numbers.

The surface of the disturbed area is owned by Plateau Mining Company.

The owners of the coal to be mined within the permit area are shown on the Regional Coal Ownership Map, (Map 2), and are listed in Section 2.1.2.4 as Blackhawk Coal Co., Carbon County, USDI - Bureau of Land Management, and Utah DNR. These same four entities own mineral rights contiguous to the property.

The owners of the surface to be affected by operations are shown on the Regional Surface Ownership Map, (Map 1). According to this map and the text, Harry C. and Alda M. Edqards own land contiguous to the proposed permit area, but the application does not include their address. It says the address is not in Carbon County records. It should be provided fi it becomes available.

Appendix 3.7V of the application indicates that, 800 acres in Crandall Canyon is owned by Reed L. Martineau, Esq. This surface owner is not listed on Regional Surface Ownership Map, (Map 1) or in Section 2.1.2.4 Surface and Mineral Ownership. Page 3.7.27 of the application indicates that land within the disturbed area is under real estate contract to Reed L. Martineau, Esq.

Findings:

R645-301-112.600, Update the text in Section 2.1.2.4 (Surface and Mineral Ownership) and the Regional Surface Ownership Map, (Map 1) to include Reed L. Martineau, Esq., and to delete Blackhawk Coal Co.

VIOLATION INFORMATION

Regulatory Reference: 30 CFR 773.15(b); 30 CFR 773.23; 30 CFR 778.14; R645-300-132; R645-301-113

Analysis:

Compliance information is presented in Section 2.1.4 and Exhibit 2 (Volume 8). Neither the Applicant nor any affiliate, subsidiary or persons controlled by or under common control with the Applicant has had a federal or state mining permit suspended or revoked in the five years prior to the date of the application, and these entities have not forfeited a mining bond or similar security deposited in lieu of bond.

R645-301-113.300 requires a list of all unabated cessation orders and air and water quality violation notices received by the Applicant or any operation owned or controlled by either the Applicant or any person that owns or controls the Applicant. Exhibit 2 (dated October 1999) provides such information, however, a current listing is required to reflect activity since 1999.

Findings:

R645-301-113.300, Update the text in Exhibit 2 Volume 8.

RIGHT OF ENTRY

Regulatory Reference: 30 CFR 778.15; R645-301-114

Analysis:

Plateau Mining Corporation presents legal descriptions of land, coal leases and access agreements in Section 2.1.5 by which PMC has right of entry.

Findings:

Right of entry information is considered complete and accurate.

LEGAL DESCRIPTION AND STATUS OF UNSUITABILITY CLAIMS

Regulatory Reference: 30 CFR 778.16; 30 CFR 779.12(a); 30 CFR 779.24(a)(b)(c); R645-300-121.120; R645-301-112.800; R645-300-141; R645-301-115.

Analysis:

Section 2.1.5.1 has legal descriptions for fee surface and coal and for coal leases held by Cyprus Western Coal Company.

Section 2.1.6.1.and 2.1.6.2 discuss areas unsuitable for mining and operations within 100 feet of a public road.

Findings:

This portion of the application is complete and accurate.

PERMIT TERM

Regulatory References: 30 CFR 778.17; R645-301-116.

Analysis:

The permit term of five years from the initial issuance in 1996 may be extended over the life of the mine. Information provided in the permit is for the life of the mine (Section 2.1.7).

Findings:

This portion of the application is complete and accurate.

PUBLIC NOTICE AND COMMENT

Regulatory References: 30 CFR 778.21; 30 CFR 773.13; R645-300-120; R645-301-117.200.

Analysis:

A copy of the publication has been obtained by the Division from the Sun Advocate as published on March 1, 8, 15 and 22, 2001. The legal description in the advertisement is correct, and it includes other information required by R645-300-121.100. To date, no public comment has been received on the issue of the post-mining land use change for Crandall Canyon. An Affidavit of Publication is required for insertion into Exhibit 3.

Findings:

R645-301-121.100, Update Exhibit 3, Volume 8, with an Affidavit of Publication.

PERMIT APPLICATION FORMAT AND CONTENTS

Regulatory Reference: 30 CFR 777.11; R645-301-120.

Analysis:

Mr. Johnny Pappas, a responsible Plateau Mining Corporation official has affirmed by signature on the C1 Form that the information in the amendment is true and correct to the best of the official's information and belief. This affirmation was included in the transmittal which accompanied the permit application submittal. The C1 Form will be included in the Mining and Reclamation Plan before the table of contents.

Findings:

This portion of the application is complete and accurate.

REPORTING OF TECHNICAL DATA

Regulatory Reference: 30 CFR 777.13; R645-301-130.

Analysis:

Section 2.1.11 lists the individuals and consulting companies who were engaged in writing and compiling the MRP along with their field of expertise. No soil scientists were noted on the list.

Findings:

This portion of the application is complete and accurate.

MAPS AND PLANS

Regulatory Reference: 30 CFR 777.14; R645-301-140.

Analysis:

All maps in the MRP are either U.S. Geologic Survey Mapping or site specific mapping developed using surveyed aerial control and accepted aerial photogrammetry methods. Where required by R645-301-512, maps have been certified by a qualified, registered professional engineer or land surveyor.

Findings:

This portion of the application is complete and accurate.

COMPLETENESS

Regulatory Reference: 30 CFR 777.15; R645-301-150.

Analysis:

The application for change of postmining land use was determined to be administratively complete which means that the application contained the minimum information required under R645-301.

Findings:

This portion of the application is complete and accurate.

ENVIRONMENTAL RESOURCE INFORMATION

Regulatory Reference: Pub. L 95-87 Sections 507(b), 508(a), and 516(b); 30 CFR 783., et. al.

GENERAL

Regulatory Reference: 30 CFR 783.12; R645-301-411, -301-521, -301-721.

Analysis:

Crandall Canyon is a narrow canyon holding Crandall Creek, a tributary of the Price River. At its upper reaches, Crandall Canyon is at an elevation of 7,400 feet. As it converges with Price Canyon, the elevation is 6,400 feet. The natural topography of Crandall Canyon is characterized by steep canyon side slopes and a broad canyon bottom (Exhibits 3.7-1 and 3.7-2). The stream meanders from one side of the canyon to the other throughout the length of the canyon. Exhibit 3.7-7B and D show cross-sections of the undisturbed area of the canyon and illustrate the steep slopes cut by the stream through unconsolidated material.

There exists an unconfined aquifer in Crandall Canyon at a depth of approximately 30 - 60 feet at the unconsolidated soil/rock interface. This aquifer was intercepted by the two ventilation shafts in Crandall Canyon. As discussed in Section 3.7-5(3) (2), water flows in through the concrete lined shafts at a rate of approximately 13 - 50 gpm and is transmitted through the mine to the Blackhawk formation to recharge the regional aquifer.

Findings:

This portion of the application is complete and accurate.

PERMIT AREA

Regulatory Requirements: 30 CFR 783.12; R645-301-521.

Analysis:

The Crandall Canyon disturbed area is located in Carbon County, Utah as follows:

Township 12 South, Range 9 East

Section 22: Portions of SW/4 SE/4; SE/4 SW/4;
Section 27: Portions of S/2 NW/4; NE/4 NW/4; NW/4 SW/4;
Section 28: Portions of S/2;
Section 29: Portions of SE/4

The permit area is shown on the Kyune U.S. Geological Survey 7.5-minute map.

Findings:

This portion of the application is complete and accurate.

HISTORIC AND ARCHEOLOGICAL RESOURCE INFORMATION

Regulatory Reference: 30 CFR 783.12; R645-301-411.

Analysis:

Exhibit 3.7-2 shows some rock structures of cultural significance. Historical study reports are included in Exhibit 19 of the MRP.

Findings:

This portion of the application is complete and accurate.

CLIMATOLOGICAL RESOURCE INFORMATION

Regulatory Reference: 30 CFR 783.18; R645-301-724.

Analysis:

Climatological information is found in Sections 3.7.1.4, and 3.7.4. Information specific to temperatures, precipitation and wind is located in Sections 3.7.4.1, 3.7.4.2, and 3.7.4.3,

respectively. More climatological information is found on Page 3.7-28, Section 3.7.3.1. Table 3.7-7 is the summary of climatological data.

Average monthly temperatures are listed in Table 3.7-7. The frost free period ranges from 60 to 120 days, depending on elevation and exposure. Temperatures can change rapidly when fast moving storm fronts pass. Annual precipitation is 14.8 inches. Rainfall frequently comes in brief, high-intensity storms. Average monthly precipitation is lowest in June, 0.65-inches, and highest in September, 1.86-inches.

Prevailing summer wind are from the West and Northwest, usually blowing less than 20 mile per hour. Winter wind tend to be more variable, blowing frequently from the Northeast. Diurnal flow tend to be upslope in the daytime and downslope at night.

Findings:

This portion of the application is complete and accurate.

SOILS RESOURCE INFORMATION

Regulatory Reference: 30 CFR 783.21; 30 CFR 817.22; 30 CFR 817.200(c); 30 CFR 823; R645-301-220; R645-301-411.

Analysis:

Initial topsoil and subsoil sampling for the Crandall Canyon area is located in Volume 4, Exhibit 5, "Price River Coal 1984 Permit Soil Analyses." Samples taken in 1981 portray a loamy sand subsoil and loam topsoil. The topsoil was fertile with nitrogen levels ≈ 4, phosphorus levels ≈10, and potassium levels ≈ 150. The pH was in the range of 8.0 and EC was below 0.5.

More detailed soil information is found in Volume 15, Exhibit 20, Appendix 3.7S, "Crandall Canyon Soil Sampling Results." Here are found the results of overburden and topsoil evaluations conducted in 1995. Seven soil pits were dug with a backhoe in the facilities area. An auger was used to sample the two topsoil piles. Soil logs and profile descriptions are provided.

The 1995 survey identified the Soils along the bottom of Crandall Canyon as Shupert and Winetti mapping units; along the lower slopes of the canyon is the Datino Variant; and along the upper slopes is the Pathead and Comodore families. During construction in the canyon, soils from the upper and lower slopes were used to construct the facilities pad. These soils are represented by pits EF-4, EF-5, and EF-6. Construction of the shafts brought shale and coarse fragments to the surface which is represented in pits EF-1, EF-2, EF-3 and EF - 7 (Figure 1, Appendix 3.7S). The 1995 survey indicates that soils on the pad from shaft construction is less

desirable for topsoil substitute due to higher content of clay, salts, selenium, coal and coarse fragments. The soils in the pad at represented by pits EF-4, EF-5, and EF-6 are the most suitable topsoil substitutes. Although this overburden has a higher coarse fragment content (32%) than the topsoil (13%), it meets the Division's suitability criteria.[1] This proposal indicates that soil from the location of soil pits EF-4, EF-5 and EF-6 will be utilized as substitute topsoil.

Findings:

The information in the proposal is adequate to meet the requirements of this regulations.

RECLAMATION PLAN

BACKFILLING AND GRADING

Regulatory Reference: 30 CFR Sec. 785.15, 817.102, 817.107; R645-301-242, -301-537, -301-552, -301-553, -302-230, -302-231, -302-232, -302-233.

Analysis:

The backfilling and grading plan is presented on Exhibits 3.7-7A, 7B, 7C, and 7D and discussed in Section 3.7-5(3)(3). Reclamation slopes will be concave in cross-section and will not exceed a slope of 2:1. Table 3.7-10 summarizes the cut/fill calculations: 85,860 cubic yards of cut and 83,990 cubic yards of fill and 6,680 cubic yards of topsoil.

Some cut slopes will remain. They will blend with the existing topography, and they will be compatible with the approved postmining land use. Cut slopes are discussed in more detail under Approximate Original Contour and also under Maps Plans and Cross-Sections of this Technical Analysis.

During Phase I and Phase II reclamation, 18.7 acres will be reclaimed. Of these acres, 16 will require topsoil. Topsoil will be applied at a depth of twelve inches, requiring 25,800 cubic yards.

Findings:

The information in the proposal is adequate to meet the requirements of this regulations.

---

[1]Leatherwood, James and Dan Duce. 1988. "Guidelines for Topsoil and Overburden Management For Underground and Surface Coal Mines." Utah Department of Natural Resources. Division of Oil, Gas, and Mining.

MINE OPENINGS

Regulatory Reference: 30 CFR Sec. 817.13, 817.14, 817.15; R645-301-513, -301-529, -301-551, -301-631, -301-748, -301-765, -301-748.

Analysis:

As of October 23, 1991, Shafts No.1 and No.2 were sealed with six inch thick concrete slabs. A two inch PVC vent pipe was installed through the seal of each shaft. The sealing plan is detailed in Appendix 3.7M. The seals were intended to be temporary. Although the Applicant asserts that the present seals appear to be in compliance with MSHA guidelines 30 CFR 75.1711-1, there will be further sealing work done during Phase I of the reclamation as described in Section 3.7-5(3)(2). If the mine is not reactivated and the existing seals remain, then the permanent seals will be placed directly over the existing seals.

Findings:

The information in the proposal is adequate to meet the requirements of this regulations.

TOPSOIL AND SUBSOIL

Regulatory Reference: 30 CFR Sec. 817.22; R645-301-240.

Analysis:

Two topsoil piles exist at the site. These stockpiles were sampled in 1995. The results of that sampling are reported in Volume 15, Exhibit 20,Appendix 3.7S, "Crandall Canyon Soil Sampling Results." Topsoil pile No. 1 (referred to as stockpile A in the aforementioned report) is infested with noxious weeds and therefore its use as a source of topsoil is impaired. The 1,210 cubic yards in this pile could be used as subsoil, however.

Topsoil will be used from stockpile No. 2 (referred to as stockpile B in Appendix 3.7S) located on access road P-1. Stockpile No.2 has 6,680 cubic yards of soil (Exhibit 3.7-5C and Table 3.7-10), enough to cover 4 acres with twelve inches. The material in stockpile No 2 will be used as needed depending upon the results of soil sampling of the lower pad during reclamation (see four paragraphs below) and may not be entirely used. The excess soil in stockpile No 2 will be made available for reclamation of other Willow Creek Mine sites.

Substitute topsoil material will come from the facilities pad area. This material was tested according to the Division Guidelines[1] (see report in Appendix 3.7S). The Applicant suggests that the top eight feet of soil in the facilities area can be used as substitute topsoil. This would provide 51,400 cubic yards of soil, more than enough to cover the site with one foot of topsoil. This material will be used first to achieve final grade. Approximately 18,920 cubic yards are required as "substitute topsoil".

A test plot was gouged and seeded in 1996 on the upper and middle pads to prove that these pad soils could produce adequate vegetation. In October of 2000, the total cover on the site was 46%, which was adequate to meet the success standard, as concluded by Paul Baker, Division Biologist.

Further information on topsoil is location in Section 3.7-5(5) and Exhibit 5, Volume 4, Figure 8-5 contains the soil test results for samples taken during Crandall Canyon development in 1981.

Soils in the lower pad will again be sampled before use as substitute topsoil to avoid the soils with elevated selenium concentrations. At least three samples will be obtained from the soils in the lower pad.

Findings:

The information in the proposal is adequate to meet the requirements of this regulations. The Division recommends utilizing stockpile No.2 as a subsoil source.

STABILIZATION OF SURFACE AREAS

Regulatory Reference: 30 CFR Sec. 817.95; R645-301-244.

Analysis:

Section 3.7-5(2) itemizes the benefits of retaining an asphalt road in Crandall Canyon:

- travel will occur on the road, not overland;
- the road surface is resistant to erosion;
- the runoff from the road is controlled; and
- the road allows easy access for vegetation husbandry practices to ensure vegetation success.

One drawback is also pointed out:

- the road culverts will require maintenance which Plateau Mining Corporation will not provide, but which must be assumed by the landowner.

The Applicant asserts that the watershed will be improved as a result of reclamation with retention of the asphalt road due to the reduction of total suspended solids and through reduced flood hazards and by eliminating interference with natural flows of the stream.

As discussed in Section 3.7-5(3)(3) straw bales and/or silt fences will be installed within the main channel prior to conducting any activity in the channel. Depressions or catch basins in the main channel will also be used. Sediment ponds will be removed as reclamation overtakes them.

Prior to spreading topsoil, all regraded areas will be scarified to a depth of 18-24 inches by deep ripping to reduce slippage, increase moisture retention and promote root penetration. Should reclamation work be incomplete when seasonal conditions make it impossible to continue, then the backfilled and graded portions of the site will be left in a roughened state.

Findings:

The information in the proposal is adequate to meet the requirements of this regulations.

HYDROLOGIC INFORMATION

Regulatory Reference: 30 CFR Sec. 784.14, 784.29, 817.41, 817.42, 817.43, 817.45, 817.49, 817.56, 817.57; R645-301-512, -301-513, -301-514, -301-515, -301-532, -301-533, -301-542, -301-723, -301-724, -301-725, -301-726, -301-728, -301-729, -301-731, -301-733, -301-742, -301-743, -301-750, -301-751, -301-760, -301-761.

Analysis:

Acid and toxic-forming materials

Section 3.7-5(3)(1) states, "Any non-coal mine waste defined as "hazardous" under 3001 of the Resource Conservation and Recovery Act (RCRA) and 40 CFR Part 261 will be handled in accordance with the requirements of Subtitle C of RCRA and any implementing agency."

Section 3.7-5(3)(3) states, "Any acid forming or toxic materials exposed during the grading operation, ...will be treated or buried at a depth of no less than four feet."

Hilfilker retaining walls not covered by a minimum of four feet of soil will be removed. Concrete placed in the fill will also be buried four feet deep.

Findings:

The information in the proposal is adequate to meet the requirements of this regulations.

RECOMMENDATIONS:

The application should not be approved until the applicant has adequately addressed the deficiencies discussed in this memorandum.

sm
O:\007038.WIL\FINAL\pwbSR01A.wpd