

# TECHNICAL MEMORANDUM

Utah Coal Regulatory Program

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August 3, 2009

TO: Internal File

THRU: James D. Smith, Permit Supervisor *DS 08/06/09*

FROM: David Darby, Environmental Scientist III/Hydrologist, Team Lead 

RE: Midterm Permit Review, Plateau Mining Corporation, Star Point Mine, C/007/0006, Task ID #3304.

## SUMMARY:

The Division initiated a mid-term review of the Star Point Mine's on June 4, 2009, when the Division notified Plateau Mining Corporation (PMC) of the commencement of the Midterm Permit Review. There have been no major changes to the MRP since the mine was reclaimed in 2003.

A field inspection of the reclaimed mine was conducted on July 28, 2009 by Division personnel, and Mr. Dennis Ware, representing the Star Point Mine.

An AVS check was conducted by Priscilla Burton on July 28, 2009. One violation was found with conditional status on a Kentucky permit linked to Plateau Mining through a parent entity.

Seven areas of the MRP that have been selected by the Division as part of the evaluation process, these include the following:

1. An AVS check to ensure that Ownership and Control information is current and correct.
2. A review to ensure that the Plan has been updated to reflect changes in the Utah Coal Regulatory Program, which have occurred subsequent to permit approval (One area of emphasis is to ensure compliance with the U. S. Fish and Wildlife Windy Gap Process).

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3. A review of the plan to ensure that the requirements of all permit conditions, division orders, notice of violation abatement plans, and permittee initiated plan changes are appropriately incorporated into the plan document.
4. A review of the applicable portions of the permit to ensure that the plan contains commitments for application of the best technology currently available (BTCA) to prevent additional contributions of suspended solids to stream flows outside of the permit area.
5. A review of the bond to ensure that it is in order and that the cost estimate is accurate and is escalated to the appropriate year dollars.
6. A review of the MPR commitments for the subsidence control/monitoring plans and reporting requirements.
7. The Division may conduct a technical site visit in conjunction with the assigned compliance inspector to document the status and effectiveness of operational, reclamation, and contemporaneous reclamation practices.

This memo will address hydrology issues related to Items 2 and 4.

## PERMIT TERM

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

### Analysis:

The Division renewed the permit on January 28, 2007, which will expire on January 28, 2012. There were no special permit conditions related to biology, cultural resources or land use.

### Findings:

The information provided is adequate to meet the minimum regulatory requirements for this section.

## ENVIRONMENTAL RESOURCE INFORMATION

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

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## GENERAL

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

### Analysis:

The Star Point Mine permit area is 8820.86 acres with 93.7 acres within the disturbed boundary. The mine ceased operations and closed the mine in February of 2000. Reclamation immediately commenced in the mud water and corner Canyon sites, No. 1 mine area, unit train loadout and silo area and the Lion deck area. By 2003, all reclamation activities were complete and subsidence monitoring and infrared photography was discontinued with Division approval.

The Division approved Phase I bond release for the star point mine on October 12, 2004. Year four vegetation monitoring was completed by MT. Nebo scientific in 2007, and the Division approved Phase II bond release for the mine on July of 2008. The Division conducted a site visit on July 28, 2009. All reclaimed areas were well vegetated and stable. All areas had well developed shrub species and had little weedy species. No noxious weeds were identified. Year four vegetation monitoring revealed that the sites have exceeded most parameters when compared to the reference area standards.

### Findings:

The information provided is adequate to meet the minimum regulatory requirements for this section.

## OPERATION PLAN

### VEGETATION

Regulatory Reference: R645-301-330, -301-331, -301-332.

### Analysis:

Reclamation studies were conducted beginning in 1980 and are described on page 300-65 of the MRP.

- Native Plants test plots. These test plots were established on the refuse pile, the borrow area, and on the steep fill slope. The plots were monitored until 1986. Results can be found in the corresponding Annual reports.
- Roadside Mulch study plots. The plots were monitored in 1982 and 1983.
- Wildlife Mitigation area: these were monitored between 1982 and 1985.

- Refuse Test plots: this plot was established to study the type, depth and fertility requirements of the refuse material. The study did not yield meaningful data and was discontinued with Division approval in 1986.

### **Findings:**

The information provided is considered adequate to meet the minimum regulatory requirements for this section.

## **FISH AND WILDLIFE INFORMATION**

Regulatory Reference: 30 CFR Sec. 784.21, 817.97; R645-301-322, -301-333, -301-342, -301-358.

### **Analysis:**

#### **Endangered and Threatened Species**

The Mine is closed as of 2000 and does not consume any water. Therefore, there is no depletion affecting the endangered fish of the Colorado River basin.

### **Findings:**

The information provided is adequate to meet the minimum regulatory requirements for this section.

## **HYDROLOGIC INFORMATION**

Regulatory Reference: 30 CFR Sec. 773.17, 774.13, 784.14, 784.16, 784.29, 817.41, 817.42, 817.43, 817.45, 817.49, 817.56, 817.57; R645-300-140, -300-141, -300-142, -300-143, -300-144, -300-145, -300-146, -300-147, -300-148, -301-512, -301-514, -301-521, -301-531, -301-532, -301-533, -301-536, -301-542, -301-720, -301-731, -301-732, -301-733, -301-742, -301-743, -301-750, -301-761, -301-764.

### **Analysis:**

#### **General**

All hydrologic structures have been removed and the site reclaimed. Two surface monitoring sites and one ground water monitoring site are currently being monitored. The data collected from these sites is submitted to the DOGM water quality database. A Phase II bond release and inspection were finalized in December 2008..

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### **Groundwater Monitoring**

Ground water monitoring is still conducted on Spring 971, although there has been no flow at the spring for several years.

### **Surface Water Monitoring**

Two surface water monitoring sites still exist, 10-1 and ST-1. Surface water UPDES monitoring will not be conducted because all ponds have been reclaimed and there is no mine discharge.

### **Acid- and Toxic-Forming Materials and Underground Development Waste**

There are no mine openings. The refuse piles have been turned over to Star Point Refuse

### **Transfer of Wells**

There are no wells on site to transfer.

### **Discharges Into An Underground Mine**

There are no mine openings, thus no discharge into an underground mine.

### **Gravity Discharges From Underground Mines**

No gravity discharges from an underground mine will take place.

### **Water-Quality Standards And Effluent Limitations**

The Permittee is current in submitting quarterly monitoring reports to the Division of Water Quality UPDES program.

### **Sedimentation Ponds**

All sedimentation ponds associated with the mining operations have been reclaimed.

### **Findings:**

The information provided meets the minimum requirements of the Regulations for Operational Plan Hydrologic Information.

## MAPS, PLANS, AND CROSS SECTIONS OF MINING OPERATIONS

Regulatory Reference: 30 CFR Sec. 784.23; R645-301-512, -301-521, -301-542, -301-632, -301-731, -302-323.

### **Analysis:**

The information provided meets the minimum requirements of the Regulations for Operation Plan Hydrologic Information.

### **Mining Facilities Maps**

The mining facilities are shown on several maps. A professional engineer certified all the maps.

## RECLAMATION PLAN

### REVEGETATION

Regulatory Reference: 30 CFR Sec. 785.18, 817.111, 817.113, 817.114, 817.116; R645-301-244, -301-353, -301-354, -301-355, -301-356, -302-280, -302-281, -302-282, -302-283, -302-284.

### **Analysis:**

#### **Revegetation: Standards For Success**

DWR suggests an alternate density standard in the approved M&RP of 4000 stems per acre for the soil borrow area. The following standards based on the land use are listed on page 3-14 of the approved M&RP:

Grazing and pasture land: the ground cover and production of living plants on the revegetated area will be at least equal to the specified success standards.

Fish and wildlife habitat: the success of revegetation will be determined by tree and shrub stocking and ground cover. The Division, on the basis of local and regional conditions, will approve minimum stocking arrangements. Cover shall not be less than that required to meet the land use.

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In January of 2009, the Division conducted a site visit of the reclaimed sagebrush plant communities in the star point mine. The reference area woody species density was over 8000-individuals/ acre, which was a very high standard to meet. The Division, along with Leroy Mead (DWR) and Dr. Pat Collins (Mt. Nebo Scientific) agreed that the standard was too high and probably unachievable. On January 20, 2009, the Division received a letter from DWR stating that a more appropriate density standard would be between 1500 and 2000 individuals per acre. This letter has not been referenced or incorporated into the M&RP. However, the MRP, on page 300-72 already lists a DWR approved density of 2000 individuals per acre.

**Findings:**

The information provided is considered adequate to meet the minimum regulatory requirements for this section.

## **BONDING AND INSURANCE REQUIREMENTS**

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

**Analysis:**

**General**

An amount of \$ 734,000 remains (2008 dollars) in the reclamation bond account held by the Division for the Star Point Mine, (113.34 acres of disturbance).

**Form of Bond**

The bond is a surety provided by the Traveler's Casualty and Surety Insurance Company, (#104329368). This surety has an A.M. Best rating of A+ as of June 30, 2009.

**Determination of Bond Amount**

As was previously noted, the Permittee has received Phase I and Phase II bond releases for the reclamation work accomplished at this site.

Revegetation costs remain in the amount of \$ 517,916.00 (remaining direct cost).

This amount was used to project the indirect costs (amounting to 26.8%) which have been tallied at \$ 138,802.00.

Total Cost to complete all reclamation at the Star Point Mine has been estimated at \$656,718.00 (2008 dollars).

This amount was escalated six years (2014 is the next midterm permit review) to 2014 at an escalation factor of 1.013. (Escalation amount = \$ 52,918.00).

Total Cost in 2014 dollars = \$709,636.00.

The bond amount rounded to the nearest \$ 1,000 is \$ 710,000.00

The amount of bond posted in 2009 = \$ 734,000.00.

The amount of bond currently posted is adequate to complete reclamation at this site at least until the next midterm permit review, which is scheduled for 2014.

#### **Terms and Conditions for Liability Insurance**

The Permittee's current general liability insurance coverage remains in effect through October 1, 2009. The Division confirms renewal / coverage of this permit requirement during the four quarterly inspections conducted each year.

#### **Findings:**

The amount of bond currently posted by the Permittee is adequate to ensure that the remaining reclamation responsibilities at this site can be completed through 2014.

#### **RECOMMENDATIONS:**

The midterm review is complete and recommended for approval.