

# TECHNICAL MEMORANDUM

Utah Coal Regulatory Program

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October 4, 2012

TO: Internal File

THRU: Daron Haddock, Program Manager 

FROM: James Owen, Lead 

RE: Channel Repair Plan, Plateau Mining Corporation, Star Point Mine, C/007/0006, Task #4196

## SUMMARY:

On September 25, 2012, the Utah Division of Oil Gas & Mining received an application for an amendment to the Mining & Reclamation Plan (MRP) of the Star Point Mine. The application seeks approval to add Exhibit 761d, which details a repair plan for the reclaimed channels SPRD-30 and SPRD-31. The channels require repair due damage resulting from wildfires.

*NOTE:* Before the application was submitted by the operator, the Division instructed the operator to re-build the channel according to its initial design, and not according to the changes that resulted from the fire as per the instructions of Christine Belka, from OSM\*.

This memo addresses the application's compliance with the engineering (R645-301-500) sections of the Utah Coal Mining Rules. Contents and information provided are sufficient enough to meet the minimum requirements of this section of the Utah Coal Mining Rules. There were no deficiencies identified.

\*Please see attached correspondence at the end of this document

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**TECHNICAL ANALYSIS:**

**RECLAMATION PLAN**

**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:**

The erosion of SPRD-30 and SPRD-31 was the result of runoff exceeding the design flow due to the effects of the burn in the upper watershed. Plateau commits to working with the U.S. Forest Service to re-vegetate the burned area and restore the watershed to a pre-burn condition as soon as practical.

SPRD-30 was designed and constructed with a 4-foot bottom width and a minimum depth of 1 foot. The channel was lined with a three-dimensional geofabric (Pyramat or equivalent). The same cross section will be installed during the channel repair. Because the flow in the channel exceeded its capacity, some erosion has occurred adjacent to the channel. The geofabric will be removed and the channel will be re-graded by hand to remove rills. The geofabric will then be replaced and anchored in accordance with the manufacturer's instructions.

The original design for SPRD-31 called for a trapezoidal channel with a bottom width of 12 feet, 3: 1 side slopes, and a depth of 2 feet. The channel was lined with riprap having a median diameter of 12 inches, underlain by two filter layers to protect against soil piping beneath the riprap. This same cross section will be installed during the channel repair.

**Findings:**

Contents and information provided are sufficient enough to meet the minimum requirements of this section of the Utah Coal Mining Rules.

**MAPS, PLANS, AND CROSS SECTIONS OF RECLAMATION OPERATIONS**

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

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**Analysis:**

Plan views and cross sections of the channels were included with the application on Plate 2 (see cutouts below). The basic plan for repair of the channel is as follows:

- Mobilize equipment and materials to the site and install sediment controls as necessary. It may be necessary to install these controls immediately downstream from the current permit area since site access will be at the permit boundary.
- Re-grade all areas of the damaged channel, as necessary, to achieve the required grades.
- Install appropriate filter bedding in areas intended for installation of riprap.
- Install D50 = 12 inch riprap in the re-graded portions of the channel.
- Work topsoil into the top of the riprap layer.
- Seed and fertilize all areas disturbed by this project.

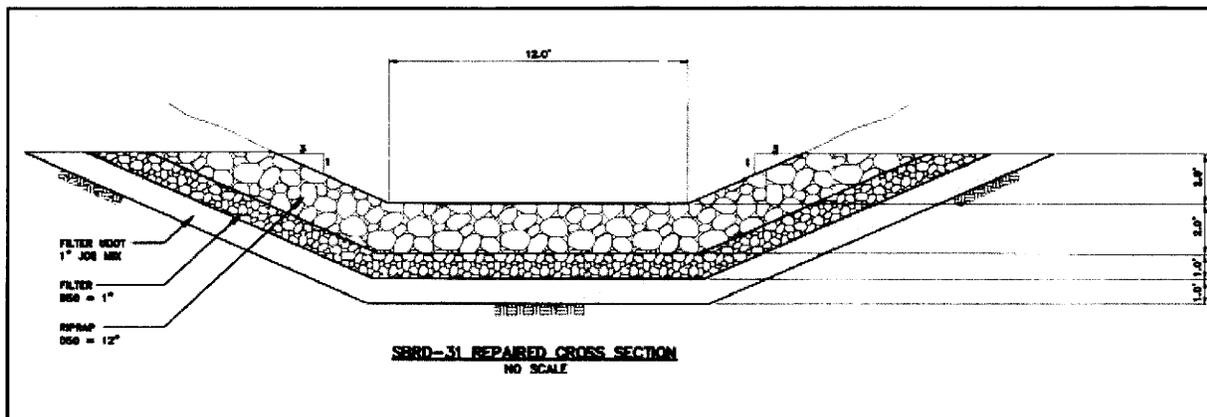
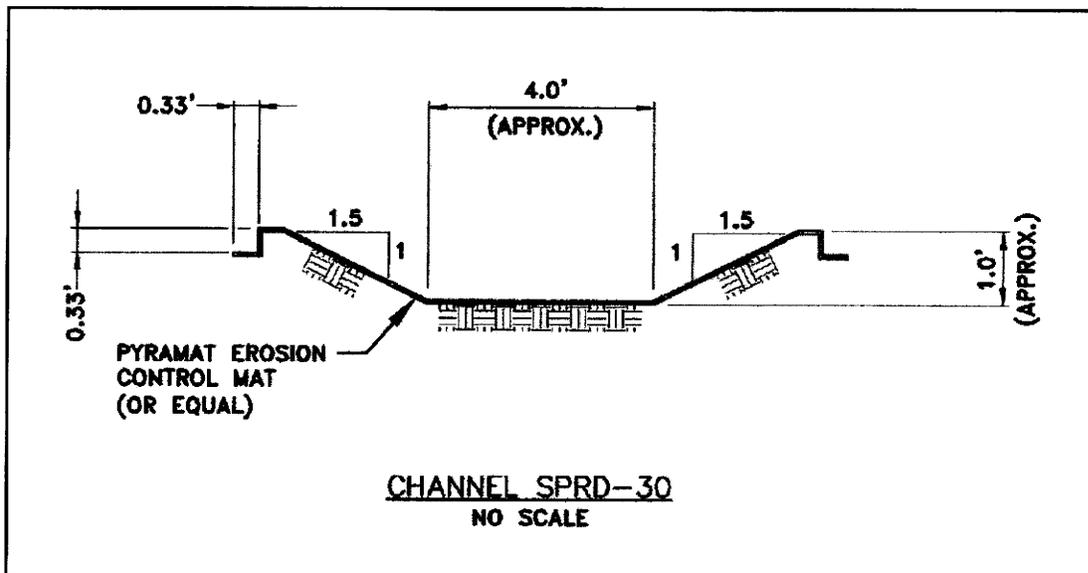


Plate 2 also indicates that D<sub>50</sub> = 24 inch riprap will be installed in a small section of the channel at an outlet from a 24-inch diameter downspout culvert. This culvert conveys water from a sedimentation pond that is maintained by others adjacent to the nearby coal slurry pile. Riprap sizing was increased in this area to dissipate energy in water discharging from the downspout.

Riprap deposited in two areas of the channel as it was eroded from above. This riprap (and filter blanket materials, if they exist) may be salvaged from these areas during channel repair if this salvaging can be accomplished without significant damage areas adjacent to the

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channel. Any riprap and/or filter materials thus salvaged will be screened as necessary to meet the required quality and gradation standards.



The channel sections requiring repair will be graded as necessary to form a base for the repaired channel, with an allowance made for the placement of riprap and filter bedding. Filter bedding will be installed at the nominal thicknesses shown on Plate 2 beneath the riprap prior to placement of the riprap. The riprap will then be placed in the channel.

Drawings were properly certified.

**Findings:**

Contents and information provided are sufficient enough to meet the minimum requirements of this section of the Utah Coal Mining Rules.

**RECOMMENDATIONS:**

Approval is recommended at this time

## **\*Attachment**

----- Forwarded message -----

From: "Belka, Christine" <cbelka@osmre.gov>  
Date: Sep 5, 2012 1:09 PM  
Subject: RE: Star Point Channel Repair  
To: "Dana Dean" [danadean@utah.gov](mailto:danadean@utah.gov)

Hi Dana,

Yes, that accurately reflects our conversation. My reasoning was based on the fact that the original surface water control plan was not deficient - effects of the wildfire changed the hydrologic conditions such that the design event was exceeded. Under R645-301-357.364, rill and gully repair resulting from a *\*deficient\** surface water control plan will be considered an augmentative process that would restart the responsibility period. Also, this is a rip-rapped channel so vegetation responsibility periods are not directly applicable. However, redesigning and constructing a larger diversion could be construed as a "coal mining and reclamation operation" and would likely cause additional disturbance that would require revegetation efforts.

Thank you,

Christine Belka  
Environmental Protection Specialist  
Office of Surface Mining  
Reclamation & Enforcement  
Denver Field Division  
1999 Broadway, Suite 3320  
Denver, CO 80202  
(303) 293-5020

From: Dana Dean [<mailto:danadean@utah.gov>]  
Sent: Wednesday, September 05, 2012 11:59 AM  
To: Belka, Christine  
Subject: Fwd: Star Point Channel Repair

Christine,

Does this accurately reflect our conversation?

Thanks,  
Dana

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Dana Dean, P.E.  
Associate Director - Mining  
Utah Division of Oil, Gas and Mining  
----- Forwarded message -----  
From: \*James Owen\* <jamesowen@utah.gov>  
Date: Tue, Sep 4, 2012 at 4:53 PM  
Subject: Star Point Channel Repair  
To: Dennis Ware <dware@alphanr.com>

Dennis,

Based on discussions between Dana Dean and Christine Belka from OSM, I believe that finding a solution to the channel repair problem at Star Point has been simplified.

According to Dana, Christine explained that OSM would require that the stream channel be replaced according to its initial design specifications. Installing a larger channel or modifying the channel design would constitute "new" mining-related operations that would include additional disturbance and would require the extended responsibility to re-start. OSM wants the channel put back the way it was and they will allow the reclamation clock to continue.

To address the issue of the changes in variables created by the wildfire, Christine recommended that you (the operator) work with the landowner of the burned slopes above your permit area that are effecting your channel's flow. Hopefully, the landowner will allow you to assist in re-planting and re-establishing vegetation in those burned areas. OSM would consider this as a way of allowing the original channel design to be adequate. So rather than designing for new specifications, OSM would prefer that you work to restore the area back to the condition it was in before the natural disaster while your finish your liability period. With the original channel back in place, you would qualify for Phase III bond release as per your current timetable and your liability will end as scheduled. If you have any questions on the details, feel free to contact Dana or myself.

Regards,

James C. Owen  
Reclamation Engineer  
Division of Oil, Gas and Mining  
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Salt Lake City, Utah 84114-5801  
801.538.5306