

TECHNICAL FIELD VISIT

Utah Coal Regulatory Program

July 27, 2004

TO: Internal File

THRU: Pamela Grubaugh-Littig, Permit Supervisor

FROM: Priscilla W. Burton, Environmental Scientist III/Soils
Wayne H. Western, Environmental Scientist III/Engineering

RE: Technical Field Visit, Phase I Bond Release, Plateau Mining Corporation, Star Point Mine, C/007/006, Task ID #1910

Attendees: Angela Wadman, Geologist, BLM, Price Office
Sue Burger, Physical Scientist, BLM, Price Office
Mitch Rollings, OSM, Denver Office
Johnny Pappas, Plateau Mining Corporation
Layne Jensen, P.E., Earth Fax Engineering
Pam Grubaugh-Littig, Permit Supervisor, DOGM
Priscilla Burton, Soils, DOGM
Wayne Western, Engineer, DOGM

Date & Time:

The inspection party arrived at the Lion Deck at 9:30 AM on June 24, 2004 and ended at 4:20 PM at the Unit Train Loadout. The weather was partly cloudy when the inspection began, thunderstorms began around 11:00 AM and light rain began about 2:30 PM and lasted until 3:30 PM.

Purpose:

The inspection team conducted the site visit to determine if all disturbed areas at the Star Point Mine with the exception of the facilities at Mudwater Canyon and Corner Canyon meet the minimum requirements for Phase I bond release. Mudwater and Corner Canyon's were inspected on June 23, 2004.

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Observations:

The disturbed area at the Star Point Mine excluding Mudwater Canyon and Corner Canyon consisted of 92.24 acres. In Section 521.163 of the MRP, PMC indicated that they showed the area covered by the performance bond on Maps 521.121a through 521.121d. PMC divided the disturbed area into the following subareas:

- Lion Deck.
- Number 2 Mine.
- Number 1 Mine.
- Main Mine Area.
- Unit Train Loadout.

Because of the size of the Star Point Mine, the Division addressed each of the subareas separately.

Lion Deck

At 9:30 AM, the inspection party arrived at the Lion Deck, where the portals for the Wattis Seam and mine support facilities were located. County Road 290 went through the Lion Deck when the mine was operational, after reclamation the road remained open because it provided access to Gentry Mountain. Items inspected at the Lion Deck were:

Highwall Remnants:

The Division approved the retention of highwall remnants at the Lion Deck in order to allow County Road 290 to remain open. The Division restated the findings in a letter to PMC dated March 19, 2004. If PMC had backfilled the highwalls, either the fill would have blocked the County Road 290 or the backfilled slopes would have been so steep that they would have been unstable.

The highwall remnants were approximately 400 feet in length and a maximum of 40 feet height. The highwall remnants were in competent sandstone. The inspection party found that the highwalls were stable and compatible with the postmining land use of wildlife habit, grazing and public access to Gentry Mountain.

The specific highwall remnant items that the inspection party looked at were:

- Did the highwall remnants pose a safety hazard to the public? The highwall remnants were in competent sandstone. There was no evidence that slope failure occurred in natural rock outcrops. Therefore, the risk of slope failure to the public was no more than slope failure in the surrounding area. While the highwall remnants were a potential fall hazard, the risk to the public was no greater than from natural cliffs in the area.
- Did the highwall remnants pose an environmental hazard? The major concern was that runoff from the highwall remnants could cause erosion. The lower sections of the highwalls were backfilled, pocked (surface roughening technique) and seeded. PMC did the earthwork and seeding in 2002. The pocks were able to retain all the runoff, which prevented erosion. Layne Jensen mentioned that his soil loss calculations showed that more erosion occurred on the natural slopes than occurred on the pocked areas.
- Were the highwall remnants compatible with the postmining land use? The main reason for leaving the highwall remnants was to support the postmining land use. If PMC had eliminated the highwalls, the backfill would have blocked County Road 290, which was needed for postmining land use of public access to Gentry Mountain, or the backfilled slopes would have been unstable. Under either condition not all of the postmining land uses could have occurred.

Cutslopes:

The Lion Deck Area contains both pre-SMCRA and post-SMCRA cutslopes. The pre-SMCRA cutslopes totaled 1,000 feet long and they were up to 30 feet high. The post-SMCRA cutslopes totaled 2,600 feet and they were up to 30 feet high. Had the cutslopes along County Road 290 been completely reclaimed the fill would have blocked the road.

The Division did not have specific standards for cutslope reclamation or cutslope retention. Because the cutslopes were constructed in a steep canyon, the natural slopes had safety factors of less than 1.3. Therefore, total elimination of the cutslopes and meeting the slope stability requirements were not possible. As with the highwall remnants the inspection party found that the cutslope remnants were not hazards to the public or the environment.

County Road 290:

PMC moved part of the County Road 290 during reclamation at the Lion Deck so that the road would be on stable ground instead of fill. The inspection party found that the road appeared to be stable and was in good order.

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During the inspection, Mr. Rollings asked why the gouging and seeding did not include all of the disturbed area between County Road 290 and the former Treatment Facility #1 (see map 542.200a and map 521.121a and page 500-44). He questioned whether this untreated section of outslope would be included in the percent cover in the final bond release evaluation. He wondered if PMC should stabilize that section of slope. The Division stated that the area in question was not part of the disturbed area. See Map 521.121a for the location of the disturbed area boundaries.

Backfill and Grading:

Plates submitted with the Phase I bond release application, Task ID #1910, indicated that PMC placed 113,532 CY of mine waste against the Lion Deck cutslopes and highwalls (Map 542.200a). They also placed demolition debris and asphalt against the cutslopes. PMC filed the location of the debris fill with the County Recorder's Office as required by the permit by rule, which allowed the debris to be disposed on site. PMC indicated that approximately 100,000 CY of fill from the adjacent road outslope was used to cover the coal mine waste and debris.

The backfill appeared to be stable, although the stope hole has settled 1 – 2 ft. A stake on the slope marked the stope hole and PMC committed to monitor the site.

The inspection party found no signs of slumps or slides. The pocks were in good shape and prevented erosion. Since the site was pre-SMCRA, no topsoil had been salvaged. Therefore, available soils from the outslope of the road was spread over the reclaimed surface (as described in the MRP.) PMC spread two tons of hay per acre over the site with an excavator during reclamation; they pocked the surface and seeded the site. Afterwards PMC spread 1,500 lbs of straw per acre over the seeded site and anchored it with 500 pounds/acre of hydromulch/tackifier.

The inspection team noted penstamen, flax, and grasses were on the reclaimed site. The penstamen and flax were in full bloom. A crew had walked the site just recently, hand spraying a cocktail of 2-4-D, Round-Up and Escort to prevent establishment of noxious weeds (i.e. Scotch thistle, Canadian thistle).

Hydrology:

There were no sediment ponds at the Lion Deck after reclamation. Sediment control consisted of pocks and channels. Pocks proved to be effective in controlling runoff from the slopes. After a wet winter and spring, the inspection party found very little evidence of erosion on the slopes.

PMC used a synthetic fabric (Pyramat) to construct the intermittent and ephemeral

channels. PMC keyed the Pyramat into the slope using soil, rocks, and 18-inch steel pins. PMC placed check slots every thirty feet, so that erosion of a length of Pyramat would not extend down the entire channel. During reclamation, PMC placed two to four inches of soil over the Pyramat. Eventually vegetation will grow in the holes in the Pyramat and create a natural looking channel. The vegetation will slow the runoff and reduce erosion. After only one season, the inspection party noted vegetation in the channels.

Erosion of soil cover over the Pyramat had occurred in some channel sections before vegetation could be established (i.e. channel SPRD 17 b). However, the fabric prevented the channels from eroding. The inspection team found that the channels and pocks functioned properly.

Number 2 Mine

The Number 2 Mine Site consisted of a small area where portals had been constructed to access the Wattis Seam. As with the Lion Deck Area, County Road 290 ran through part of the Number 2 Mine. The Division allowed highwall remnants and cutslopes to remain at the site.

Highwall Remnant:

The highwall at the Number 2 Mine was approximately 300 feet long, with 100 feet being next to County Road 290. As at the Lion Deck, total highwall elimination would have blocked County Road 290.

The limiting factor for reclaiming the other 200 feet highwall section was slope stability. Since the natural slopes had safety factors of less than 1.3, total highwall elimination would have required that the reclaimed slopes had a safety factor of less than 1.3. The Division determined that slope stability was more important to public safety and environmental protection than total highwall elimination.

The specific items that the inspection party looked at were:

- Did the highwall remnants pose a safety hazard to the public? The highwall remnants were in competent sandstone. The risk of slope failure was minimal. The area around the highwall was steep which limited access by the public, so the fall hazard was similar to the natural cliffs in the area.
- Did the highwall remnants pose an environmental hazard? The area was backfilled in 2000. The inspection party found that the backfill was stable over the past 4 years and there was no sign of erosion. The highwalls were not an environmental hazard.

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- Were the highwall remnants compatible with the postmining land use? The highwall remnants would not interfere with the postmining land uses, which were public access to Gentry Mountain, grazing and wildlife habitat.

Cutslopes:

The cutslopes at the Number 2 Mine are pre-SMCRA and approximately 200 feet long and 30 feet high. If the cutslopes had been backfilled, the reclaimed slopes would not meet the minimum safety factor requirement of 1.3 or greater.

The cutslopes were similar to the highwall remnants. The inspection team found that they were not a public safety hazard, posed environmental risk, or interfered with the postmining land use.

County Road 290:

The inspection party found that the road appeared to be stable and was in good order.

Backfilling and Grading:

Mr. Rollings inquired whether the Division required cover over all coal seams or just the mineable coal seam. The Division replied that on a pre-SMCRA site, they would allow the rider seams to be left exposed. The BLM representatives agreed with this assessment. The backfill appeared to be stable. The inspection party found no signs of slumps or slides. The pocks were in good shape and prevented erosion.

Hydrology:

There were no sediment ponds or other hydrologic structures at the Number 2 Mine. Pocks controlled runoff. The inspection team found no rills or gullies.

Number 1 Mine

Highwall Remnants:

Mine Number 1 was constructed pre-SMCRA. The Division approved the retention of highwall remnants because of slope stability limitations. The highwall remnants are in competent sandstone and appeared to be stable.

The specific items that the inspection party looked at were:

- Did the highwall remnants pose a safety hazard to the public? The highwall remnants were in competent sandstone. The inspection party did not find any failure of the highwall remnants. The highwall remnants are located in a steep canyon, which restricts access by the public. Natural cliffs in the area posed a similar fall hazard.
- Did the highwall remnants pose an environmental hazard? The major concern was that runoff from the highwall remnants could cause erosion. There was no evidence of erosion or slope failure on the slopes below the highwall remnants.
- Were the highwall remnants compatible with the postmining land use? The highwall remnants will not interfere with the postmining land use of wildlife habitat and grazing. The highwall remnants are similar to nature cliffs in the area.

Cutslopes:

The cutslopes at the Number 1 Mine were pre-SMCRA. There are cutslopes in the pad area and along the mine access road. The cutslope remnants associated with the pad areas were similar to the highwall remnants. The inspection team made the same finding for the pad cutslopes remnants as they did for the highwall remnants.

The mine road that provided access to the Number 1 Mine was constructed in a steep canyon. The safety factor of the natural slopes was less than 1.3. Therefore, totally reclaiming the cutslopes and achieving a safety factor of 1.3 or greater was impossible.

The cutslopes along the mine access road were stable since 1916. The inspection team found no sign of failure along the mine access road.

Backfill and Grading:

Approximately 40,000 CYs of fill from Sediment Pond #3 embankments were used to reclaim Mine #1. The soil contained approximately 25% coal fragments. The dry soil color is 2.5Y 6/2. The backfill appeared to be stable. The inspection party found no signs of slumps or slides. The pocks were in good shape and prevented erosion. The site was seeded in the Fall of 2001 and the inspection team noted flax, penstamen, purple mustard, winterfat, foxtail, rice grass, Great Basin wildrye at the higher elevations of Mine #1 site. The vegetation and soil type changes to Kochia and halogeton on the lower portion of the access road up to the former Sediment Pond #3.

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Hydrology:

The hydrologic structures included channels constructed with fabric and channels constructed with riprap, and a plunge pool. The plunge pool was constructed as an energy dissipater in 2001. The plunge pool was not blocked by sediment and the area below the structure showed no signs of erosion or failure.

All the channels appeared to be in good condition. There were no signs that the runoff had gone outside the channel boundaries. The inspection team noted that the vegetation had controlled erosion.

Main Mine Site

Highwalls:

There were no highwalls associated with the Main Mine Site.

Cutslopes:

The cutslopes at the Main Mine Area were pre-SMCRA. The cutslopes were in competent rock and appeared stable. The Division allowed the retention of the cutslopes due to slope stability factors.

Backfill and Grading:

PMC buried demolition debris and asphalt at the Main Mine site (permit by rule). The location of the debris fill was filed in the County Recorder's Office and shown on reclamation maps.

The backfill appeared to be stable. The inspection party found no signs of slumps or slides. The pocks were in good shape and prevented erosion. The Main Mine area and channel was seeded in the Fall 2003. Yellow sweet clover dominates the slope and reclaimed sediment pond #2 area, along County Road 290 south of the main channel.

Hydrology:

The side channels entering the main channel were constructed of Pyramat fabric. Three additional side channels were constructed on the north side of the main channel in the fall of 2003 after a large rainfall event indicated the need. These new channels are between the two existing channels downstream of the historic buildings left on the north side of the channel.

Unit Train Loadout

Highwalls:

There were no highwalls at the Unit Train Loadout.

Cutslopes:

There were no exposed cutslopes at the Unit Train Loadout.

Backfill and Grading:

The former silo area is level and now serves as a staging area for the railroad. The backfill of the slopes appeared to be stable. The inspection party found no signs of slumps or slides. The pocks were in good shape and there was some sediment accumulation in the pocks, which showed the pocks were effective in controlling erosion. The Unit Train Loadout slopes were seeded in 2001. The inspection team noted shadscale and yellow sweetclover growing at this site.

Hydrology:

The only hydrologic structure at the Unit Train Loadout was a culvert that directed water underneath the railroad tracks. Vegetation and pocks controlled erosion. The inspection team found the Unit Train Loadout to be stable.

RECOMMENDATIONS/CONCLUSIONS:

In the future, the Division should bring operational photos of the site to bond release inspections and a map showing reclamation and operations contours for the site.

The Division should approve Phase I bond release for the areas covered by this inspection.

As noted during the inspection, letters of concurrence from all affected surface owners (BLM and F.S.) are required within 30 days of the inspection.