



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

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ok

November 19, 2001

James Fulton, Chief, DFD
Office of Surface Mining
1999 Broadway, Suite 3320
Denver, Colorado 80202-5733

Re: Concurrence Requested on Miller Canyon Phase I Bond Release, PacifiCorp,
Cottonwood/Wilberg Mine, C/015/019-BR99D, Outgoing File

Dear Mr. Fulton:

The Division requests Office of Surface Mining concurrence on this Phase I Bond Release at Miller Canyon at the Cottonwood/Wilberg Mine (enclosed). This bond release entails a total disturbance of 0.02 acres and no bond reduction. Please notify the Division by December 13, 2001 about this concurrence request.

If you have any questions, please call me at (801) 538-5268.

Sincerely,

A handwritten signature in cursive script, appearing to read 'Pamela Grubaugh-Littig'.

Pamela Grubaugh-Littig
Permit Supervisor

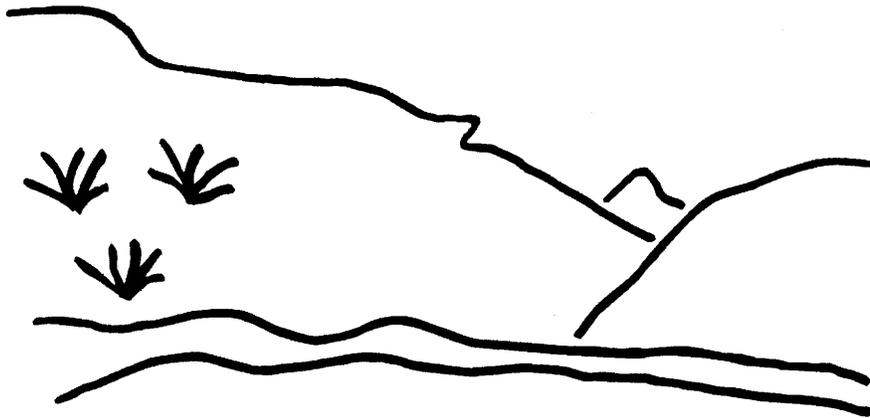
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Enclosure

cc: Chuck Semborski, PacifiCorp
Price Field Office

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State of Utah



Utah Oil Gas and Mining

Coal Regulatory Program

DECISION DOCUMENT
Phase I Bond Release
Cottonwood Wilberg Mine
C/015/019-BR99D
November 19, 2001

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ADMINISTRATIVE OVERVIEW

PacifiCorp
Cottonwood Wilberg Mine
Phase I Bond Release
C/015/017
Emery County, Utah

November 19, 2001

EXECUTIVE SUMMARY

Three ventilation portals in Miller Canyon were sealed in 1987 and were backfilled and seeded in 1999. These portals are not accessible by vehicle, and the only disturbances are the portals and immediately adjacent areas. Total disturbance is 0.02 acres. Reclamation consisted of installing stoppings in the portals, putting in French drains, backfilling, topsoiling, seeding and mulching. Most backfill material came from areas adjacent to the portals, but topsoil was brought by helicopter from the Cottonwood Fan Portals. The helicopter also brought in woody material that helps the portals blend with surrounding areas while also providing erosion control. On June 21, 2001, the Division approved as-built designs for the reclamation.

The Division received no public comments about the bond release. The bond release inspection was held September 6, 2001, with representatives of the Division, PacifiCorp, and Manti-LaSal Nation Forest in attendance. The Bureau of Land Management and Office of Surface Mining, Reclamation and Enforcement were invited but did not attend. Division participants in this inspection recommended that Phase I bond release be given but that PacifiCorp be required to continue water monitoring. The Division received comments dated October 19, 2001, from the Forest Service saying it concurs with Phase I bond release but that a change in water monitoring is necessary to evaluate potential impacts to National Forest System lands. The Bureau of Land Management concurrence was received on November 7, 2001.

BACKGROUND

The Miller Canyon portals are in a small canyon just east of Cottonwood Canyon near the Trail Mountain Mine. They were developed as intake portals as part of Cottonwood Wilberg Mine in October 1981. They consist of three 8 X 16-foot portals on 100-foot centers. The portals were used for intake purposes until the Wilberg Mine fire in 1984 when they were temporarily sealed. Portal 1 was opened for exploration in 1985, and all three portals were permanently sealed in 1987.

There is some water discharge from the portals, and discharge from Portal 1 has been monitored as a UPDES discharge point. Because the discharge is not monitored right at the portal and because the discharge seeps into the alluvium in the canyon before reaching the monitoring point, no discharges have been recorded since 1996.

Final reclamation was done in 1999 using hand labor and a helicopter to transport materials from a staging area in Cottonwood Canyon. Most backfill material came from areas adjacent to the portals, but topsoil was brought by helicopter for two of the portals.

In 2000, PacifiCorp received an Earth Day Award from the Board of Oil, Gas and Mining for the reclamation work done at these portals.

CHRONOLOGY FOR PHASE I BOND RELEASE

- December 23, 1999 Division receives application for Phase I bond release which includes as-built designs.
- April 4, 2000 Letter from the Bureau of Land Management concurring with bond release.
- April 25, May 2,
May 9, May 16, 2000 Bond release advertised in the *Emery County Progress*
- June 15, 2000 End of public comment period with no comments received.
- October 30, 2000 Division's first technical analysis of as-builts.
- February 20, 2001 PacifiCorp responds to technical analysis.
- June 21, 2001 Division approves as-built designs.
- August 24, 2001 Division sends letters of invitation for the Phase I bond release inspection to the BLM, OSM, and Forest Service.
- September 6, 2001 Phase I bond release inspection. In attendance:

Dennis Oakley, PacifiCorp
Chuck Semborski, PacifiCorp
Dale Harber, Forest Service
Susan White, DOGM
Wayne Western, DOGM
Dave Darby, DOGM
Pete Hess, DOGM
Priscilla Burton, DOGM
Pamela Grubaugh-Littig, DOGM
- October 19, 2001 Forest Service concurrence letter.
- November 7, 2001 Bureau of Land Management concurrence letter.

ANALYSIS AND FINDINGS FOR PHASE I BOND RELEASE

ADMINISTRATIVE ANALYSIS

Regulatory Reference: R645-301-880 - 880.330

The application for Phase I bond release for the Miller Canyon portals of the Cottonwood Wilberg Mine was made on December 23, 1999. Phase I notification was published in the *Emery County Progress* on April 25, May 2, May 9, and May 16, 2000. The comment period ended June 15, 2000, and no comments were received.

PacifiCorp sent letters to the following entities notifying them of the bond release proposal:

Real Estate Division, The Church of Jesus Christ of Latter-day Saints
Emery County Board of Commissioners
Bureau of Land Management
Manti-LaSal National Forest
State Historic Preservation Office
State Division of Wildlife Resources
State Division of Water Rights

Invitations to the bond release inspection on September 6, 2001 were sent by the Division on August 24, 2001, to the Bureau of Land Management, the Forest Service, and the Office of Surface Mining, Reclamation and Enforcement.

In attendance at the September 6, 2001 bond release inspection were:

Division:	Wayne Western, Paul Baker, Susan White, Dave Darby, Pete Hess, Pamela Grubaugh-Littig, and Priscilla Burton.
PacifiCorp:	Dennis Oakley and Chuck Semborski.
Forest Service	Dale Harber

The inspection found no problems related to Phase I bond release, but there were some concerns about water quality and water monitoring. The inspection report discusses recommendations for future monitoring, and the concurrence letter from the Forest Service recommends future monitoring. A copy of the inspection report dated October 19, 2001, is in Appendix A.

ADMINISTRATIVE FINDINGS

PacifiCorp has met the minimum requirements for Phase I bond release for the Miller Canyon portals of the Cottonwood Wilberg Mine. The Phase I bond release application was properly submitted, and it was advertised for four consecutive weeks with no public comments

received. Proper notification was sent to land owners, local governmental bodies, and planning agencies concerning the bond release. Appropriate agencies were notified of the bond release inspection, and the inspection identified no reason Phase I bond release should not be given.

TECHNICAL ANALYSIS

Regulatory Reference: R645-301-880 - 880.310

Postmining Land Uses

Regulatory Reference: 30 CFR Sec. 784.15, 784.200, 785.16, 817.133; R645 -301-412, -301-413, -301-414, -302-270, -302-271, -302-272, -302-273, -302-274, -302-275.

Analysis:

The pre- and postmining land use is wildlife habitat. Grading has been done to blend the reclaimed area with surrounding areas. Brush and large rocks were placed on the surface, and these should provide cover for small animals. The reclaimed area is conducive to the postmining land use.

Findings:

The applicant has complied with the requirements of the mining and reclamation plan and this section of the regulations.

Approximate Original Contour Restoration

Regulatory Reference: 30 CFR Sec. 784.15, 785.16, 817.102, 817.107, 817.133; R645 -301-234, -301-270, -301-271, -301-412, -301-413, -301-512, -301-531, -301-533, -301-553, -301-536, -301-542, -301-731, -301-732, -301-733, -301-764.

Analysis:

The applicant met the general requirements for restoring the site to the approximate original contours. The reclaimed topography blends into the surrounding topography. French drains allow any water that will drain from the mine to mimic natural seeps in the area. Photographs in Appendix XXII show the operational and reclaimed phases of the Miller Canyon site. The reclaimed site is similar in grade to the surrounding area.

Findings:

The applicant has complied with the requirements of the mining and reclamation plan and this section of the regulations.

Backfilling And Grading

Regulatory Reference: 30 CFR Sec. 785.15, 817.102, 817.107; R645 -301-234, -301-537, -301-552, -301-553, -302-230, -302-231, -302-232, -302-233.

Analysis:

The general engineering requirements for backfilling and grading are to restore the site to the approximate original contours; eliminate all highwalls, spoil piles and depressions; and to achieve a postmining long-term static safety factor of 1.3. While no detailed premining contour maps and cross sections of the site exist, the photographs of the surrounding area and postmining contour maps and cross section support the claim that the breakouts were in a near vertical face. Therefore, the highwalls will be eliminated if the applicant seals and backfills the port face ups.

The portals were backfilled as shown on the drawing entitled *Cottonwood Mine Miller Canyon Breakouts Plan View & Cross Section*. The cross sections show that the reclaimed slopes have angles less than 2h:1v. The applicant did not give the Division detailed slope stability analysis for the backfilled slopes. Instead they used empirical methods based on slope height, slope angle and stability of similar slopes. The Division reviewed the stability analysis and agrees with the findings.

From information in Appendix XXII, the Division found that the site had been restored to the approximate original contours. See the AOC section of this decision document for more details.

The area should not have had any spoil piles or large depressions since surface activities were limited to the construction of the breakouts, and the site inspection confirmed this. In the December 23, 1999, submittal, the applicant states that all non-coal and coal waste was removed from the site.

All coal seams that were exposed by mining have been covered. If naturally occurring coal outcrops do exist they were not the result of coal mining and the Division will not require the applicant to cover the natural coal outcrops.

Water seeps from Portal #1 at a rate of 3gpm. "Minor" seeps occur at portals #2 and #3. Attachment 4 shows the typical cross-section of the French drain created in each portal to a depth of six inches with six-inch rock material. The drain was covered with larger rock material and then soil. Soil was placed eighteen inches thick and litter was placed on the soil to control erosion. Photos of the process were located in Attachment 5 of the current mining and reclamation plan.

Findings:

The applicant has complied with the requirements of the mining and reclamation plan and this section of the regulations.

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:

The Miller Canyon portals were sealed according to a plan approved by MSHA and the Division. Seals were placed in the portals and then the entrances backfilled. Due to natural cliff failure the backfill did not extend to the seal. A cross section of the site showing how the portals were sealed is Appendix XXII.

Findings:

The applicant has complied with the requirements of the mining and reclamation plan and this section of the regulations.

Topsoil And Subsoil

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

Analysis:

Initial estimates were that each portal would be filled with 41 cubic yards of rock material to create a French Drain. The rock was to be covered with a filter liner. On top of the liner, approximately 7 cubic yards of soil was to be placed to a depth of 18 inches. Litter and branches were to be incorporated into the slope to add stability. The surface was to be roughened, seeded, and raked by hand.

The as-built information indicates that the helicopter imported 50 cubic yards of material (rock and soil), and the remainder of the yardage came from the adjacent area. During an on-site bond release inspection, the Division learned that some of that imported soil remains at the mouth of the canyon. (This soil pile may be useful for future stabilization of rills and gullies.)

Portals #3 and #2 were topsoiled with the imported soil. However, topsoil for Portal #1 (the farthest upstream portal) was obtained from the adjacent hillside by scraping the soil from the surrounding slope onto the backfill. Otherwise, the activity proceeded as planned with 18 inches of soil applied to the rock fill and litter and branches strewn over the surface for stability and aesthetics.

Erosion of the soil around Portal #1 was noticeable and the adjacent slope disturbed for topsoil harvest had formed a very hard crust. Erosion around this portal will be closely watched.

A tally of subsoil volume of Pile B has been included with the Miller Canyon Appendix XXII, Attachment #2. The tally shows 209 cubic yards remaining in subsoil pile B. This volume is in accordance with the "approximately 200 yards" reported in Section 230 of the Soils Chapter, Volume 11 of the MRP.

Findings:

The applicant has complied with the requirements of the mining and reclamation plan and this section of the regulations.

Road Systems and Other Transportation Facilities

Regulatory Reference: 30 CFR Sec. 701.5, 784.24, 817.150, 817.151; R645 -100-200, -301-513, -301-521, -301-527, -301-534, -301-537, -301-732.

Analysis:

No roads are associated with the Miller Canyon portals.

Findings:

The applicant has complied with the requirements of the mining and reclamation plan and this section of the 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:

Ground-water monitoring

The three portal sites are currently discharging a few gallons of water a minute as witnessed on September 6, 2001. The Division is concerned whether the flow and quality of water discharging at the portals could change and cause adverse impacts after bond release. There is no data showing the portal areas discharged flows prior to mining or prior to development of the breakouts. Mr. Dennis Oakley, PacifiCorp, stated that seeps existed at the portal site prior to development. His statement was verified during the bond release inspection on September 6, 2001. Large chunks of old tufa were observed in the stream channel below the seeps.

In a telephone conversation on October 13, 2000, Dennis Oakley of PacifiCorp said it is unlikely water is flowing directly from the mine because the portals are sealed. He proposed that the flow currently emanating from the French drains is caused by seepage from sandstone channels in the facies above the mine. There is seepage in many nearby areas at the same stratigraphic level. Map HS-3 shows the mapped channel sands. In addition, the portals are not the lowest point in the mine, so water would not drain from the mine through the portals.

The Trail Mountain tunnel, consisting of the belt and roadway portal, is lower in elevation and dip than the Miller Canyon portals, as shown on Map HM-3. This being the case, water filling the mine voids would tend to flow from the Trail Mountain tunnel portal first if sections of the mine were filled and not sealed. It is unclear at this point how the Trail Mountain tunnel will be sealed or what function it will take at the time of mine closure. It is also not clear if this portal will prevent water from backing up against the Miller Canyon seals.

Surface-water monitoring

Monthly monitoring has been conducted at the mine in compliance with provisions of the UPDES permit. The applicant's authorization to discharge expires October 31, 2002. Portal samples have been collected analyzed and, in the past, they have shown moderate iron levels and even less manganese. Total dissolved solids and pH are within normal ranges.

Gravity discharges

The three Miller Canyon Portals were temporarily sealed in 1984 following the Wilberg Mine fire and permanently sealed in 1987. A pipe was installed in the seal of the eastern (#1) portal, and it extended at least 500 feet down the canyon to facilitate the collection of water samples. Initially, there was almost no discharge, with only five sporadic discharges, ranging from 4 to 25 gpm, measured between October 1986 and November 1988.

Water started flowing consistently beginning in April 1989, when discharge jumped to 70 gpm. The highest discharge was 78 gpm in August 1989, after which flow-volume trended downward. There were some high flows in the spring of 1991. Flow-volumes decreased significantly in 1994, and there has been no reported discharge since July 1996 when the UPDES sampling discharge point was changed because of safety concerns. Originally the sampling location was immediately below the portals at the confluence of the three portal discharges. DEQ allowed the operator to move the sampling site down the canyon near the road.

In May 1999 it was discovered that the pipe had collapsed from caving of the portal openings, and that water was flowing from the seals, over the rock ledge, and to the canyon floor, where it dissipates within a few hundred feet. It is unknown how long the pipe was pinched-off and what effect this had on the accuracy of flow measurements. Photos taken in June 1999 during backfilling of the portals show water seeping from the top of the Star Point Sandstone ledge just below the portals. French drains were installed in 1999 in the base of the fill to prevent slope failure due to saturation.

A Phase I Bond Release field visit was conducted on September 6, 2001. Flow from portal #1 was estimated at 3 gpm. Currently, discharge disappears into the channel before the sampling point. The rate and consistency of flow from these portals should be monitored throughout the bond release period.

Water quality standards and effluent limitations

The combined disturbed area for the portals is .02 acres. The amount of disturbed runoff and sediment yield are very small. The reclaimed area was pocked to retain any runoff and control erosion. The applicant has conformed to UPDES water quality standards in the past when water was flowing from the discharge pipe. The location of the UPDES monitoring point has been changed, and as a result, the seeps from the mine area do not reach the monitoring site.

The reclamation of the Miller Canyon Portals meets the requirements for Phase I bond release. The Division recommends that the applicant conduct the following actions and submit the following information needed to fulfill part of the regulatory requirements for future Phase II and Phase III bond release.

- The rate of water discharge from the three portals should be monitored at their confluence annually in summer through final bond release. If substantial changes in flow should occur, i.e., a 3-fold increase, then a water sample should be taken and analyzed. The sample taken at the French drain should be analyzed for flow, pH, oil and grease, temperature, TSS, dissolved iron, dissolved manganese and TDS.
- An initial red precipitate sample from Portal #1 should be collected and analyzed in the laboratory to determine the occurrence and composition of the red precipitate.
- The water should be sampled at the three portals confluence and analyzed for Class 3D parameters. The frequency should be adequate to demonstrate compatibility with the post-mining land use.

Findings:

Information provided in the application is adequate to meet the requirements of this section of the regulations. However, monitoring of flows from the portals should continue through the Phase II and Phase III bond release period.

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:

As part of the bond release inspection, the Division is required to evaluate the difficulty to complete any remaining reclamation. According to the mining and reclamation plan, a reference area will be located adjacent to the reclaimed portals, and cover and diversity of the reclaimed area will be compared with this reference area.

The bond release inspection report says:

Vegetation on all three portals was sparse but establishing. Some observed species included: Fourwing saltbush, rabbitbrush, bluebunch wheatgrass, flax, thistle, shadscale, combed [corymbed] eriogonum, penstemon, bulrush, colombine [sic], and willow. The flax and fourwing had been browsed by wildlife. The seeded areas around the portals had roughly 10 to 20 percent vegetative cover.

Vegetation in the reclaimed area is similar to what exists in surrounding areas although the site may not yet meet revegetation requirements. The Division considers the probability of meeting revegetation standards to be good.

Findings:

The applicant has complied with the requirements of the mining and reclamation plan and this section of the regulations

Stabilization of Surface Areas

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

Analysis:

Areas were stabilized by the installation of a French drain. Straw was incorporated into the soil as the surface was roughened. Seed was broadcast and raked into the surface. Straw mulch and netting covered the seeded surface. Large litter was placed on the netting surface.

Findings:

The information provided is adequate for the purposes of this regulation.

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.

Analysis:

Affected area boundary maps

The applicant has supplied the required maps and information to analyze the Miller Canyon portal site. Map HC-3 and Appendix XXII provide the documentation to describe the portal site, the extent of disturbance, reclamation activities, and the surface configuration of the portal area.

Bonded area map

The applicant did not give the Division any bonded (disturbed area) maps for the Miller Canyon area. Due to the small size of the disturbed area, detailed disturbed area maps boundary maps are not needed.

Reclamation backfilling and grading maps

The applicant did not give the Division any backfilling or grading maps in the bond release package. The applicant included a topographic map and cross sections of the reclaimed portals. The map and cross sections were certified by a professional engineer.

Final surface configuration maps

The applicant included final surface configuration (topographic) maps in the bond release package.

Findings:

The information provided meets the requirements for Phase I bond release.

Bonding and Insurance Requirements

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

Analysis:

General

The applicant is required to submit the bond release application during a season when it is possible to evaluate the success of reclamation. The Division received the application December 23, 1999, which is not normally a time when it is possible to easily view or gain access to the site. However, since the Division delayed analyzing the bond release application, the timing of the submittal is not critical.

The applicant submitted copies of letters it sent to owners of land in the area and to local, state, and federal agencies. The application also includes a copy of the affidavit of publication

for the public notice that was published in the *Emery County Progress* April 25 through May 16, 2000.

The mining and reclamation plan contains copies of concurrence letters from the Forest Service, the state Division of Wildlife Resources, and the Bureau of Land Management.

The applicant does not seek any bond reduction for the Miller Canyon portals. Since no bond reduction is sought, the Division will not recalculate the bond at this time.

Findings:

The applicant has complied with the requirements of the mining and reclamation plan and this section of the regulations.

APPENDIX A

Affidavit of Publication Notice

Site Photos (see <ftp://dogm.nr.state.ut.us/PUB/MINES/Coal/C015/019/IMAGES/09062001/>)

Bond Release Inspection Report

Surface and Mineral Owner Concurrence Letters

Forest Service
BLM

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October 19, 2001

TO: Internal File

THRU: Pamela Grubaugh-Littig, Permit Supervisor *Pgl*

FROM: Susan White, Sr. Reclamation Specialist/Biology *smw*
Priscilla Burton, Sr. Reclamation Specialist/Soils *PB*
Wayne Western, Sr. Reclamation Specialist/Engineering
Dave Darby, Sr. Reclamation Specialist/Hydrology
Pete Hess, Sr. Reclamation Specialist/Engineering *PH by smw*

RE: Bond Release Inspection for Miller Canyon Portals, PacifiCorp,
Cottonwood/Wilberg Mine, C/015/019-BR99D

Other Attendees: Chuck Semborski (PacifiCorp), Dennis Oakley (PacifiCorp), and Dale Harbor (Manti LaSal Forest)

Date & Time: September 6, 2001, 10:30 a.m. to 12:30 p.m.

PURPOSE:

This field visit was conducted as required by R645-301-880.210 for Phase I bond release. The portals were sealed in 1987 and backfilled and seeded in 1999. The area of disturbance is 0.02 acres.

OBSERVATIONS:

General

The portals are on the steep, south facing slope of a box canyon about 150 - 200 feet above the canyon floor. Evidence of the coal outcrop is noticeable on the opposite side of the canyon at two elevations. All three portals drain water which enter the canyon bottom. In total, the amount of water seen during the bond release inspection was estimated to be approximately 5 gal/min.

Vegetation on all three portals was sparse but establishing. Some observed species included: Fourwing saltbush, rabbitbrush, bluebunch wheatgrass, flax, thistle, shadscale, combed eriogonum, penstemon, bulrush, colombine, and willow. The flax and fourwing had been browsed by wildlife. The seeded areas around the portals had roughly 10 to 20 percent vegetative cover.

TECHNICAL FIELD VISIT

Portal #1: This portal lies the farthest east in the box canyon. It is the largest disturbance due to the fact that native soils were raked from the areas above and to the sides of the backfilled opening. The disturbed ground has rilled, but between rills the surface has cemented. A small micro-drainage channel has formed though the backfilled area. The channel appeared stable with some rock armoring. Water was observed flowing from the sandstone ledge. The water is supporting a small wetland of sedges. A sample of the water was last taken in 1999. The pH was 7.7, and total Iron was 1.0 ppm. A reddish-orange color appears below the point where water flows from the french drain. It appears to be oxidized, but may also be related to an algae growth in the small stream of water (approx. 3 gpm) that emanates from the drain. The measured iron in samples appears low with manganese somewhat higher. It was noticed that flows from the cliffs were not new. Evidence of old algal growth was observed near the stream channel in the chunks of travertine.

Portal #2: A very large rock sits on the sandstone ledge approximately 10 feet from the portal and holds the soil. Soil was backfilled against the rock and the portal face up. Coal chunks are scattered on the surface.

Portal #3: Willows have established at the base of Portal #3 along the sandstone ledge. An erosion gully approximately 6 to 7 inches wide, 4 to 8 inches deep, and 4 to 6 feet long was observed. Coal fines were visible. Pinyon or juniper dead fall had been placed on the surface during reclamation.

Backfilling and Grading

The slopes were backfilled to a 2H : 1V slope. The slopes have been in place since 1999, and appear to be stable. Some minor erosion was seen at the site, but appears to be stable. Most of the rills seemed to be self-armoring with time. All the portals have french drains, which discharge water.

Approximate Original Contours

No off-site impacts were noticed from backfilling and grading activities. Some of the Division's staff had concerns about coal on the surface. However, coal naturally outcrops in the area and the amount of coal is minor.

The portals were backfilled and graded so that they blend into the surrounding area. The Permittee placed logs and other materials at the site so that it blends into the adjacent areas. See the photos for more details.

The portals were break-outs and were constructed from inside the mine. The amount of surface disturbance at the site was minimal. The area of the highwalls that was disturbed amounted to little more than the portals which were 20 feet wide by 6 feet high. The highwall areas were backfilled and graded. Some coal outcrops about the portal entrances were seen during the visit. Since those areas were not disturbed, they do not need to be backfilled. Since coal outcrops naturally occur in the area, the Division is not concerned that some of the coal

above the highwalls was left exposed.

Water Quality

The UPDES monitoring discharge point for the Miller Canyon Portals is below the reach of the spring discharge. Monthly UPDES monitoring does not represent the Miller Canyon Portal discharge.

During the bond release period, the operator should monitor the flows from the portals. This should be done at least once a year at the confluence of the three discharges. The Forest Service also requested continued flow monitoring of the discharge during this inspection.

Water quality should be sampled at Portal #1 for Class 3D parameters (during early summer) to identify increases in flow patterns and changes in water quality. Sampling should be done at the point where water emanates from the french drains. Sampling should be adequate to demonstrate the post-mining land use. Class 3D is protected for non-game fish and other aquatic life, including the necessary aquatic organisms in their food chain. (Although, Cottonwood Creek and its tributaries, from Highway U-57 crossing to headwaters is protected by Class 1C, 2B, 3A, and Class 4 quality parameters as noted for in the Classification of Waters of the State R317-2-13, it would seem that the amount of water and the remote location limits the use of the water to wildlife.) For informational purposes, the classes of protection listed in R317-2-13 are included in this report as Attachment 1.

RECOMMENDATIONS/CONCLUSIONS:

The reclamation of the Miller Canyon Portals meet the requirements for Phase I bond release. As a result of this inspection, the following three actions are recommended for future bond releases.

- The rate of water discharge from the three portals should be monitored at their confluence annually in summer through final bond release. If substantial changes in flow should occur, ie, a 3 fold increase, then a water sample should be taken and analyzed. The sample taken at the French drain should be analyzed for flow, pH, oil and grease, temperature, TSS, dissolved iron, dissolved manganese and TDS.
- An initial red precipitate sample from Portal #1 should be analyzed in the laboratory to determine the composition of the red precipitate.
- The water should be sampled at the three portals confluence and analyzed for Class 3D parameters. The frequency should be adequate to demonstrate compatibility with the post-mining land use.

Photos from this field visit are located at:

<ftp://dogm.nr.state.ut.us/PUB/MINES/Coal/C015/019/IMAGES/09/06/2001/>

Attachment 1

Repeated below is an abbreviated table of quality parameters for Class 3, Aquatic Life.

c. Class 1C -- Protected for domestic purposes with prior treatment by treatment processes as required by the Utah Division of Drinking Water

b. Class 2B -- Protected for secondary contact recreation such as boating, wading, or similar uses.

6.3 Class 3 -- Protected for use by aquatic wildlife.

a. Class 3A -- Protected for cold water species of game fish and other cold water aquatic life, including the necessary aquatic organisms in their food chain.

b. Class 3B -- Protected for warm water species of game fish and other warm water aquatic life, including the necessary aquatic organisms in their food chain.

c. Class 3C -- Protected for nongame fish and other aquatic life, including the necessary aquatic organisms in their food chain.

d. Class 3D -- Protected for waterfowl, shore birds and other water-oriented wildlife not included in Classes 3A, 3B, or 3C, including the necessary aquatic organisms in their food chain.

e. Class 3E -- Severely habitat-limited waters. Narrative standards will be applied to protect these waters for aquatic wildlife.

6.4 Class 4 -- Protected for agricultural uses including irrigation of crops and stock watering.

6.5 Class 5 -- The Great Salt Lake. Protected for primary and secondary contact recreation, aquatic wildlife, and mineral extraction.

TABLE 2.14.2
NUMERIC CRITERIA FOR AQUATIC WILDLIFE

Parameter	Aquatic Wildlife			
	3A	3B	3C	3D
PHYSICAL				
Total Dissolved Gases	(1)	(1)		
Minimum Dissolved Oxygen (MG/L) (2)				
30 Day Average	6.5	5.5	5.0	5.0
7 Day Average	9.5/5.0	6.0/4.0		
1 Day Average	8.0/4.0	5.0/3.0	3.0	3.0
Max. Temperature (C)	20	27	27	
Max. Temperature Change (C)	2	4	4	
pH (Range)	6.5-9.0	6.5-9.0	6.5-9.0	6.5-9.0
Turbidity Increase (NTU)	10	10	15	15

METALS (3)				
(DISSOLVED,				
UG/L) (4)				
Aluminum				
4 Day Average (12)	87	87	87	87
1 Hour Average	750	750	750	750
Arsenic (Trivalent)				
4 Day Average	190	190	190	190
1 Hour Average	360	360	360	360
Cadmium (5)				
4 Day Average	1.1	1.1	1.1	1.1
1 Hour Average	3.9	3.9	3.9	3.9
Chromium (11)				
(Hexavalent)				
4 Day Average	11	11	11	11
1 Hour Average	16	16	16	16
Chromium				
(Trivalent) (5)				
4 Day Average	210	210	210	210
1 Hour Average	1700	1700	1700	1700
Copper (5)				
4 Day Average	12	12	12	
1 Hour Average	18	18	18	18
Cyanide (Free)				
4 Day Average	5.2	5.2	5.2	
1 Hour Average	22	22	22	22
Iron (Maximum)				
4 Day Average	1000	1000	1000	1000
Lead (5)				
4 Day Average	3.2	3.2	3.2	3.2
1 Hour Average	82	82	82	82
Mercury				
4 Day Average	0.012	0.012	0.012	0.012
1 Hour Average (11)	2.4	2.4	2.4	2.4
Nickel (5)				
4 Day Average	160	160	160	160
1 Hour Average	1400	1400	1400	1400
Selenium				
4 Day Average	5.0	5.0	5.0	5.0
1 Hour Average	20	20	20	20
Silver				
1 Hour Average (5)	4.1	4.1	4.1	4.1
Zinc (5)				
4 Day Average	110	110	110	110
1 Hour Average	120	120	120	120

FOOTNOTES:

(1) Not to exceed 110% of saturation.

(2) These limits are not applicable to lower water levels in deep impoundments. First number in column is for when early life stages are present, second number is for when all other life stages present.

(3) Where criteria are listed as 4-day average and 1-hour average concentrations, these concentrations should not be exceeded more often than once every three years on the average.

(4) The dissolved metals method involves filtration of the sample in the field, acidification of the sample in the field, no digestion process in the laboratory, and analysis by atomic absorption spectrophotometry or inductively coupled plasma (ICP).

(5) Hardness dependent criteria. 100 mg/l used. Conversion factors for ratio of total recoverable metals to dissolved metals must also be applied. See Table 2.14.3 for complete equations for hardness and conversion factors.

(6) Un-ionized ammonia toxicity is dependent upon the temperature and pH of the water body.

(7) Numeric criteria will be established based on a site-specific assessment of potential impacts to aquatic wildlife.

(8) Investigations should be conducted to develop more information where these levels are exceeded.

(9) pH dependent criteria. pH 7.8 used in table. See Table 2.14.4 for equation.

(10) Total Phosphorus as P (mg/l) limit for lakes and reservoirs shall be 0.025.

(11) Total recoverable metals to dissolved metals conversion factors must be applied to arrive at correct dissolved metals criteria. The conversion factors are: chronic hexavalent chromium criteria, 0.962; acute hexavalent chromium criteria, 0.982; acute mercury criteria, 0.850.

(12) The criterion for aluminum will be implemented as follows: Where the pH is equal to or greater than 7.0 and the hardness is equal to or greater than 50 ppm as CaCO₃ in the receiving water after mixing, the 87 ug/l chronic criterion (expressed as total recoverable) will not apply, and aluminum will be regulated based on compliance with the 750 ug/l acute aluminum criterion.

AFFIDAVIT OF PUBLICATION

STATE OF UTAH)

ss.

County of Emery,)

I, Kevin Ashby, on oath, say that I am the Publisher of the Emery County Progress, a weekly newspaper of general circulation, published at Castle Dale, State and County aforesaid, and that a certain notice, a true copy of which is hereto attached, was published in the full issue of such newspaper for 4 (Four) consecutive issues, and that the first publication was on the 25th day of April, 2000 and that the last publication of such notice was in the issue of such newspaper dated the 16th day of May, 2000.



Kevin Ashby - Publisher

Subscribed and sworn to before me this 16th day of May, 2000.



Notary Public My commission expires January 10, 2003 Residing at Price, Utah

Publication fee, \$ 249.60

APPLICATION FOR PHASE III BOND RELEASE

COTTONWOOD/WILBERG MINE

ACT/015/019

ENERGY WEST MINING COMPANY

P.O. BOX 310

HUNTINGTON, UTAH 84528

PacifiCorp, by and through its wholly-owned subsidiary, Energy West Mining Company ("Energy West") as mine operator, has filed with the Division of Oil, Gas and Mining an application for partial release of the reclamation performance bond for the Miller Canyon portal breakouts of the Cottonwood/Wilberg Mine.

The Miller Canyon breakouts were located within Federal Coal Lease is U-083066 in the SE1/4 of Section 30, Township 17 South, Range 7 East, SLB&M. Total disturbance associated with the ventilation breakouts is approximately 0.02 acres.

The Miller Canyon ventilation breakouts consisted of three separate portals located on a steep escarpment in Miller Canyon on the western side of East Mountain. On June 25, 1999, Energy West completed final reclamation of the portal sites as specified in the approved plan. Reclamation activities consisted of reconfiguration of the landscape to be consistent with the surrounding environment.

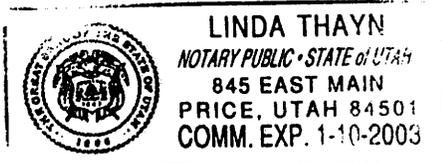
The portals were located in the coal outcrop and talus deposits on a vertical cliff face. As part of PacifiCorp's enhancement project, rock and aesthetically appealing materials were strategically placed along the coal outcrop area to blend the portal site to the surrounding terrain. Ground water discharges that occur from the portal area will be monitored according to the approved plan and Utah Pollution Discharge Elimination System guidelines. Phase I and Phase II bond release requirements have been met.

A Surety bond is posted with the Division for the Cottonwood/Wilberg mine in the amount of \$2,071,098.00. PacifiCorp is requesting Phase III release of reclamation liability. Bond reduction is not requested.

This notice is being published to comply with the Surface Mining Control and Reclamation Act of 1977 and State and Federal regulations promulgated pursuant to said Act.

Written comments or objections may be submitted to: State of Utah Department of Natural Resources, Division of Oil, Gas and Mining, 1594 West North Temple, Suite 1210, Box 145801, Salt Lake City, Utah 84114-5801.

Published in the Emery County Progress April 25, May 2, 9, and 16, 2000





United States
Department of
Agriculture

Forest
Service

Manti-La Sal
National Forest

Supervisor's Office
599 West Price River Drive
Price, UT 84501
Phone # (435) 637-2817
Fax# (435) 637-4940

OK

File Code: 2820-4
Date: October 19, 2001

Pamela Grubaugh-Littig
Permit Supervisor
Utah Division of Oil, Gas and Mining
1594 West North Temple, Suite 1210
P.O. Box 145801
Salt Lake City, UT 84114-5801

Incoming
10/15/019 - BR99D
Copy Pam

Subject: Phase I Bond Release for Miller Canyon Breakouts, Cottonwood-Wilberg Mine,
C/015/019-BR99D

Dear Pam:

The Manti-La Sal National Forest concurs with the Phase I bond release for the Miller Canyon breakouts of the Cottonwood-Wilberg Mine. However, we feel a change in water monitoring is necessary to evaluate potential impacts to National Forest System lands.

Sincerely,

Elaine J. Zieroth
ELAINE J. ZIEROTH
Forest Supervisor

RECEIVED

OCT 23 2001

DIVISION OF
OIL, GAS AND MINING





United States Department of the Interior

BUREAU OF LAND MANAGEMENT

Price Field Office
125 South 600 West
Price, Utah 84501

3482
SL-064900
U-083066
(UT-070)

Pamela Grubaugh-Littig
Permit Supervisor
Utah Division of Oil, Gas and Mining
1594 West North Temple Street, Suite 1210
Salt Lake City, Utah 84114-5801

APR - 4 2000

Re: Miller Canyon Portals Reclamation, PacifiCorp, Cottonwood/Wilberg Mine, Act/015/019

Dear Mrs. Grubaugh-Littig:

We have received a copy from you of PacifiCorp's request for release of reclamation liability for the subject mine portals. The three portals comprising the Fourth South off Seventh West air/escape way entries into Miller Canyon were permanently sealed in 1987, of which we observed and approved. The permanent seals are adequate protection to the coal resource under the Mineral Leasing Act. The reclamation aspect to the portals at the outcrop is under the jurisdiction of your agency and the Manti-LaSal National Forest. We therefore have no objections to the release of liability for these breakouts and concur with PacifiCorp's request.

If you have any questions, please contact Stephen Falk of my staff at (435) 636-3600.

Sincerely,

Steve E. Rousseau (Acting)

for Richard L. Manus
Field Manager

cc: UT-921, SD, Utah
Energy West Mining Company
P. O. Box 310
Huntington, Utah 84528
Utah Division of Oil, Gas and Mining
Price Field Office
451 East 400 North
Price, Utah 84501

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APR 06 2000

**DIVISION OF
OIL, GAS AND MINING**