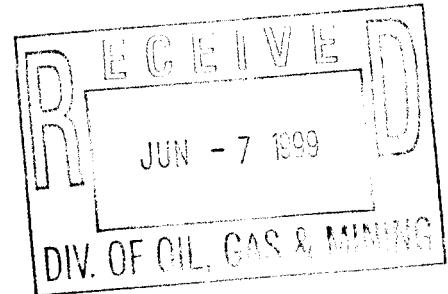




PO Box 310
Huntington, Utah 84528

June 4, 1999

Utah Coal Program
Utah Division of Oil, Gas, and Mining
Price Field Office
College of Eastern Utah
457 East 400 North
Price, Utah 84501



Attn: Bill Malencik

Re: Notice to Conduct Reclamation Activities at the Miller Canyon Portals, PacifiCorp, Cottonwood/Wilberg Mine, ACT 015/019, Emery County, Utah

Copy Joe -

PacifiCorp, by and through its wholly-owned subsidiary, Energy West Mining Company ("Energy West") as mine operator, hereby submits a notice of intent to reclaim the portal breakouts in Miller Canyon. Reclamation will begin during the week of June 21, 1999 and progress until the work is completed. Energy West estimates that the project will take approximately three days to complete.

The Miller Canyon portals were developed as intake portals in October of 1981 (refer to location and plan view drawing in Attachment #1). This facility consist of three ft. x 16 ft. portals on 100 ft. centers. The portals were used for intake purposes until the Wilberg Mine fire in December 1984. At that time they were temporarily sealed. The portal furthest east (# 1 portal) was reopened in 1985 for exploration purposes after the mine fire. The portals were subsequently sealed permanently (MSHA approved) in 1987.

The #1 portal is provided with a 2 inch water monitoring pipe. Small quantity discharges occur at this point. The discharges are monitored in accordance with stipulations in the UPDES Permit, UT-0022896-004. No discharges have been recorded at site 004 since 1996.

A recent field investigation of the portals revealed that there has been some caving of the portal openings. The pipe in the #1 portal has been pinched off allowing mine discharge water to flow freely over the rock ledge to the canyon floor. The total disturbance of these portals is approximately 0.02 acres. There is currently no reclamation plan for the Miller Canyon breakouts in the approved MRP.

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6/4/99

Huntington Office:
(435) 687-9821

Fax (435) 687-2695
Purchasing Fax (435) 687-9092

Deer Creek Mine:
(435) 687-2317
Fax (435) 687-2285

Trail Mountain Mine:
(435) 748-2140
Fax (435) 748-5125

Reclamation will be accomplished utilizing helicopter support for transporting materials from the staging area in Cottonwood Canyon to the portal areas in Miller Canyon. The staging area in Cottonwood Canyon is located approximately 2 miles from the junction of State Highway 29 on Emery County Road 506. The Emery County road department occasionally uses this area as a road chip storage area. A road encroachment application has been submitted to Emery County and verbally approved as of June 2, 1999.

The following gives an overview of the reclamation that will be conducted at these portal sites according to the Utah Coal Regulations R645-100 through R645-301-800.

R645-301-100: General

All requirements in this section have been met and can be found in the Cottonwood/Wilberg MRP, Volume 1, pages 1-1 through 1-66.

R645-301-200: Soils

Soil from the Cottonwood/Wilberg waste rock site storage area will be utilized to establish a vegetative cover over the backfilled openings. Attachment #2 shows the location of the soil piles within the old Cottonwood/Wilberg waste rock site. Soil pile "B" will be utilized for reclamation. This soil was excavated in 1995 from the Cottonwood Fan Portal (CFP) area. It was to be used for final reclamation of the fan portal area, but was not needed since a sufficient amount of soil was stored at the CFP site. Samples were taken from piles "A", "B", and "C" and sent to InterMountain Laboratory in Sheridan, Wyoming for analysis. These soils were found to be fair to good when compared to the soil suitability criteria in Appendix A of the *Guidelines for Management of Topsoil and Overburden for Underground and Surface Coal Mining – 1988*. The analysis report is found in Attachment #3.

The soil from the CFP site was transported to the old Cottonwood/Wilberg waste rock site and stored in a fenced area as depicted in the figure in Attachment #2. The soil was then covered with curlex blanketing to protect it from wind and water erosion. An approved vegetative seed mix was used on the soil piles to promote biotic growth and provide erosion control.

R645-301-300: Biology

Following backfilling and grading, an approved final seed mixture will be placed on the reclaim site. This seed mixture is identical to the mixture used at the CFP reclamation site and discussed below. Revegetation techniques are as follows:

- ❖ After soil is unloaded by helicopter at the portals, the area will be hand raked to ensure that all disturbed slopes are adequately covered with approximately 18" of soil material.
- ❖ The surface will be roughened to control runoff and erosion. Litter material (rocks and tree branches) will also be incorporated into the slope to protect against erosion.
- ❖ The seed mixture will be broadcast by hand onto the reclaimed slopes.
- ❖ The soil surface will then be turned lightly by hand raking to cover the seeds.

Seed Mixture - Final Revegetation for the Miller Canyon Portal Breakouts

<u>Common Name</u>	<u>Scientific Name</u>	<u>Lbs/Acre</u> <u>PLS*</u>
<u>Grasses</u>		
Western wheatgrass	Agropyron smithii	3
Bluebunch wheatgrass	Agropyron spicatum	3
Indian ricegrass	Oryzopsis hymenoides	3
Needle and thread grass	Stipa comata	1
Thickspike wheatgrass	Agropyron dasystachyum	1
Great Basin wildrye	Elymus ciaereus	2
<u>Forbs</u>		
Blueleaf aster	Aster glaucodes	.5
Utah sweet vetch	Hedysarum boreale	1
Lewis flax	Linum lewisii	1
Globemallow	Sphaeralcea coccinea	.5
Yarrow	Achillea millefolius	.5
Palmer penstemon	Penstemon palmeri	1
	Total	<u>17.5</u>
<u>Shrubs</u>		
Serviceberry	Amelanchier alnifolia	1
Fourwing saltbush	Atriplex canescens	2
Green Mormon tea	Ephedra viridis	1
Wyoming big sagebrush	Artemesia wyoningensis	.5
Big white rabbitbrush	Chrysothamunus nauseosus	
	var. albicaulis	.5
	Total	<u>5</u>

The total disturbance is approximately 0.02 acres. This equates to approximately 0.5 lbs. of pure live seed to complete revegetation at the Miller Canyon portals.

Fish and Wildlife

Fish and wildlife information is provided on pages 2-159 through 2-174 in Volume 2 of the Cottonwood/Wilberg MRP.

A raptor survey was conducted in May 1999 of the Miller Canyon area. One active eagle nest was located in the canyon approximately ½ mile west of the portals and 1000 feet higher in elevation. Chris Colt (Division of Wildlife Resources – Price District) has been informed of the reclamation activities to be conducted in the canyon. Refer to Attachment #1 for nest location.

Through the establishment of a mine discharge in portal #1, a riparian habitat has formed. Final reclamation of the portals consist of establishing french drains in each of the portals. A french drain will conduct mine discharge from the portals to the rock ledge directly outby the portals. Mine discharge will flow freely down the rock face to the canyon floor. Historically the discharge dissipates completely within approximately 100 feet down the canyon. The mine discharge has been a good water source for wildlife that occupies the area in and around Miller Canyon. Typical springtime discharge quantities are less than approximately 2.0 gpm and decrease as the year progresses. A water sample of the discharge was taken in May 1999 and found that it meets drinking water standards for TDS. The water analysis is found in Attachment #3. Historical records of baseline and operational sampling is included in this attachment. Minimum, maximum, and mean values of various parameters are displayed in these reports. A Bioassay toxicity testing report from 1995 and 1996 is also included. Water quality is presented in more detail in the R645-301-700: Hydrology Section.

R645-301-400: Land Use and Air Quality

Post-mining land use for the Cottonwood mine is grazing and wildlife. Given the fact that the portals are located on steep (nearly vertical) rock outcrops, this area is only considered for wildlife. It is highly unlikely that cattle could access the steep ledges in and around the portal areas. Recent site visits found no signs of any cattle grazing in the immediate area.

R645-301-500: Engineering

As stated earlier, backfilling and grading will be conducted utilizing helicopter support. A staging area will be located along side County Road 506 in Cottonwood Canyon. Rock and soil material stored at this area will be lifted out by helicopter using a long-line belly-dump and/or cargo net to haul this material. The material will be dumped at each of the three portals.

Approximately 48 yds³ of total material (soil and rock) will be needed at each portal. Of this material, it is estimated that 41 yds³ will be rock material of various sizes. Larger rock material will be used first. Smaller material will be used to fill in the voids of the larger material. The idea is to create a french drain that will enable mine discharge to flow from the portal area. Refer to the typical cross-section in Attachment #4.

After the helicopter dumps its load at the portal, the rock material will be moved by hand to insure all areas of the portal are covered. The rock material will be pushed back into the portal as far as possible for complete closure.

After the rock material backfill is in place, a filter liner will be laid down over the top of it. The filter material is used as a barrier so soil cannot infiltrate the rock material. Infiltration of soil will eventually clog the french drain, possibly causing discharges in undesired locations. Soil material will be laid down to a thickness of approximately 18". Litter material will be placed on the newly graded soil that will guard against erosion. The area will be revegetated as outlined in R645-301-300: Biology. A digital rendition of the reclamation sequences is displayed in Attachment #5.

Lastly, the 2 inch water monitoring pipe that runs in excess of 500 feet down the canyon will be removed. The pipe will be removed by helicopter and disposed.

R645-301-600: Geology

This section provides useful geologic information for understanding ground water and surface water resources in the area. These resources are dependent on the geology of East Mountain. Refer to the following hydrology section for a full discussion of water related resources.

Stratigraphy of the Miller Canyon Portal Area.

The rock formations exposed in the Miller Canyon Portal area are restricted to the Upper Cretaceous period. The formations, in ascending order, Star Point Sandstone, Blackhawk. The Star Point Sandstone, which is a prominent cliff former, consists of several eastward thinning marine sandstone tongues of medial Campanian age (Clark, 1928). Westward thinning wedges of the Masuk Shale interfinger with the basal tongues of the Star Point Sandstone. The three members are the basal Panther Sandstone, the middle Storrs Sandstone, and the upper Spring Canyon Sandstone. These sandstone units are generally separated from each other by westward projecting tongues of Mancos Shale. The basal Panther Sandstone is approximately 100 feet thick and consists of massive, well indurated, crossbedded delta front sandstones. The Storrs Sandstone is located about 120 feet above the top of the Panther Member and consists of 50 feet of soft, friable sandstone. The Spring Canyon is located about 80 feet above the top of the Storrs Member and consist of 100 feet of massive, fine to medium grain, crossbedded delta front sandstones. Even though the Star Point formation exists

throughout the entire East Mountain property, the low permeability and lack of recharge limit its usefulness as a water producing aquifer. Permeability and the limiting factors of recharge, i.e., very little outcrop exposure and limited vertical groundwater migration, are caused by the mudstone layers of the upper formations.

The Blackhawk Formation overlies the Star Point Sandstone and is 625-800 feet thick in the Miller Canyon Portal area. The Blackhawk consists of alternating sandstones, siltstones, shales and coal deposited in a deltaic environment. Although coal is generally found throughout the Blackhawk Formation, the economic seams are restricted to the lower 150 feet of the formation. The Hiawatha seam was naturally exposed prior to development mining at the Miller Canyon. The seam is approximately seven and half (7 ½) feet thick and consist of several mudstone splits in the upper portion of the seam. The sandstones contained within the Blackhawk Formation are fluvial and increase in number in the upper portions of the formation. Many of the tabular sandstone channels form local perched water tables. Several small seeps occur along the boundary of the Blackhawk and Star Point Sandstone formations.

Structure – Miller Canyon Portal Area.

There are no identified faults or major folds within the Miller Canyon Portal area. The axis of the Straight Canyon Syncline lies to the northwest of the Miller Canyon Portal area (See Volume 8 Structural Contour Map - Hiawatha Seam). The Hiawatha seam in the Miller Canyon area has a dip of approximately 2° to the northwest.

R645-301-700: Hydrology

This section provides a detailed description of the hydrology, including groundwater and surface water of the Miller Canyon area.

To provide necessary ventilation to the western portion of the Wilberg Mine, entries were developed in 1981 from the 3rd South Mains to Miller Canyon. Ventilation breakouts in Miller Canyon consist of 3 portals in the Hiawatha Seam located near the head of Miller Canyon approximately one hundred and fifty (150) feet above the canyon floor. Topography in the area is extremely steep and access is limited. During development of 7th West and 4th South, several sandstone channel systems were encountered which produced minor quantities of groundwater (<20 gpm). Earth berms were constructed at the portal locations to prevent the discharge of

intercepted groundwater. PacifiCorp (Utah Power & Light Company) applied for additional NPDES (UPDES) discharge point (location 004) in 1982 and started reporting in the first quarter of 1983. Discharge from the portals was initiated after the sealing in 1984. Due to the steep topography, a

2" discharge pipe was installed to assist in sample collection. Discharge from the Miller Canyon breakouts average less than 20 gpm and steadily decreased from 1994 to 1996 to less than 5 gpm. No discharge has been reported from the portals since August 1996. Field investigations conducted in May 1999 identified minor seeps at portals two and three, and discharge from portal one was estimated at less than 3 gpm. Flow from portal area reaches the canyon floor, but dissipates within 100 feet from the portal area.

Groundwater Resources - Seeps

The characteristics and usefulness of a groundwater resource are dependent upon the geology of the water-bearing strata and on the geology and hydrology of the recharge area. Groundwater movement and storage characteristics are dependent on the characteristics of the substratum. To facilitate an understanding of groundwater of the East Mountain property including the Miller Canyon area refer to Volume 9 - Hydrologic Section for a complete discussion of pertinent regional hydrologic and geologic features.

Groundwater resources of the Miller Canyon area are limited to a series of seeps located near the formational contact between the Blackhawk and Star Point Sandstone formations and the gravity discharge from the old mine workings. The source of the groundwater seeps is from the winter snowpack which melts and infiltrates the lower Blackhawk Formation through vertical fractures. The groundwater flows down vertically until it intersects mudstone layers above and below the Hiawatha seam. Groundwater flow continues horizontally down dip through the permeable sandstone channels located above the Hiawatha seam and the upper member of the Star Point Sandstone Formation until it intersects the land surface in the form of seeps. Flow from the seeps is insufficient for quantity and quality determination. During reclamation, to facilitate post mine gravity discharge from the portals, french drains will be installed to prevent slope failure due to saturation of the fill (refer to Attachment #4 for a typical of a french drain). Construction of the french drain will consist of a layer of rock material to a depth of at least 6" to cover the affected area. A filter fabric will be placed over the drain rock to prevent contamination of the drain system. The size of the drain systems will be dependent upon topographic constraints along with size of the seep.

Post Mine Gravity Discharge

Gravity discharge from intercepted groundwater in the Wilberg Mine will occur as seeps from the individual portals. As mentioned early, several small seeps occur along the formational boundary between the Blackhawk and Star Point formations. Flow from the formational seeps is insufficient for sample collection. Surface Water Resources

The PacifiCorp permit area including the Miller Canyon portal area is located in the headwater region of the San Rafael River Basin. The surface drainage system of the Miller Canyon area is

confined exclusively to the Cottonwood Canyon Creek drainage system (refer to Vol. 9 - Hydrologic Section: Map HM-1). For a complete discussion of the surface water systems of the East Mountain property including the Miller Canyon refer to Volume 9 - Hydrologic Section.

The Miller Canyon area consists of approximately 0.02 acres located on a south-facing slope in the Miller Canyon drainage. Surface flow prior to the mine development in 1981 consisted of sheet flow downslope until intersecting Miller Canyon drainage system.

Surface Water Quality

Miller Canyon is an ephemeral drainage which flows to Cottonwood Canyon Creek. The portals are located approximately one half (1/2) mile from the confluence of Miller Canyon and Cottonwood Canyon Creek. In 1983 the portal location was incorporated into the Wilberg/Cottonwood UPDES permit: UT-0022896, as outfall location 004. Discharge water quality from the portal area is monitored according to UPDES permit stipulations. Discharge has not occurred from the portal area since 1996. Water quality and quantity of the receiving stream - Cottonwood Canyon Creek, is monitored above and below the Miller Canyon at site SW-2 and SW-3 as specified in Appendix A of Volume 9 - Hydrologic Section. Results of the monitoring including hydrographs and water quality statistics are reported in the Annual Hydrologic Report.

Sampling and Analysis

Water quality sampling and analysis of samples collected by PacifiCorp were done according to the "Standard Methods for the Examination of Water and Wastewater." Attachment #3 consists of historic water quality data for the Miller Canyon discharge. Also within Attachment #3 is a recent quality sample analysis. This sample compared well with the historical data, which suggests a stabilization of water quality from the mine water discharge.

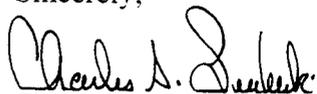
In addition to the routine water quality sampling, PacifiCorp conducted bioassay sampling to satisfy the UPDES permit. Samples collected from Miller Canyon passed the fifty (50) percent mortality criteria established in the permit. This information is also found in Attachment #3.

R645-301-800: Bonding and Insurance

Currently, the Cottonwood/Wilberg Mine reclamation bond is \$2,071,098.00. Costs associated with this project will not affect the bond liability. Insurance is provided for and was updated in February 1999.

Based on extensive research by Energy West, all parameters necessary to this reclamation project have been covered and are included in the preceding text. If you have any questions or concerns regarding this notice to conduct reclamation operations, please contact myself at 435-687-4720 or Dennis Oakley at 435-687-4825.

Sincerely,



Chuck Semborski
Geology/Permitting Supervisor

Enclosures

DCO/dco/cas

Cc: Jeff DeFreest – USFS - Price District
Chris Colt - DWR – Price District
Joe Helfrich – DOGM – Salt Lake City
Blake Webster – IMC w/o Attachments
Carl Pollastro – EWMC w/o Attachments
File