



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

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October 15, 2002

TO: Internal Files

THRU: James D. Smith, Sr. Reclamation Specialist, Hydrology/Team Lead *JDS*

FROM: Stephen J. Demczak, Sr. Reclamation Specialist/Engineering *WHW for SJH*  
 Wayne H. Western, Sr. Reclamation Specialist/Engineering *WHW*

RE: Mill Fork Lease, PacifiCorp, Deer Creek Mine, C/015/018-PM01I

**SUMMARY:**

The Mill Fork lease lies within the Huntington Canyon-Gentry Mountain and Ferron Canyon, Cottonwood-Trail Mountain multiple-use evaluation area as described in the Manti-La Sal National Forest Land and resource management plan. The Permittee acquired the Mill Fork lease and entered a coal mining lease and agreement with the State on April 1, 1999. On October 29, 2001, the Division received the PAP for the Mill Fork Lease.

The April 15, 2002 submittal contained a response to the deficiencies to the initial response.

**TECHNICAL ANALYSIS:**

**ENVIRONMENTAL RESOURCE INFORMATION**

**MAPS, PLANS, AND CROSS SECTIONS OF RESOURCE INFORMATION**

Regulatory Reference: 30 CFR 783.24, 783.25; R645-301-323, -301-411, -301-521, -301-622, -301-722, -301-731.

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**Analysis:**

**Affected Area Boundary Maps**

The affected area is usually considered by the Division to be the same as the permit boundaries. The Permittee submitted several maps that show the permit boundaries for the Mill Fork lease. This issue has been address below in the section called Maps, Plans and Cross Sections of Mining Operations.

**Existing Structures and Facilities Maps**

The Mill Fork Lease will not have any surface facilities at the present time. All mining activities will be conducted underground. However, the permittee did make a statement that they are evaluating the possibility of new portals located at Crandall Canyon. This would require a separate permitting action and will not be approved under the C/015/018-PM01I (Mill Fork Lease).

**Existing Surface Configuration Maps**

Several maps show the existing surface configuration of the Mill Fork lease area, such as Drawing MFS1839D, Deer Creek Mine Mill Fork Lease ML-48258 Pre-Subsidence Survey Map. The map is at a scale of 1" = 1,000 'and has 100 foot contours.

**Mine Workings Maps**

The permittee has submitted maps showing the underground mine working associated within the Mill Fork Lease. The maps show active, inactive and abandoned underground mine workings of Genwal Coal Company, Skeen Mine, Helco Mine, Beaver Creek Mine, and the Deer Creek Mine.

The permittee has given mine projection for the Blind Canyon and Hiawatha coal seam in the Mill Fork Lease. Map MFU-1840D gives the mining sequence for nineteen years in the Hiawatha Seam. These maps are projections and can change in the future due to ground condition, roof control, coal quality, mineable reserves and coal market.

**Permit Area Boundary Maps**

The Permittee submitted several maps that show the permit boundaries for the Mill Fork lease. This issue has been address below in the section called Maps, Plans and Cross Sections of Mining Operations.

### **Surface and Subsurface Ownership Maps**

The surface and subsurface ownership maps for the Mill Fork lease are Drawings MFS1838D and MFU1837D respectively. The maps identify the ownership of both surface and coal rights.

### **Surface and subsurface manmade features maps**

Map MFU1840D shows that Genwal mine facilities are within 1000 ft of the proposed permit area. The permittee has identified the buildings that are in or within 1,000 feet of the proposed permit area. The buildings are the Genwal mine facility and are shown on Figure R645-301-500a.

The permittee has identified surface and subsurface man made features within, passing through, or passing over the proposed permit area see Page 5-20 and 5-21 and on Map MFS1839D.

The permittee has shown two gas wells, one of which is proposed. This is illustrated on several of the mine maps. The gas well in Section 23 in the Mill Fork Lease will not be mined. The proposed gas well in Section 14 will be mined by longwall mining between the years 2012-2016. See map MFU1840D.

### **Contour Maps**

Several maps show the existing contours of the Mill Fork lease area, such as Drawing MFS1839D, Deer Creek Mine Mill Fork Lease ML-48258 Pre-Subsidence Survey Map. The map is at a scale of 1" = 1,000' and has 100 foot contours.

### **Findings:**

The information provided in the proposal is considered adequate to meet the requirements of the Maps, Plans and Cross-Sections of Resource Information section of the regulations.

## **OPERATION PLAN**

### **MINING OPERATIONS AND FACILITIES**

Regulatory Reference: 30 CFR 784.2, 784.11; R645-301-231, -301-526, -301-528.

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**Analysis:**

**General**

The permittee plans to conduct only underground mining within the Mill Fork Lease in the near future. All coal will be shipped out of the mine by conveyor belt to the Deer Creek's existing coal handling facilities. Men and some of the material will also use these facilities. Some of the equipment and material will enter the Deer Creek mine by the portal at Rilda Canyon. However, the permittee has mentioned in the proposal that surface facilities may be constructed at Crandall Canyon. This would be a separate action and is not considered in this review.

**Type and Method of Mining Operations**

The permittee will use continuous miner for development of longwall panels and main entry development. Longwall mining will be used to extract the majority of the coal from the Mill Fork Lease. This method yields high coal recovery and is safer than other mining methods for heavy ground cover. This is the same method being used at the Deer Creek mine today.

**Facilities and Structures**

The permittee has not proposed any new surface facilities on the Mill Fork Lease.

**Findings:**

The permittee has met the minimum requirements of this section of the R645 Coal Rules.

**EXISTING STRUCTURES:**

Regulatory Reference: 30 CFR 784.12; R645-301-526.

**Analysis:**

The permittee needs to state in section R645-301-526 of the PAP the type and location of each existing structure in the Mill Fork lease. Some of those facilities are listed on Page 5-20 and 5-21. The structures listed include one operating gas well and two gas pipelines, two power transmission lines, one radio repeater station and two roads. Additional structures in the Mill Fork lease area include the U.S. Forest Service road #244 and transmission lines in the southwest corner of the lease.

The information listed in section R645-301-526 of the PAP is for surface structures in existing disturbed areas. The reader is instructed to refer to Volume 5, maps 3-9 and 3-9a for information about other existing structures in the permit area.

**Findings:**

The information provided in the proposal is considered adequate to meet the requirements of the existing structures section of the regulations.

**COAL RECOVERY**

Regulatory Reference: 30 CFR 817.59; R645-301-522.

**Analysis:**

The permittee will be using longwall mining for the main extraction of coal in the Mill Fork Lease. Continuous miners will be used for development of longwall panels and main entries. This is the current method of mining at the Deer Creek and in the Carbon and Emery Counties. This method of mining yields the highest safety and coal recovery possible for underground coal mining. A coal recovery plan has been approved by the BLM in the R2P2 document.

**Findings:**

The permittee has met the minimum requirements of this section.

**SUBSIDENCE CONTROL PLAN**

Regulatory Reference: 30 CFR 784.20, 817.121, 817.122; R645-301-521, -301-525, -301-724.

**Analysis:**

**Renewable Resources Survey**

The Permittee has identified that renewable resources exist in the area. Those resources include springs, water seeps, grazing land, timber and wildlife. Manmade features in the area include unimproved roads, trails, a gas well and pipelines and power transmission lines. Some of the renewable resources include State appropriated water rights.

R645-301-525.130 requires that the Permittee conduct a survey of the quantity and quality of all State-appropriated water supplies that could be contaminated, diminished, or interrupted by subsidence within the permit and adjacent areas. At a minimum, the survey should list. At a minimum, the Permittee must list each water right in and adjacent to the permit area. The quality and quantity of the water associated with each water right must be listed.

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Because the list of water rights and water quality and quantity will be sent to land owners and the local water conservancy district the Division needs to have this information tabulated in a form the can easily be understood by the public. Therefore, the Division will require that the information be in table form and attached to the MRP as a stand along document.

On page 51 of the Hydrology Section of the PAP (15.b Little Bear Spring), the Permittee states the following:

Mayo and Associates (Appendix B Reference List Mayo 1997a,b) suggest that Little Bear Spring is primarily recharged from surface water losses and alluvial groundwater losses in Mill Fork Canyon east of the Mill Fork Lease.

Surface runoff from the Mill Fork lease area will flow into the recharge area for the Little Bear Spring. Should subsidence cause damage to the drainages some loss of water to the recharge area could occur. The Permittee needs to conduct a study that will show whether or not water from the Mill Fork lease area recharges the groundwater that the flows into Little Bear Spring.

**Subsidence Control Plan**

The permittee has a Subsidence Control Plan on Page 5-20 and 5-21. The Mill Fork Lease has one operating gas well and two gas pipelines, two power transmission lines, one radio repeater station and two roads. The permittee has stated that no mining will occur under any of these structures except for US Forest Service road #244 (unimproved dirt track) see Page 5-20 and 5-21.

The Permittee plans to undermine approximately 900 feet of the 345 KV line in Section Township 16 South, Range 6 East, Section 22. There are two towers in the subsidence area. The transmission line is owned and operated by Utah Power, a subsidiary of PacifiCorp.

The Permittee will use a 100-foot barrier pillar along the lease/permit area boundary of the Blind Canyon (upper) seam and a 400-foot barrier pillar for the Hiawatha seam. The barrier pillars should provide protection from the Permittee causing subsidence to occur on the Genwal permit area.

The Division considers subsidence to be part of the coal mining operations and therefore, must be confined to the permit boundaries. (See R645-300-141.) Therefore, the Permittee must contain all subsidence from the Mill Fork lease to the Deer Creek permit boundary.

Longwall mining consists of mining sequential coal blocks (panels) leaving no barrier pillars. Usually when barrier pillars are left between longwall panels, it is for ground control in the underground workings.

The Permittee must give the Division a map that shows the location of all areas that are anticipated to be subsided (area within the angle-of-draw.) The map must also include all

features such as roads and pipelines that need to be protected.

In the Mitigation of Subsidence Damage Effects of the Subsidence section of the Engineering Section of the PAP the Permittee states the following:

The water will be replaced from an alternative source in sufficient quantity and quality to maintain the current and postmining land use as stated herein.

The Division agrees with the concept of using replacement water to mitigate damages to State-appropriated water right. However, before the Division can approve the PAP the Permittee must show that they have access or the potential access to such water resource.

#### **Performance Standards for Subsidence Control**

The permittee has stated on Page 5-29, that a 100-foot barrier along the lease/permit area boundary in the Blind Canyon seam as a precaution against overlapping the underlying Genwal workings in the Hiawatha seam. Map MFU1826D verifies that 100 ft. barrier will be left along the northern boundary of the Blind Canyon seam (next to the Genwal Mine). The Permittee will leave a ~400 foot barrier in the Hiawatha Seam to prevent subsidence from occurring on the Genwal permit area.

#### **Notification**

The permittee committed to mail a notification to the water conservancy district; all owner-occupants of surface property and structures, above the underground workings at least six months before mining.

#### **Findings:**

The information provided in the proposal is not considered adequate to meet the requirements of this section. Prior to approval, the permittee must provide the following in accordance with:

The Permittee needs to commit to provide copies of the water rights survey to all property owners, the water conservancy district where the water rights are located and to the Division.

**R645-301-521.142, R645-301-525.110 and R645-301.525.240,** The Permittee must give the Division a map the show the areas that are scheduled to subside (area within the angle-of-draw.) The map must show the subsidence limit for all areas to be mined including subsidence. Stating the information in the text is not considered adequate.

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**R645-301-525.130**, The Permittee must conduct a survey/study that shows whether surface water from the Mill Fork lease area flows into the recharge area of Little Bear Spring.

**R645-301-525.480**, The Permittee must state where they will obtain water rights of sufficient quality and quantity to replace State-appropriated water rights damage from subsidence.

**R645-301-521.130**, The Permittee must list all State appropriated water rights in the permit and adjacent areas. In addition the Permittee must list the quality and quantity of the water associated with each water right. The information must be in table form and be in a stand along document.

**R645-301-521.130**, The Permittee must commit to give a list of the water right survey to each property owner, the locale water conservancy district and to the Division.

## **SLIDES AND OTHER DAMAGE**

Regulatory Reference: 30 CFR Sec. 817.99; R645-301-515.

### **Analysis:**

There should be no slides occurring, since all mining activities are underground. If slides would occur, it would most likely be caused by subsidence. The remedy for these slides would fall under the subsidence mitigation plan.

### **Findings:**

The permittee has met the minimum requirements of this section.

## **ROAD SYSTEMS AND OTHER TRANSPORTATION FACILITIES**

Regulatory Reference: 30 CFR Sec. 784.24, 817.150, 817.151; R645-301-521, -301-527, -301-534, -301-732.

### **Analysis:**

#### **Road classification system**

No roads will be built. All access to the Mill Fork Lease will be from underground.

**Findings:**

The permittee has met the minimum requirements of this section.

**SPOIL AND WASTE MATERIALS**

Regulatory Reference: 30 CFR Sec. 701.5, 784.19, 784.25, 817.71, 817.72, 817.73, 817.74, 817.81, 817.83, 817.84, 817.87, 817.89; R645-100-200, -301-210, -301-211, -301-212, -301-412, -301-512, -301-513, -301-514, -301-521, -301-526, -301-528, -301-535, -301-536, -301-542, -301-553, -301-745, -301-746, -301-747.

**Analysis:**

**Disposal of noncoal waste**

Disposal of noncoal waste will not change, since there will be no breakout in the Mill Fork Lease. Noncoal waste materials will be removed either from the Deer Creek's mine portals or from Rilda Canyon portal.

**Coal mine waste**

Coal mine waste will be removed as stated in the approved MRP.

**Refuse piles**

No new refuse piles will be associated with the Mill Fork Lease.

**Impounding structures**

No additional impoundment structures will be associated with the Mill Fork Lease.

**Excess spoil**

Excess spoil will be made when rock slopes are developed as shown in the mine projections map. The mine map shows this material will be stored underground. See Vol. 2 Part 3 of the MRP.

**Findings:**

The permittee has met the minimum requirements of this section.

**SUPPORT FACILITIES AND UTILITY INSTALLATIONS**

Regulatory Reference: 30 CFR Sec. 784.30, 817.180, 817.181; R645-301-526.

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**Analysis:**

No support facilities and utility installations will be developed in this submittal. However, the permittee is studying the feasibility of a new surface facility at Crandall Canyon. This would require a separate approval from the Division.

**Findings:**

The permittee has met the minimum requirements of this section.

**SIGNS AND MARKERS**

Regulatory Reference: 30 CFR Sec. 817.11; R645-301-521.

**Analysis:**

No additional signs or markers will be needed, since all mining activity will be underground.

**Findings:**

The permittee has met the minimum requirements of this section.

**USE OF EXPLOSIVES**

Regulatory Reference: 30 CFR Sec. 817.61, 817.62, 817.64, 817.66, 817.67, 817.68; R645-301-524.

**Analysis:**

**General**

All mining activities are underground and must comply with MSHA regulations. The permittee has committed to comply with R645-301-524.

**Findings:**

The permittee has met the minimum requirements of this section.

**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:**

**Affected area maps**

A complete affected area map was not submitted in the permit application package. The permittee could use the existing mine map MFU-1826D and add the angel of draw. This would give the lands affected by mining of the Mill Fork Lease throughout the life of the mine.

**Mining facilities maps**

There will be no changes to the current support facilities map since all mining activities will be underground using existing facilities. All maps are P.E. certified.

**Mine workings maps**

The permittee has submitted maps showing the underground mine working associated within the Mill Fork Lease. The maps show active, inactive and abandon underground mine workings of Genwal Coal Company, Skeen Mine, Helco Mine, Beaver Creek Mine, and the Deer Creek Mine.

The permittee has given mine projection for the Blind Canyon and Hiawatha coal seam in the Mill Fork Lease. Map MFU-1840D gives the mining sequence for nineteen years in the Hiawatha Seam. These map are projected and can change in the future due to ground condition, roof control, coal quality, mineable reserves, and coal market. Maps are P.E. certified.

**Monitoring and sample location maps**

**Findings:**

The information provided in the proposal is not considered adequate to meet the requirements of this section. Prior to approval, the permittee must provide the following in accordance with:

**R645-301-521.141**, The permittee must provide a map indicating the boundaries of all areas proposed to be affected by mining.

## **RECLAMATION PLAN**

### **GENERAL REQUIREMENTS**

Regulatory Reference: PL 95-87 Sec. 515 and 516; 30 CFR Sec. 784.13, 784.14, 784.15, 784.16, 784.17, 784.18, 784.19, 784.20, 784.21, 784.22, 784.23, 784.24, 784.25, 784.26; R645-301-231, -301-233, -301-322, -301-323, -301-331, -301-333, -301-341, -301-342, -301-411, -301-412, -301-422, -301-512, -301-513, -301-521, -301-522, -301-525, -301-526, -301-527, -301-528, -301-529, -301-531, -301-533, -301-534, -301-536, -301-537, -301-542, -301-623, -301-624, -301-625, -301-626, -301-631, -301-632, -301-731, -301-723, -301-724, -301-725, -301-726, -301-728, -301-729,

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-301-731, -301-732, -301-733, -301-746, -301-764, -301-830.

**Analysis:**

There will be no reclamation needed on the Mill Fork Lease since all mining activities will be underground. Subsidence mitigation is not considered as a reclamation requirement.

**Findings:**

The permittee has met the minimum requirements of this section.

**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:**

Since no surface disturbance is planned for the Mill Fork area, the Permittee does not have to address the AOC section for the Mill Fork amendment.

**Findings:**

The Permittee met the minimum requirements of this section.

**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:**

**General**

Since no surface disturbance is planned for the Mill Fork area, the Permittee does not have to address the backfilling and grading section for the Mill Fork amendment.

**Findings:**

The Permittee met the minimum requirements of this section.

## **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 permittee has not proposed any mine opening on the Mill Fork Lease.

### **Findings:**

The permittee has met the minimum requirements of this section.

## **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:**

#### **Reclamation**

No roads will be built in the Mill Fork Lease.

### **Findings:**

The permittee has met the minimum requirements of this section.

## **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 Division usually considers the affected area to be equivalent to the permit boundary. Several maps show the permit boundaries including Drawing MFU1840D, Deer Creek Mine Mill Fork Lease ML-48258 Hiawatha Mine Plan.

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**Bonded area map**

The bonded area is usually the same as the disturbed area. Since no new surface disturbance is planned for the Mill Fork lease area, the bonded area map will not change.

**Reclamation backfilling and grading maps**

Since no new surface disturbance will occur with the Mill Fork lease no backfilling or grading on the Mill Fork lease will be needed.

**Reclamation facilities maps**

No new surface facilities will be associated with the Mill Fork lease.

**Final surface configuration maps**

No surface structures or facilities will be developed for the Mill Fork lease. Therefore, no new disturbed areas will be created. Since subsidence will take place, the final surface elevations will be shorter. The Division usually is not concerned with the surface configuration after subsidence has taken place.

**Findings:**

The Permittee met the minimum requirements of this section of the regulations.

**BONDING AND INSURANCE REQUIREMENTS**

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

**Analysis:**

**General**

No additional bonding will be required since the Mill Fork Lease will be only underground mining. No surface disturbance has been proposed in the PAP.

**Terms and conditions for liability insurance**

The Deer Creek mine has liability insurance and will provide coverage for the Mill Fork Lease.

**Findings:**

The permittee has met the minimum requirements of this section.

**RECOMMENDATIONS:**

Before approval, the Permittee must adequately address all the above-mentioned deficiencies.

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