



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

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August 16, 1999

TO: File

THRU: Daron Haddock, Permit Supervisor *DQH*

FROM: Wayne H. Western, Senior Reclamation Specialist *WHW*

RE: IBC-Joe's Valley Fault, Genwal Resources, Crandall Canyon Mine, ACT/015/032-99-1, File #2, Emery County, Utah

Summary:

On July 14, 1999, the Division received a revised amendment for a 50-acre incidental boundary change at the Crandall Canyon mine. The amendment also contained other changes to the MRP: culvert designs, disposal of noncoal mine waste, and road reclamation.

OPERATION PLAN

MINING OPERATIONS AND FACILITIES

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

Analysis:

Type and Method of Mining Operations

The Permittee describes the plan for handling water if it is encountered in the 50-acre IBC. The plan is given in Section 5.23 of the amendment (Page 5-10) and is as follows:

When mining in the longwall gate entry nears the fault (between 200-300 feet away) an underground drill will be used to drill west toward the fault to determine its location. The drill will drill horizontally toward the fault up to 50 feet ahead of the entry face. If the fault is not encountered, the continuous miner will advance about 30-40 feet toward the fault, leaving at least 10 feet of coal between the entry and the end of the hole. The drill will again drill ahead. This sequence will continue until either water or a fault gouge is encountered in the hole or the entry has been developed to its maximum extent (providing no fault was detected). If the fault is encountered prior to reaching the bleeder entries, then mining will stop and the bleeder entries will be relocated. At least 10 feet of solid coal will be left between the face of the entry and the fault.

At least one horizontal hole will be drilled in the headgate and tailgate of each panel. Should water

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be encountered by the drill hole, the hole would be immediately plugged and entry development would terminate at this point. Although large amounts of water and high pressure have not been previously encountered by mining near the fault, an emergency plan to handle water inundation from the fault has been developed. The plan consists of the following actions:

1. Pull equipment back from the face.
2. Erect two Kennedy stoppings at least 2 feet apart.
3. Place appropriate sized de-water pipe with a valve at the bottom of the stoppings.
4. Pump quick drying cement into the space between the stoppings.
5. After minimum drying time, close water valve.

The Division found the plan to be adequate to protect the water resources.

Findings:

The Permittee met the minimum requirements of this section.

COAL RECOVERY

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

Analysis:

The Permittee applied for the 50-acre IBC because once mining in the area is completed the coal reserves in the 50-acre IBC will be inaccessible. The Joe's Valley fault will prevent access to the IBC from the west. Once mining has been completed on the east side of the fault access from that direction will be blocked. Only first mining will be done in the IBC to prevent subsidence from affecting the Joe's Valley fault.

Findings:

The Permittee met the minimum requirements of this section.

SUBSIDENCE CONTROL PLAN

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

Analysis:

Renewable resources survey.

In the Surface Features and Facilities Subject to Subsidence section of the amendment the Permittee includes the following:

Both forks of Crandall Creek are considered to be perennial at least up to the federal lease boundary with State Lease ML-21568.

The Division hydrologist reviewed and approved that statement.

Subsidence control plan.

- (1) A description of the method of coal removal, such as longwall mining, room-and-pillar removal, hydraulic mining, or other extraction methods, including the size, sequence, and timing for the development of underground workings.

First mining only will be done in the 50-acre IBC to prevent subsidence. Stipulation #20 with the USFS requires that a subsidence free zone be maintained within a 22° angle of draw from the Joe's Valley fault. Therefore, the Permittee has no choice but to use first mining only.

- (2) A map of underground workings which describes the location and extent of areas in which planned-subsidence mining methods will be used and which includes all areas where measures will be taken to prevent or minimize subsidence and subsidence related damage and where appropriate, to correct subsidence-related material damage.

Plate 6-2 shows the subsidence boundaries. The plate was not updated since the Permittee does not expect subsidence to occur from mining in the 50-acre IBC.

- (3) A description of the physical conditions, such as depth of cover, seam thickness, and lithology, which affect the likelihood or extent of subsidence and subsidence-related damage.

No changes were made to this section.

- (4) A description of monitoring, if any, needed to determine the commencement and degree of subsidence so that, when appropriate, other measures can be taken to prevent, reduce, or correct material damage.

In the Subsidence Monitoring section of the PAP the Permittee proposes changing the subsidence monitoring system. The change is in response to a written request by the Forest Service to conduct annual subsidence monitoring until subsidence of less than one foot has been measured for three consecutive surveys.

- (5) Except for those areas where planned subsidence is projected to be used, a detailed description of the subsidence control measures that will be taken to prevent or minimize subsidence and subsidence-related damage, including, but not limited to: backstowing or backfilling of voids; leaving support pillars of coal; leaving areas in which no coal is removed, including a description of the overlying area to be protected by leaving the coal in place; and, taking measures on the surface to prevent material damage or lessening of the value or reasonably foreseeable use of the surface.

The first mining only will be done in the 50-acre IBC.

- (6) A description of the anticipated effects of planned subsidence, if any.

The Permittee does not anticipate any subsidence in the IBC area.

- (7) A description of the measures to be taken to mitigate or remedy any subsidence-related material damage to, or diminution in value or reasonably foreseeable use of the land, or structures or facilities to the extent required under State law.

The Permittee committed to mitigate any subsidence damage that they caused.

- (8) Other information specified by the Division as necessary to demonstrate that the operation will be conducted in accordance with the performance standards for subsidence control.

The Division does not require any other subsidence information for this amendment.

Performance standards for subsidence control.

The Permittee committed to meet the performance standards for subsidence control.

Findings:

The Permittee 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:

Coal mine waste.

In Section 5.28.30 of the PAP the Permittee states:

The waste generated by the normal underground mining activities will be brought outside the mine for disposal which includes, but not limited to the following: wood, paper, scrap metal, belting, etc., could possibly be disposed of underground on pillar lines in accordance with MSHA regulations.

The Permittee proposes to remove the following:

... which include, but not limited to the following: wood, paper, scrap metal, belting, etc.,

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could possibly be disposed of underground on pillar lines in accordance with MSHA regulations.

The Permittee also makes a commitment to remove scrap metal and used equipment from the mine unless safety considerations prevent removal.

The Division and the USFS now require all permittees to inventory the noncoal waste that is left underground. By removing as much of the noncoal waste as possible from underground the Permittee will have less material to inventory.

Findings:

The Permittee 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.

The existing permit boundaries are shown on Plate 1-1 in addition to the 50-acre IBC. Other maps and plate also show the proposed change to the permit boundary.

Mine workings maps.

Plate 5-2A shows the projected mine workings for the existing permit boundary and the proposed 50-acre IBC. The text states how mining will be conducted to prevent subsidence in the 50 IBC. The Division is confident that no subsidence will occur in that area.

Findings:

The Permittee met the minimum requirements of this section.

RECLAMATION PLAN

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:

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In Section 5.42.60 of the PAP, the Permittee clarifies the reclamation plan for the main road through the mine site. The USFS now wants the Permittee to remove the asphalt surface. The Permittee restated their commitment to reclaim the road to the specification stated in the road use permit.

Findings:

The Permittee met the minimum requirements of this section.

Recommendations:

The Division should approve the engineering section of the amendment.