



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

Michael O. Leavitt
 Governor
 Kathleen Clarke
 Executive Director
 Lowell P. Braxton
 Division Director

1594 West North Temple, Suite 1210
 PO Box 145801
 Salt Lake City, Utah 84114-5801
 801-538-5340
 801-359-3940 (Fax)
 801-538-7223 (TDD)

December 4, 2000

TO: [REDACTED]

THRU: Joe C. Helfrich, Team Lead *JCH*

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

RE: Permit Boundary Extension to Include Part of the Federal Coal Lease UTU-74804
~~C/007/020~~ SR00B

SUMMARY:

On August 21, 2000, the Division received an application to extend the permit boundary at the Horizon Mine. The permittee wants to include parts of the Federal Lease UTU-74804 up to Beaver Creek. The Division reviewed the PAP and found it contained deficiencies listed below.

TECHNICAL ANALYSIS:

ENVIRONMENTAL RESOURCE INFORMATION

Regulatory Reference: Pub. L 95-87 Sections 507(b), 508(a), and 516(b); 30 CFR 783., et. al.

PERMIT AREA

Regulatory Requirements: 30 CFR 783.12; R645-301-521.

Analysis:

The permittee shows the new and old permit boundaries on Plate 1-1. That plate was certified by David Miller, a registered professional engineer. Plate 1-1 shows the following:

- The old and new permit boundaries

TECHNICAL MEMO

- The disturbed area boundary
- Township, range and sections
- Topography (80-foot contours)
- Roads and stream

The permittee did not include a legal description of the permit area. The permittee did include a legal description of the leases but the lease area and the permit area are not always the same. The Division needs to know the following information about the permit and disturbed areas:

- The legal description of the permit area (the permittee may use the term parts of a quarter quarter section.)
- The number of acres owned by the Federal, State and local governments and fee land in the permit area.
- The legal description of the disturbed area (the permittee may use the term parts of a quarter quarter section.)
- The number of acres in the disturbed area.
- The AutoCAD files in stand alone format the show the permit and disturbed area boundaries.

Findings:

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

R645-301-521.190, The permittee must give the Division additional information on the permit and disturbed area boundaries. The additional information is as follows: ❶ The legal description of the permit area (the permittee may use the term parts of a quarter quarter section). ❷ The number of acres owned by the Federal, State and local governments and fee land in the permit area. ❸ The legal description of the disturbed area (the permittee may use the term parts of a quarter quarter section). ❹ The number of acres in the disturbed area. ❺ The AutoCAD files in stand alone format that show the permit and disturbed area boundaries.

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.

Analysis:

Affected Area Boundary Maps

The Division considers the affected area to be identical to the permit area. The permit area is shown on several maps including Plate 1-1, Permit Boundary.

Mine Workings Maps

Plate 3-9, Old Workings Castlegate A Seam, and Plate 3-10, Old Workings Hiawatha Seam, show the location of the old mine workings in and around the permit boundary.

Permit Area Boundary Maps

The permittee shows the new and old permit boundaries on Plate 1-1. That plate was certified by David Miller, a registered professional engineer. Plate 1-1 shows the following:

- The old and new permit boundaries
- The disturbed area boundary
- Township, range and sections
- Topography (80-foot contours)
- Roads and stream

The permittee did not include a legal description of the permit area. The permittee did include a legal description of the leases but the lease area and the permit area are not always the same. The Division needs to know the following information about the permit and disturbed areas:

- The legal description of the permit area (the permittee may use the term parts of a quarter quarter section.)
- The number of acres owned by the Federal, State and local governments and fee land in the permit area.
- The legal description of the disturbed area (the permittee may use the term parts of a quarter quarter section.)
- The number of acres in the disturbed area.
- The AutoCAD files in stand alone format the show the permit and disturbed area boundaries.

TECHNICAL MEMO

Findings:

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

R645-301-521.190, The permittee must give the Division additional information on the permit and disturbed area boundaries. The additional information is as follows: ❶ The legal description of the permit area (the permittee may use the term parts of a quarter quarter section). ❷ The number of acres owned by the Federal, State and local governments and fee land in the permit area. ❸ The legal description of the disturbed area (the permittee may use the term parts of a quarter quarter section). ❹ The number of acres in the disturbed area. ❺ The AutoCAD files in stand alone format that show the permit and disturbed area boundaries.

OPERATION PLAN

MINING OPERATIONS AND FACILITIES

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

Analysis:

Type and Method of Mining Operations

The permittee proposes to do all mining with room-and-pillar mining methods. First mining only will be done to protect all entries, mains and no subsidence areas. The no subsidence zone is the buffer zone around Beaver Creek. Second mining will be done to maximize coal recovery when possible.

Facilities and Structures

Plate 3-1 shows the existing and proposed surface facilities and structures. The permittee does not plan to build any new surface structures in connection with the addition of the federal leases.

Findings:

The requirements of this section of the regulations are considered adequate in regard to the proposed permit changes for the addition of the permit boundary to include part of the federal coal lease UTU-74804.

COAL RECOVERY

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

Analysis:

Since the permittee proposed to add a federal coal lease to the permit area they must get approval for the coal recovery plan from the BLM. The BLM must approve the R2P2 (resource recovery and protection plan) for the additional lease area. The Division relies on the findings in the R2P2 when evaluating the coal recovery plan. Therefore, the permittee must submit information about the findings in the R2P2 or supply the Division with additional information about coal recovery.

Findings:

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

R645-301-522 and R634-301-521.190, The permittee must give the Division additional about the coal recovery plan. The additional information must be similar to that found in the R2P2. The Division suggests that the permittee incorporate the R2P2 into the amendment or documentation that the BLM has approved the R2P2.

SUBSIDENCE CONTROL PLAN

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

Analysis:

Renewable resources survey

Hydrologic and vegetative renewable resources are the in the permit boundary. Seeps and springs also exist in the permit area. Beaver Creek is the only perennial stream near the permit

TECHNICAL MEMO

area. Plate 3-3 shows that the permit boundary and the 100-foot buffer zone for Beaver Creek that is beyond the permit boundary.

Subsidence control plan

Since the permit area contains renewable resource lands that could be damaged by subsidence the Division requires the permittee to supply the following information.

- The type of mining method that the permittee will use is room-and-pillar. Second mining will occur in areas that can be safely subsided. Plate 3-3 shows the timing and sequence of mining.
- Plate 3-3, Mine Plan and Subsidence Monitoring Points, shows the location of current and proposed mine workings. The areas of first mining only and second mining are shown on Plate 3-3. The permittee shows the extent of second mining areas but does not show the limits of subsidence. The Division is concerned that subsidence will occur outside the permit boundary since second mining will occur on the west border of the permit area.
- The permittee listed the physical conditions that are likely to affect subsidence.
- The permittee shows the existing and proposed subsidence monitoring stations on Plate 3-3. The permittee proposes to have 1 base station in the permit area 1 base station outside the permit area. The permittee proposes to have 3 monitoring stations inside the permit area and an equal number outside the area.

The Division reviewed the location of the monitoring stations and the critical areas for subsidence. The critical areas for subsidence monitoring are along the permit boundary with particular interest in Beaver Creek. The permittee does not propose any monitoring station along the western edge of the permit boundary where second mining is scheduled to occur up to the permit boundary. The monitoring stations near Beaver Creek are outside the stream buffer zone. Therefore, the Division would have a difficult time determining if subsidence occurred in Beaver Creek.

- The permittee will protect no subsidence zones by first mining only. In first mining the permittee committed to leaving no less than 48% of the

coal in the pillars. The Division usually considers leaving that amount of coal adequate to prevent subsidence.

- In Section 3.4.8.4 (Subsidence) the permittee described the past mining practices in the surrounding areas and the measured effects of planned subsidence. Past subsidence did not cause any surface damage. The permittee also maintains that since many beds of swelling shale under lie Beaver Creek that fractures would be self sealing.
- If subsidence damages water resources, the permittee committed to develop a mitigation plan with Water Rights and the Division. Mitigation plans for damage to water rights usually include the purchase of the damaged water rights or replacement.

If subsidence caused surface cracks or depressions then the permittee would fill the fractures or grade the depression. Should damage occur to vegetation then the permittee committed to revegetate the damaged sites.

Findings:

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

R645-300-141 and R645-301-525.420, The permittee must show on Plate 3-3 those areas where subsidence is scheduled to occur (a subsidence zone.) The red line that shows the extent of second mining angle of draw appears to only show the areas where second mining will not occur and not the limit of subsidence. Also since second mining will occur on the west side of the permit boundary up to that boundary the Division is concerned that subsidence will occur outside the permit boundary.

R645-301-525.440, The permittee must install monitoring stations that will show if subsidence occurs in the Beaver Creek buffer zone and that subsidence has not occurred outside the western permit boundary.

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.

TECHNICAL MEMO

Analysis:

Affected area maps

Plate 1-1 shows the permit boundaries. The Division considers the permit boundary to be identical to the affected area. The Division reviewed the Plate 1-1 and found it to be adequate.

Mine workings maps

Plate 3-3, Mine Plan and Subsidence Monitoring Points, shows the location of current and proposed mine workings.

Findings:

The requirements of this section of the regulations are considered adequate in regard to the proposed permit changes for the addition of the permit boundary to include part of the federal coal lease UTU-74804.

RECLAMATION PLAN

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

Plate 1-1 shows the permit boundaries. The Division considers the permit boundary to be identical to the affected area. The Division reviewed the Plate 1-1 and found it to be adequate.

Findings:

BONDING AND INSURANCE REQUIREMENTS

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

Analysis:

Determination of bond amount

The Division reviewed the reclamation and found that no additional surface disturbance would take place. Therefore, the Division found that the bond does not have to be adjusted at this time.

Findings:

The requirements of this section of the regulations are considered adequate in regard to the proposed permit changes for the addition of the permit boundary to include part of the federal coal lease UTU-74804.

RECOMMENDATION:

The Division should deny the PAP until the permittee resolves all deficiencies.