



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

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TO:

File

THRU:

Joe C. Helfrich, Team Lead 

FROM:

Wayne H. Western, Senior Reclamation Specialist *WHW*

RE:

Permit Boundary Extension to Include Part of the Federal Coal Lease UTU-74804, Lodestar Energy Inc., Horizon Mine, CA 7020-SR00B-1

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.

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
- The disturbed area boundary
- Township, range and sections

TECHNICAL MEMO

- Topography (80-foot contours)
- Roads and stream

The permittee included a legal description of the permit area in Section 114 of the MRP. The legal description is identical to the leases areas. The permit area contains 711 acres of which 305 acres are fee (Hidden Splendor Resources) and 406 acres are leased from the Federal Government.

In Section 117 of the MRP the permittee included a legal description of the disturbed area and acreage. The actual disturbed area contains 8.23 acres. The reclamation bond amount was calculated using 9.15 disturbed acres. The permittee agreed to continue to list 9.15 acres as the official disturbed acreage.

Findings:

The requirements of this section of the regulations are considered adequate.

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

Findings:

The requirements of this section of the regulations are considered adequate.

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.

TECHNICAL MEMO

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 approved the R2P2 (resource recovery and protection plan) with stipulations for the additional lease area. The stipulations were made because some geologist information on the area can only be determined by mining. Once additional information is obtained, the BLM will revise the R2P2. The Division reviewed the R2P2 and concluded with the BLM's recommendations.

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.

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 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 permittee has supplied 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. The subsidence boundaries are within the permit boundary.

- 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 three monitoring stations inside the permit area and an equal number on the outside the edge along Beaver Creek.

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 proposes to have monitoring stations along the western edge of the permit boundary where second mining is scheduled to occur up to the permit boundary.

- 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 of 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.

TECHNICAL MEMO

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.

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

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:

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.

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 plan 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 approve the PAP.