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State of Utah

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

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January 10, 2001

TO: [redacted] File

THRU: Joe C. Helfrich, Project Team Lead

FROM: Priscilla W. Burton, Soils Reclamation Specialist

RE: Significant Revision - Permit Boundary Extension. Lodestar Energy Inc., Horizon Mine. C/[redacted]20-SR00B-1

SUMMARY:

Lodestar Energy has applied for a permit modification to extend the permit boundary into Federal Lease UTU-74804 to Beaver Creek. The chronology for this submittal is as follows:

Energy West Submittal Date	Division Response Date
August 21, 2000	October 11, 2000
October 18, 2000 Admin Complete	December 13, 2000
December 21, 2000	

Although alluvial soils exist in the permit area, there is no alluvial valley floor of farming importance. The area soils map Plate 8-2 covers the additional permit area. There will be no additional impact the surface disturbed area. There are no changes to the disposal of underground development waste or coal mine waste. No changes have been noted in the Operations or Reclamation plan that would impact soil recovery, storage or replacement. The additional lease area should be approved.

TECHNICAL ANALYSIS:

ENVIRONMENTAL RESOURCE INFORMATION

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

SOILS RESOURCE INFORMATION

Regulatory Reference: 30 CFR 783.21; 30 CFR 817.22; 30 CFR 817.200(c); 30 CFR 823; R645-301-220; R645-301-411.

Analysis:

Section 2.117 states that the disturbed area contains 8.23 acres. The bond covers 9.15 acres. The permit and disturbed area boundaries are shown in Plate 1-1.

Chapter 8 covers soil survey information. A soil survey was conducted in 1990. The survey was conducted by Richard Foster, of the SCS. A disturbed area soils map Plate 8-1 was drawn by Patrick Collins (Mt Nebo, Scientific).

This submittal includes a revised permit area soil map, Plate 8-2. The permit area boundary has been redrawn on this map to reflect the new lease.

Findings:

Information provided in the proposed amendment is considered adequate to meet the requirement of this section.

ALLUVIAL VALLEY FLOORS

Regulatory Reference: 30 CFR 785.19; 30 CFR 822; R645-302-320; R645-302-321;R 645-302-323.

Analysis:

There is a letter in Appendix 7-6 from SCS dated 6/13/80 stating that there are no Alluvial Valley Floors in the area of section 17, Township 13 South, Range 8 East. As this letter does not cover the revised permit area and as the Alluvial Valley Floor determination is the responsibility of the Division, the issue will be addressed here, on the basis of the information provided in the application.

The additional lease area falls within sections 7 and 8 on the north and sections 18 and 17 on the south. The additional lease area is at an elevation of 7600 - 8400 feet and is bordered by Beaver Creek on the north. Beaver Creek lies in sections 7 & 8.

The soil type along Beaver Creek at ~8300 feet elevation is #109 Silas-Brycan loams.

The following soil description comes from the SCS Soil Survey[1]: these soils are found in low areas adjacent to stream channels or on alluvial fans adjacent to narrow alluvial valleys. The water table fluctuates between 20 - 25 inches.

Surface mining will not be conducted in the area. The premining land use has been undeveloped rangeland utilized for grazing and the deposits of alluvium are small and do not support farms.

Findings:

In accordance with R645-302-323, the Division finds that the premining land use is undeveloped rangeland which is not significant to farming and that the area of alluvium is small.

PRIME FARMLAND

Regulatory Reference: 30 CFR 785.16, 823; R645-301-221, -302-270.

Analysis:

The additional lease area is at an elevation of 7600 - 8400 feet and is bordered by Beaver Creek on the north, Gordon Creek on the south and is bisected by Jewkes Creek. In Figure 8-1, the prime farmland determination dated 9/12/1990 by the Soil Conservation Service states that there are no prime farmlands within sections 7, 8, 17, 18 or 20 of Township 13 South, Range 8 East. The area covered in the lease application extends into sections 7 and 8 on the north and section 18 on the south.

The soils within the lease are were designated #107 (Shupert-Winetti complex) along Jewkes Creek , and #72 (Pathead/Curecanti family association) on the south facing slopes, #63 (Midfork family Podo association) on the north facing slopes and #109 (Silas-Brycan loams) in the Beaver Creek drainage with #124 on the north facing slopes and #72 on the south facing slopes.

Soil type #107 is deep and well drained. The mine surface facilities are located within this soil type.

Findings:

The application provides the required information.

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[1]USDA. SCS. 1988. Soil Survey of Carbon Area, Utah.

OPERATION PLAN

TOPSOIL AND SUBSOIL

Regulatory Reference: 30 CFR Sec. 817.22; R645-301-230.

Analysis:

Plate 3-1 shows the planned surface facilities. Section 3.5.2 states that during any future disturbance, topsoil will be stockpiled, contoured, fertilized and vegetated with seed mix #1 (Table 3-2). The piles will protected with markers and berms or strawbales. And (section 3.4.4) that disturbed soils will be carefully handled for use as substitute topsoil materials.

Findings:

There is no change to the approved operations plan.

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

Section 3.2.3 *Surface Facilities* indicates that there will be no disposal of non-coal waste on site other than rock type construction materials. And further that the disposal of rock-type construction materials will be disposed of in underground workings within the Horizon Mine, not on the surface. Garbage will be hauled to the state-approved landfill (section 3.2.3.8).

Coal mine waste

Section 3.2.3.100 states that no coal mine waste disposal facilities will exist on the surface in the permit area. Section 3.2.600 indicates that coal mine waste will be handled as outlined in this section and previously in this MRP. Section 3.2.3 *Surface Facilities*. Indicates that underground development waste will be disposed of underground with the Horizon Mine. If waste is brought to the surface, a permanent stockpile will be permitted.

Section 3.3.2.5 states that approximately 2500 CY of coal mine waste was buried in the facilities pad during construction. Appendix 3-8 contains a plate showing approximate locations of buried coal mine waste.

Refuse piles

Section 3.2.3.500 no refuse piles will exist in the permit area. Section 3.2.600 *Coal Mine Waste* indicates that underground development waste will be disposed of underground in a dry state. The acid-toxic nature of the material is discussed in Chapter 6.

Plate 3-1 shows the location of the sediment pond and ditch clean out material (behind the substation and behind the fan). The designated areas can hold 260 CY. The material may be sampled for use as substitute topsoil or fill material.

Findings:

There is no change to the approved operating plan.

RECLAMATION PLAN

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:

Plate 3-1 shows the location of the sediment pond and ditch clean out material (behind the substation and behind the fan). The designated areas can hold 260 CY. The material may be sampled for use as substitute topsoil or fill material.

Contemporaneous reclamation is discussed in section 3.5. Plate A of Appendix 8-1 shows areas which were contemporaneously reclaimed in 1997. This work is discussed in section 8-8.

General plans for backfilling and grading are found in Section 3.5.4. Plates 3-7 and 3-7A show the topography post-mining. Cut and fill calculations are in Table 3-1. There is a 4,240 CY deficit which will require lowering the site 5 inches.

Findings:

There is no change from the approved reclamation plan.

TOPSOIL AND SUBSOIL

Regulatory Reference: 30 CFR Sec. 817.22; R645-301-240.

Analysis:

Twenty inches of topsoil will be placed over 8.23 acres of graded fill (section 2.117). The figure of 9.15 acres was used for bonding purposes and is listed in (section 3.5.4 and Table 3-1). This amounts to approximately 14,417 CY of topsoil (section 3.5.4 and Appendix 8-1).

Findings:

There is no change from the approved reclamation plan.

STABILIZATION OF SURFACE AREAS

Regulatory Reference: 30 CFR Sec. 817.95; R645-301-244.

Analysis:

The backfilling and grading schedule is detailed in section 3.5.7.1 and outlined in Table 3-4.

All acid-toxic material, exposed coal or refuse will be covered with 4 feet of material. The regraded surface will be scarified. Topsoil will be replaced.

Silt fences will be used at the bottom of fill slopes and along the reclamation channel during topsoil placement. The site will be seeded and mulched as described in section 3.5.5.3 (1 ton mulch/acre) and section 3.5.4. Erosion control matting on slopes 2½H:1V or greater and sediment controls will be placed as needed (Plate 7-7a; section 3.5.4.3).

Findings:

There has been no change to the approved 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

Bonded area map

Plate 1-1

Reclamation backfilling and grading maps

Plate 7-7A

Final surface configuration maps

Plate 3-7 and 3-7A

Reclamation surface and subsurface manmade features maps

Plate 3-1 shows surface contours of undisturbed areas adjacent to disturbed areas which are indicative of the original land slopes in the vicinity of the disturbed area and which were used to create the reclamation final contour maps Plates 3-7 and 3-7A. Plate 3-6 shows conditions prior to disturbance by Horizon.

Reclamation treatments maps

Plate 7-7A

Findings:

There has been no change to the approved reclamation plan.

RECOMMENDATION:

There is no change to the approved operations and reclamation plan with regard to soils or the handling of underground development waste. The lease application should be approved.

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