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August 9, 2001

TO: [redacted] File

THRU: Mike Suflita, Project Team Lead

FROM: Priscilla W. Burton, Soils Reclamation Specialist

RE: Transformer Installation, Lodestar Energy, Inc., Horizon Mine, C[redacted] AM01A

SUMMARY:

Lodestar Energy, Inc. submitted an amendment to their MRP on July 18, 2001 to construct a transformer within the disturbed area boundary. The transformer will occupy an area approximately 50' x 50'. The Permittee expects to recover 4 cubic yards of soil. This technical review should serve as a reminder to the Permittee of the commitments already within the Mining and Reclamation Plan for topsoil removal.

Within 30 days of approval, the Permittee must provide a surface facilities map showing the transformer, having a North arrow, labeling County roads and all topsoil storage locations and showing the jeep road running parallel to the Beaver Creek Road at an approximate elevation of 7650.

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:

Soil resources are described in Chapter 8, Sections 8.1 through 8.3 and located on Plate 8-1 and Plate 8-2. The soil resource was surveyed in 1996 for the Horizon Mine by EarthFax Inc. The undisturbed soils within the proposed location of the transformer are GIG or Curecanti Family- loamy – skeletal, mixed Typic Argiborolls.

Table 8-3, Potential Topsoil/Growth Medium Available for Salvage, reports removal depths between 2.0 and 4.5 feet for the GIG or Curecanti soils within the disturbed area.

None of the test pits dug in 1996 were in the undisturbed ground. The only information specific to the vicinity is that found in the EarthFax Inc. 1996 report entitled: Soil Salvage Practices Fall, 1996, found in Appendix 8-1. In October 1996 it was recorded that in the vicinity of the operations and administrative site near the portals, an undisturbed area 200 feet by 3.5 feet was buried inadvertently. The buried topsoil was described by the Soil Conservation Service as Curecanti- Very Bouldery Loam, slopes 55-65% with "a surface layer that is dark grayish brown loam about 7 inches thick and lower part that is brown very stony loam about 8 inches thick." The EarthFax report continues, "The subsurface layer is very pale brown very stony loam about five inches thick. The subsoil to a depth of sixty inches or more is pale brown very stony loam." The buried topsoil resource was reported to be of approximately 34 cubic yards.

The Division assumes (based on the EarthFax 1996 record) that if undisturbed ground is encountered during construction, a minimum of fifteen inches will be salvaged from the disturbed area prior to construction. It is important that the Permittee has a qualified individual at the site during topsoil removal to determine:

1. If the construction of the transformer will encounter the buried topsoil area.
2. Since the SCS description of the Curecanti Family soil (provided in the EarthFax Inc. report in Appendix 8-1) was not specific to this location, topsoil may be deeper (or shallower) than expected.

Findings:

The information provided in the existing Mining and Reclamation Plan is considered adequate to meet the environmental soils resource requirements of the Regulations.

OPERATION PLAN

TOPSOIL AND SUBSOIL

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

Analysis:

Removal

Although, Section 8.11 indicates that no additional surface disturbance involving soils will be required for the surface facilities, the addition of the transformer will generate some soil from vegetated ground (personal communication with Dave Miller, August 9, 2001).

Plate 8-1, Soils, identifies the native soils in the vicinity as Curecanti – Very Bouldery Loam, 55-65% slopes. This soil is described in Section 8.3 of the MRP, as very deep, well-drained, moderately permeable soils on mountain slopes. These soils are loamy-skeletal, mixed Typic Argiborolls.

There may be fifteen inches of topsoil to salvage and add to the topsoil pile, unless the placement of the transformer encroaches upon a buried topsoil area (discussed above under Soil Resources), i.e. If the cut for transformer construction is 3.5 feet or deeper, then the buried topsoil may be encountered and approximately fifteen inches of buried topsoil can be recovered.

If the entire area fifty-foot square area was within undisturbed ground, then approximately 115 cubic yards of topsoil would be recovered. However, most of the ground where the transformer will be located has already been disturbed. The area of soil removal is limited to an area which is 8' x 15' and a ten inch recovery depth is planned (personal communication with Dave Miller during the week of July 9, 2001). Five and one half cubic yards might be salvaged from the area, if fifteen inches are taken. (As opposed to 4 cubic yards if ten inches are salvaged.)

Soil plan for removal is given in Section 8.7 of the MRP. The plan indicates that "a professional soil scientist or equivalently qualified individual will be on site to insure proper separation and stockpiling of topsoil (A and/or B horizons)...". The Division would appreciate notification in advance of the work so that the Division soil scientist could be on hand. The island method of removal was used in the past to salvage topsoil and substitute topsoil from locations identified on Figure 8-2, Growth Medium Removal Locations. For this site, the cut into the bank will serve as a measure to ascertain the topsoil recovery depth for the transformer site.

Findings:

A verbal commitment to follow the plan has been received from the Permittee and it has been acknowledged in the cover letter accompanying this submittal. This Technical Analysis provides background information to the Permittee to outline what actions the Mining and Reclamation Plan require in this instance.

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:

Mining facilities maps

Plate 3-1 Surface Facilities has been revised with this submittal. The Division notes that the revision does not include the County Road names, the North arrow, or the road on the hillside that runs parallel to Beaver Creek Road at an elevation of 7650.

The Division also notes that the Revised Plate 3-1 outlines some areas of interim reclamation/topsoil storage, but the locations noted are not all inclusive when compared to Appendix 8-1 Plate A Topsoil/Growth Medium Distribution.

Findings:

The information provided is not adequate to meet the minimum Operations requirement for Maps, Plans and Cross Sections of the facilities. Within 30 days of approval, the Permittee must provide a surface facilities map showing the transformer, having a North arrow, labeling County roads and all topsoil storage locations and showing the jeep road running parallel to the Beaver Creek Road at an approximate elevation of 7650.

RECOMMENDATIONS:

The amendment can be approved in its present form with the caveat that within 30 days of approval a surface facilities map will be resubmitted which has all the required information as outlined in this technical analysis. The Permittee should be notified in the approval correspondence that the MRP calls for the presence of a qualified individual during topsoil recovery. The plan indicates that there may be buried topsoil in the vicinity of the "operations and administrative site" and that approximately 15 inches of topsoil is likely in the vicinity of the transformer. Notes on exact topsoil depths and recovery should be taken. The Division would appreciate advance notification of the work so as to plan to be present during topsoil removal.

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