



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

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February 23, 2001

TO: [Redacted] le  
THRU: Wayne H. Western, Senior Reclamation Specialist/Hydrologist, Project Lead. *W H W*  
FROM: David W. Darby, Reclamation Specialist III *[Signature]*  
RE: Mid-term Permit Review, Lodestar Energy, Inc., Horizon Mine, [Redacted]  
MT99-3

**SUMMARY:**

This technical review evaluates the completeness issues identified during the mid-term site and MRP review. Lodestar Energy, Inc responded on April 25, 2000 to earlier technical deficiencies identified by Sharon Falvey in her mid-term review of August 13, 1999.

One of the outstanding issues from the last mid-term review involve the discharge of mine water into the surface diversions and treatment facility, which were not sized to control or contain the unexpected flows. Minewater was discharged via these facilities to lessen impacts until a UPDES permit could be obtained. Other issues concerning ground-water flow, quality and monitoring beyond the current permit area will be review, but technical comments will be reserved for a future technical evaluation. A mining change has been presented by the operator but was returned until the mid-term review was sufficiently addressed.

**TECHNICAL ANALYSIS:**

**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 boundaries of the disturbed area, as well as those of its component areas of previous and proposed disturbance, are shown adequately on Plates 3-1, 3-6, and 3-7.

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TECHNICAL MEMO

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**Mining facilities maps**

The locations and approximate dimensions of all mine facilities are shown on Plate 3-1--Surface Facilities. Included on this map are all buildings, portals, fans and earthen structures (pads, cuts and embankments), both of the large main drainage bypass culverts, the mine supply substation adjacent to the main portals, the large main substation at the mouth of the canyon, the Main Haul Road, the Hiawatha Fan Portal Access Road, the conveyor from the mine, the coal storage and loading facilities, the topsoil storage area and the sediment pond. This plate was certified in 1996, after its latest revision, by Richard B. White, a professional engineer registered in the state of Utah.

Design details of the sediment pond are shown on Plate 7-6--Sedimentation Pond Detail Map. This plate was certified in 1996 by Richard B. White, a professional engineer registered in the state of Utah.

Cross-sections of main channel culverts indicating culvert size and trash rack are shown in Figure 7-8.

**Mine workings maps**

The location and extent of all known abandoned underground mine workings, including mine openings to the surface within the proposed permit and adjacent areas, are shown on Plate 3-3--Five Year Mine Plan. There are no active underground mines and there has been no surface mining within the permit and adjacent areas.

**Monitoring and sample location maps.**

Both geologic and groundwater information were obtained from test borings done at sites designated LMC-1, LMC-2, LMC-3, and LMC-4. The locations of these sites are shown on Plate 6-1--Geology and Plate 7-1--Water Monitoring Locations.

Information on water quality and quantity was obtained from monitoring stations designated 1, 2, 3, 4, 5, 6, and 7. The elevations and locations of these sites are shown on Plate 7-1--Water Monitoring Locations.

**Findings:**

The applicant has addressed this section.

**RECOMMENDATION:**

The hydrology section appears complete and it is recommended hydrologic portion of the mid-term review be approved.