

TECHNICAL MEMORANDUM

Utah Coal Regulatory Program

December 6, 2005

TO: Internal File

THRU: D. Wayne Hedberg, Permit Supervisor

THRU: Steve Fluke, Team Lead

FROM: Wayne H. Western, Environmental Scientist III, Engineering and Bonding

RE: SITLA Muddy Lease Amendment, Canyon Fuel Company, LLC., SUFCO Mine, C/041/0002, and Task ID #2354

SUMMARY:

On February 11, 2005, the Division received an amendment to include the SITLA Muddy Tract to the Mining and Reclamation Plan (MRP) for the SUFCO Mine. The SITLA lease will add 2,134.19 acres to the existing approved permit area of 24,632.95 acres. The Permittee will not add any new surface facilities because of the SITLA leases. This memo addresses the engineering and bond issues.

On October 13, 2005, the Division received a response to deficiencies from the February 11, 2005 submittal.

TECHNICAL MEMO

TECHNICAL ANALYSIS:

ENVIRONMENTAL RESOURCE INFORMATION

PERMIT AREA

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

Analysis:

The Permittee met the requirements for the R645 – Rules by a describing and identifying identify the lands subject to surface coal mining operations over the estimated life of mine. In Section 114 of the MRP, the Permittee lists the legal description for the permit. In Section 116 of the MPR, the Permittee lists the total acreage for the permit and disturbed areas.

Findings:

The Permittee met the minimum requirements of this section of the regulations.

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 Permittee met the requirements for showing the affected area boundaries. The Permittee is required to show the boundaries of all areas proposed to be affected over the estimated total life of the underground mining activities, with a description of size, sequence, and timing of the mining of subareas for which it is anticipated that additional permits will be sought. Plate 5-7, Land Ownership and Permit Area Map, shows the permit area.

Mine Workings Maps

The Permittee met the requirements for showing the mine workings. The Permittee is required to show the location and extent of know workings of active, inactive, or abandoned underground mines, including mine openings to the surface within the proposed permit and

adjacent areas. Plate 5-1, Previously Mined Areas, shows the location of the previously mined areas.

Permit Area Boundary Maps

The Permittee met the requirements for showing the permit area boundary. The Permittee is required to show the boundaries of land within the proposed permit area upon which the Permittee has the legal right to enter and begin underground mining activities. Plate 5-7, Land Ownership and Permit Area Map, shows the permit area.

Findings:

The Permittee met the minimum requirements for this section of the R645 – Rules.

OPERATION PLAN

COAL RECOVERY

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

Analysis:

The Permittee meet the requirements for the R645 – Rules. The Permittee showed how they would conduct underground mining activities to maximize the utilization and conservation of the coal, while utilizing the best technology currently available to maintain environmental integrity.

Findings:

The information provided in the amendment is considered by the Division to be adequate to meet the requirements of this section.

SUBSIDENCE CONTROL PLAN

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

Analysis:

Renewable Resources Survey

TECHNICAL MEMO

The Permittee meet the requirements of the R645 – Rules for this section. Those requirements are that the Permittee conduct a survey, which shall show whether structures or renewable resource lands exist within the proposed permit area and adjacent area and whether subsidence, if it occurred, could cause material damage or diminution of reasonably foreseeable use of such structures or renewable resource lands. As part of the survey, the Permittee listed the quality and quantity of State appropriated water within the SITLA Muddy tract in Appendix 7-20.

The Permittee determined that there are renewable resources within the subsidence zone. Therefore, the Permittee must implement a subsidence control plan.

Subsidence Control Plan

The subsidence control plan shall contain the following information:

- The Permittee met those requirements by stating in Section 5.2.5.1, Subsection Mining Methods, of the MRP that longwall, and room and pillars are the mining methods.
- The Permittee met those requirements by showing the subsidence area for the Muddy and Pine Tract on Plate 5-10B.
- The Permittee met those requirements by providing geological information in Chapter 6 of the MRP.
- The Permittee meet those requirements. In Section 5.2.5.1, Subsection Monitoring, of the MRP the Permittee states that control points for the aerial subsidence monitoring program are shown Plate 5-10A and Plate 5-10B. The subsidence monitoring points are shown on Table 5-2.
- The Permittee met those requirements by providing the subsidence control plan. The Permittee will use full extraction methods in the Muddy Tract. The Permittee will protect areas from subsidence by leaving support pillars when needed.
- The Permittee met those requirements by describes the anticipated effects of subsidence in Section 5.2.5.1, Anticipated Effects of Subsidence in the MRP.
- The Permittee meet the minimum requirements of the R645 – Rules. The Permittee included a detailed description of methods that can be used to mitigate the loss of State appropriated water in Section 7.31.8 of the MRP.
- The Division does not require other information at this time.

Performance Standards For Subsidence Control

The Permittee shall either adopt measures consistent with known technology which prevent subsidence from causing material damage to the extent technologically and economically feasible, maximize mine stability, and maintain the value and reasonably foreseeable use of surface lands; or, adopt mining technology which provides for planned subsidence in a

predictable and controlled manner. Nothing in this part shall be construed to prohibit the standard method of room-and-pillar mining.

The Permittee shall comply with all provisions of the approved subsidence control plan.

The Permittee shall correct any material damage resulting from subsidence caused to surface lands, to the extent technologically and economically feasible, by restoring the land to a condition capable of maintaining the value and reasonably foreseeable uses which it was capable of supporting before subsidence, and, to the extent required under applicable provisions of State law, either correct material damage resulting from subsidence caused to any structures or facilities by repairing the damage or compensate the owner of such structures or facilities in the full amount of the diminution in value resulting from the subsidence. Repair of damage includes rehabilitation, restoration, or replacement of damaged structures or facilities. The Permittee may accomplish compensation by purchasing before mining of a non-cancelable premium-prepaid insurance policy.

Underground mining activities shall not be conducted beneath or adjacent to: public buildings and facilities; churches, schools, and hospitals; or, impoundments with a storage capacity of 20 acre-feet or more or bodies of water with a volume of 20 acre-feet or more, unless the subsidence control plan demonstrates that subsidence will not cause material damage to, or reduce the reasonably foreseeable use of, such features or facilities. If the Division determines that it is necessary in order to minimize the potential for material damage to the features or facilities described above or to any aquifer or body of water that serves as a significant water source for any public water supply system, it may limit the percentage of coal extracted under or adjacent thereto.

The Permittee will not subsidize any of the following:

- Public buildings and facilities.
- Churches, schools, and hospitals.
- Impoundments with a storage capacity of 20 acre-feet or more or bodies of water with a volume of 20 acre-feet or more.

The Division has not determined subsidence will damage any aquifer or body of water that serves as a significant water source for any public water supply system.

If subsidence causes material damage to any of the features or facilities, the Division may suspend mining under or adjacent to such features or facilities until the subsidence control plan is modified to ensure prevention of further material damage to such features or facilities.

The Division shall suspend underground mining activities under urbanized areas, cities, towns, and communities, and adjacent to industrial or commercial buildings, major

TECHNICAL MEMO

impoundments, or perennial streams, if imminent danger is found to inhabitants of the urbanized areas, cities, towns, or communities.

Within a schedule approved by the Division, the Permittee shall submit a detailed plan of the underground workings. The Division requires annual mine maps are part of the annual reports.

Notification

At least 6 months before mining, or within that period if approved by the Division, the underground mine the Permittee shall mail a notification to all owners and occupants of surface property and structures above the underground workings. The notification shall include, at a minimum, identification of specific areas in which mining will take place, dates that specific areas will be undermined, and the location or locations where the permittee's subsidence control plan may be examined.

Findings:

The information provided in the amendment is considered adequate to meet the requirements of the Subsidence Control Plan section of the R645 – Rules.

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 Permittee met the requirements for showing the affected area boundaries. The Permittee is required to show the boundaries of all areas proposed to be affected over the estimated total life of the underground mining activities, with a description of size, sequence, and timing of the mining of subareas for which it is anticipated that additional permits will be sought. Plate 5-7, Land Ownership and Permit Area Map, shows the permit area.

Mine Workings Maps

The Permittee met the requirements for showing the mine workings. The Permittee is required to show the location and extent of known workings of proposed, active, inactive, or abandoned underground mines, including mine openings to the surface within the proposed

permit and adjacent areas. Plate 5-7, Upper Hiawatha Mine Plan 5-Year Projection show the operational and projected mine workings associated with the SITLA Muddy Tract.

Certification Requirements

The Permittee met the requirements for map certification. The Permittee is required to have cross sections, maps, and plans that are required to show the design, location, elevation, or horizontal or vertical extent of the land surface or of a structure or facility used to conduct mining and reclamation operations shall be prepared by, or under the direction of, and certified by a qualified, registered, professional engineer, a professional geologist, or in any State which authorizes land surveyors to prepare and certify such cross sections, maps, and plans, a qualified, registered, professional land surveyor, with assistance from experts in related fields such as landscape architecture. All such maps associated with the SITLA Muddy tract have been certified.

Findings:

The Permittee met the minimum requirements for this section of the R645 – 301 Rules.

RECLAMATION PLAN

BONDING AND INSURANCE REQUIREMENTS

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

Analysis:

Determination of Bond Amount

Since the addition of the SITLA Muddy Tract does not involve any additional surface disturbance or surface facilities, the bond amount will not change. The Division calculated the bond as part of Task 2068, Midterm Review. The current reclamation estimate is for \$2,616,000 and the current bond amount is for \$4,439,000.

Findings:

The Permittee met the minimum requirements for this section of the R645 – 301 Rules.

TECHNICAL MEMO

RECOMMENDATIONS:

The Division should approve the amendment.

O:\041002.CON\FINAL\WG2354\whw2354.doc