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# TECHNICAL MEMORANDUM

Utah Coal Regulatory Program

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September 16, 2010

TO: Internal File

THRU: April Abate, Hydrologist and Team Lead *AAW* *12-1-2010* *AAZ*

FROM: James Owen, Engineer *JO*

RE: West Coal Lease Modifications, Canyon Fuel Company, LLC, SUFCO Mine, C/041/002, Task # 3609

**SUMMARY:**

On August 30, 2010 the Utah Division of Oil Gas & Mining received an application from Canyon Fuel Company's SUFCO Mine. The application requests approval of an amendment to the SUFCO Mining & Reclamation Plan (MRP) concerning the addition of leased area referred to as the West Coal Lease Modification.

The applicant states that the additional lease area requested represents approximately 9% of the total existing lease acreage and does not involve a change to the reclamation bond or liability insurance or operation after the cancellation thereof.

Baseline information used for and included with the permit modification was obtained from the US Department of the Interior Bureau of Land Management, West Coal Lease Modification Environmental Assessment UT-070-08-083 (West Lease). Criteria for determining the proximity to mining and subsidence was based on the data obtained.

SUFCO is anticipating entering the lease modification in November 2011 to begin development mining for longwall panels.

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**TECHNICAL ANALYSIS:**

**OPERATION PLAN**

**GENERAL REQUIREMENTS**

Regulatory Reference: PL 95-87 Sec. 515 and 516; 30 CFR Sec. 784.13, 784.14, 784.15, 784.16, 784.17, 784.18, 784.19, 784.20, 784.21, 784.22, 784.23, 784.24, 784.25, 784.26; R645-301-231, -301-233, -301-322, -301-323, -301-331, -301-333, -301-341, -301-342, -301-411, -301-412, -301-422, -301-512, -301-513, -301-521, -301-522, -301-525, -301-526, -301-527, -301-528, -301-529, -301-531, -301-533, -301-534, -301-536, -301-537, -301-542, -301-623, -301-624, -301-625, -301-626, -301-631, -301-632, -301-731, -301-723, -301-724, -301-725, -301-726, -301-728, -301-729, -301-731, -301-732, -301-733, -301-746, -301-764, -301-830.

**Analysis:**

Included in Chapter 5 of the application is all of the modified MRP text that demonstrates compliance with the engineering section of the Utah Coal Mining Rules (R645-301-500). The changes to Chapter 5 are minimal and for the most part details a replacement of permit area details with that of lease area details, as both the permit and lease areas have been modified. There are also statements in which the operator designation is changed from "Southern Utah Fuel Company" to "Canyon Fuel Company, LLC SUFCO Mine". In addition, a new plate (5-10AC) will be added to the MRP. Plate 5-10AC was submitted as confidential and will be kept within the confidential portion of the MRP.

**Findings:**

Contents and information provided are sufficient enough to meet the minimum requirements of this section of the Utah Coal Mining Rules.

**SUBSIDENCE CONTROL PLAN**

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

**Analysis:**

**Subsidence Control Plan**

The application included a Potential Subsidence Limits Map (Plate 5-10Av9) that indicates the expected extents of possible subsidence areas. Subsidence is expected to occur within the area of the West Lease areas as portions of the area will be mined using full extraction mining methods. Though most of the area within the West Lease portion will be affected by

subsidence eventually, it is not expected to have any significant variance from the subsidence that had occurred at other locations where the same mining method has been used. There are no significant differences between the overburden that exists above the West Lease area and overburden that exists above longwall panels in the northern portions of previously leased/mined areas.

For monitoring purposes, there are control points and aerial targets that are located (approximately) along the eastern border of the development and longwall sections that will be mined within the West Lease area.

From the southeastern most corner (greatest distance) of the West Lease area, a control point (Rim Rock) can be located within 5,500 feet. Multiple control points & aerial targets are within range to be used as monitoring stations for subsidence that occurs in the West Lease area. These control points and monitoring stations are surveyed using aerial photography annually. Subsidence monitoring details are provided to the Division via annual reports.

**Findings:**

The subsidence control measures and monitoring methods are sufficient to accommodate the West Coal Lease Modification. Contents and information provided are sufficient enough to meet the minimum requirements of this section of the Utah Coal Mining 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:**

The application includes new & replacement maps with the following information: plant communities and sampling areas, wildlife habitat & ranges, land uses, previously mined areas, existing surface and subsurface facilities and features, land ownership, lease and permit areas, potential subsidence limits, overburden isopachs, geology, drill hole location, surface and ground water rights and hydrologic monitoring stations.

**Findings:**

The submitted application is adequate in terms of maps providing details of resource and operational information that are relevant to the West Coal Lease Modification. In addition, a registered professional engineer has certified all maps.

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**RECOMMENDATIONS:**

Contents and information provided are sufficient enough to meet the minimum requirements of the engineering section of the Utah Coal Mining Rules. The application is recommended for approval.

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