

# TECHNICAL MEMORANDUM

## Utah Coal Regulatory Program

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November 18, 2005

TO: Internal File

THRU: D. Wayne Hedberg, Permit Supervisor  
Steve Fluke, Team Lead

FROM: Priscilla Burton, Environmental Scientist III

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

### **SUMMARY:**

Approval is recommended.

School and Institutional Trust Lands Administration (SITLA) Lease ML-49443, referred to as the SITLA Muddy Tract, adds 2,134.19 acres to the existing, 24,632.95 acre permit area, making a new total of 26,767.14 acres in the permit area. The United States owns the surface and the Forest Service (Manti-LaSal District) is the land managing agency within lease ML-9443. There is no surface disturbance anticipated within the Muddy Tract.

Plate 5-6 shows the location of lease ML 49443, which includes land within Sections 4, 5, 7, 8, and 9 of T. 21 S., R.5 E. The coal identified in the lease lies beneath Big Ridge portrayed on the intersection of the following 7.5minute quadrangle maps: Heliotrope Mountain, Flagstaff Peak, Acord Lakes and Emery West.

The application includes a commitment in the cover letter to incorporate chemical analysis of the roof and floor of the coal into Appendix 6-2 as it becomes available. The Division's expectation for receiving this information promptly should be expressed in the approval letter.

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**TECHNICAL ANALYSIS:**

**GENERAL CONTENTS**

**IDENTIFICATION OF INTERESTS**

Regulatory Reference: 30 CFR 773.22; 30 CFR 778.13; R645-301-112

**Analysis:**

General Chapter 1 volume contains information on corporate ownership for SUFCO and affiliated Utah mines: Soldier Canyon Mine, Banning Loadout, and Dugout Canyon Mines. (Section 111 of the MRP). (At the Division, General Chapter 1 has been filed with the C/007/0018 Soldier Canyon Mine MRP.)

Section 112.400 of the MRP and Table 1-1 and Figure 1 of General Chapter 1 provide a listing of affiliated coal mining operations under the control Arch Coal Co. and subsidiaries. The affiliated Utah mines are Skyline Mine, Soldier Canyon Mine, Banning Loadout, Dugout Canyon Mine, Gordon Creek No. 2, 7, and 8, Gordon Creek No. 3 and 6, and Huntington Canyon No. 4 mine.

**Findings:**

The information provided meets the requirements of the Regulations.

**VIOLATION INFORMATION**

Regulatory Reference: 30 CFR 773.15(b); 30 CFR 773.23; 30 CFR 778.14; R645-300-132; R645-301-113

**Analysis:**

Section 113 of the MRP indicates that a current listing of violation information is provided in the General Chapter 1 volume for Utah affiliated mines (filed at the Division with the Soldier Canyon Mine MRPC/007/018).

**Findings:**

The information provided meets the requirements of the Regulations.

## **RIGHT OF ENTRY**

Regulatory Reference: 30 CFR 778.15; R645-301-114

### **Analysis:**

Lease agreement ML-49443 between the State of Utah and Ark Land Coal Company and Arch Coal Co. is included in Appendix 1-2 and provides the right of entry for coal in the Upper Hiawatha coal zone within the Blackhawk formation.

The location of the Muddy Tract is shown on Plate 5-6, Land Ownership and Permit Area Map. Legal descriptions for ML-49443 are provided in Section 114 of the MRP.

### **Findings**

The information provided meets the requirements of the Regulations.

## **LEGAL DESCRIPTION AND STATUS OF UNSUITABILITY CLAIMS**

Regulatory Reference: 30 CFR 778.16; 30 CFR 779.12(a); 30 CFR 779.24(a)(b)(c); R645-300-121.120; R645-301-112.800; R645-300-141; R645-301-115.

### **Analysis:**

The land described by lease ML-49443 lies within the Manti-LaSal National Forest. Plate 5-6 shows the location of lease ML 49443, which includes land within Sections 4, 5, 7, 8, and 9 of T. 21 S., R.5 E. The coal identified in the lease lies beneath Big Ridge portrayed on the intersection of the following 7.5minute quadrangle maps: Heliotrope Mountain, Flagstaff Peak, Acord Lakes and Emery West. There are no cemeteries, occupied dwellings or maintained public roads within the lease. Section 4.1.1.1 describes previous study of the roadless Muddy Tract area for wilderness designation, but no wilderness designation was made. There are no lands currently under study or administrative proceedings for unsuitability claims.

### **Findings**

The available information meets the requirements of the Regulations.

## **PERMIT TERM**

Regulatory References: 30 CFR 778.17; R645-301-116.

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**Analysis:**

The most recent permit for SUFCO was issued on May 20, 2002 and will expire on May 20, 2007.

**Findings:**

The information available meets the requirements of the Regulations.

**PUBLIC NOTICE AND COMMENT**

Regulatory References: 30 CFR 778.21; 30 CFR 773.13; R645-300-120; R645-301-117.200.

**Analysis:**

This amendment is not considered a significant revision and therefore, no public notice was required.

**Findings:**

The information presented meets the requirements of the Regulations.

**ENVIRONMENTAL RESOURCE INFORMATION**

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

**PERMIT AREA**

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

**Analysis:**

School and Institutional Trust Lands Administration (SITLA) Lease ML-49443, referred to as the SITLA Muddy Tract, adds 2,134.19 acres to the existing, 24,632.95 acre permit area, making a new total of 26,767.14 acres in the permit area (Section 116 of the MRP).

**Findings:**

Information provided meets the requirements of the Regulations.

**CLIMATOLOGICAL RESOURCE INFORMATION**

Regulatory Reference: 30 CFR 783.18; R645-301-724.

**Analysis:**

Soil descriptions for Big Ridge in SITLA lease ML-49443 indicate that the area receives between 20 – 30 inches of precipitation.

**Findings:**

The information provided meets the requirements of the Regulations.

**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:**

There is no planned surface disturbance associated with the SITLA Lease ML-49443. An Order III level soil survey was included in the application to provide general reconnaissance information about the surface. Soil types are described in Appendix 2-10. The major soil taxonomic order is Mollisol, reflecting the rich, deep soils on pediment terraces.

Prior to any surface disturbing activity, an Order I soil survey must be conducted of the proposed disturbed area.

**Findings:**

The information provided meets the requirements of the Regulations, since there is no surface disturbance. However, should circumstances change, an Order I soil survey must be conducted prior to any surface disturbance.

**LAND-USE RESOURCE INFORMATION**

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Regulatory Reference: 30 CFR 783.22; R645-301-411.

**Analysis:**

Land use within the SITLA lease ML-49443 is described in Section 4.1.1.1 and illustrated on Plate 4-1b. The land is within the Manti-LaSal National Forest. The land is managed for big game range and forage. Other existing land uses are described in Section 4.1.1.1 as timber production, livestock grazing, wildlife habitat, recreation and associated travel on forest development roads. Existing forest development roads are single-lane, native surface, category 2 roads, recommended for high clearance vehicle traffic.

The SITLA Muddy tract is within the Emery C & H grazing allotment, supporting 1,387 head of cattle. Stock is watered at springs, streams, and ponds (see State Appropriated Water Rights, Hydrologic Resource Information section of this TA for more discussion).

Forest users include recreational visitors and hunters with the highest use in the fall during the deer and elk hunts. Forest development roads provide access to the lease area for foot traffic, bicycle, horse, ATV and snowmobile etc.

**Findings:**

Information provided meets the land use requirements of the Regulations.

**PRIME FARMLAND**

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

**Analysis:**

Section 2.2.1 discusses the prime farmland status of the permit area. The NRCS consultation letters are provided in Appendix 2-1.

Order III level soil survey information was included in the application to provide general reconnaissance information about the surface within SITLA lease ML-49443. Plate 2-3 Soil Types SITLA Muddy Tract shows four soils within the ML-49443 lease area, at elevations from 8400 to 9000 ft. Soil types are described in Appendix 2-10. The major soil taxonomic order is Mollisol, reflecting the rich, deep soils on pediment terraces. The temperature regime for all is frigid. There are no irrigated lands. Plate 4-1b indicates that the land is currently used as open range.

**Findings:**

The Division finds that there are no prime farmlands within the STILA lease ML-49443.

## **OPERATION 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:**

#### **Coal Mine Waste**

The application indicates in Section 5.2.2 that sand channels exist in the lease area. The amount of waste rock to be brought to the surface was not estimated.

#### **Refuse Piles**

Certification of the refuse piles is provided to the Division quarterly (not in the Annual Reports), but does not include volume of refuse hauled to the site. In August 2005, the waste rock site was estimated to hold 163,748 Tons of waste rock.

The MRP indicates the waste rock site will be contemporaneously reclaimed and that the initial cell will cover 4.5 acres (Section 3.4, Vol. 3). Map 4 of Volume 3, dated August 31, 2005, illustrates the status of reclaimed, active and topsoil salvage areas at the refuse site. The first three lifts have been reclaimed. At the current rate of transport (3,200 Tons/yr), the waste rock site will reach design capacity in 2016.

The 2003 Annual Report contains a vegetation analysis of three cells of the waste rock site.

**Findings:**

The information provided in the MRP meets the spoil and waste, refuse pile requirements of the Regulations.

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## HYDROLOGIC INFORMATION

Regulatory Reference: 30 CFR Sec. 773.17, 774.13, 784.14, 784.16, 784.29, 817.41, 817.42, 817.43, 817.45, 817.49, 817.56, 817.57; R645-300-140, -300-141, -300-142, -300-143, -300-144, -300-145, -300-146, -300-147, -300-147, -300-148, -301-512, -301-514, -301-521, -301-531, -301-532, -301-533, -301-536, -301-542, -301-720, -301-731, -301-732, -301-733, -301-742, -301-743, -301-750, -301-761, -301-764.

### Analysis:

#### **Acid- and Toxic-Forming Materials and Underground Development Waste**

The roof, floor and coal seam within the SITLA lease ML-49443 have been sampled. Laboratory Analyses will be added to Appendix 6-2 .

### Findings:

The information provided meets the requirements of the Rules.

## BONDING AND INSURANCE REQUIREMENTS

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

### Analysis:

#### **General**

The current bond is \$4,439,000 dollars.

#### **Form of Bond**

The surety bond is through St. Paul Fire and Marine Insurance Company.

#### **Determination of Bond Amount**

Recently, the Division evaluated the reclamation costs for the SUFCO Mine in the event of bond forfeiture. Costs were estimated at \$2,616,000 in 2009 dollars (see 2278WHW.doc, July 13, 2005). The amount of bond in excess of the required amount is \$1,823,000.

#### **Terms and Conditions for Liability Insurance**

The most recent liability insurance information is found in Appendix 1-2 of General Chapter 1 volume.

**Findings:**

The information provided meets the requirements of the Regulations.

**RECOMMENDATIONS:**

The application includes a commitment to place chemical analysis of the roof and floor of the coal within the lease area into Appendix 6-2 upon receipt from the laboratory. The Division's expectation of receiving this information promptly should be expressed in the approval letter.