

# TECHNICAL MEMORANDUM

## Utah Coal Regulatory Program

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March 21, 2005

TO: Internal File

THRU: Pamela Grubaugh-Littig, Permit Supervisor

THRU: Dana Dean, P.E., Senior Reclamation Hydrologist, Team Lead.

FROM: Priscilla Burton, Environmental Scientist III, Soils.

RE: Post Mining Land Use Change, Canyon Fuel Company, LLC, Banning Siding Loadout, C/007/0034, Task ID #2117

### **SUMMARY:**

The proposal for post mining land use change from wildlife habitat to industrial was initially received on May 25, 2004; given task number 1936 and determined Administratively Complete on July 27, 2004; additional information concerning Chapter 1 was received on November 17, 2004. A response to deficiencies was received on January 3, 2005. [Ownership and control information was reviewed under a separate submittal and approved on February 11, 2005.]

This post-mining land use change is for 0.41 acres of pad area associated with the substation within the disturbed area and an additional 0.42 acres of undisturbed area within the permit area (pp 4-6 and 4-7). The area being considered for post mining land use change totals 0.83 acres as shown on the revised Plate 5-2. There is a reasonable likelihood (R645-301-413.310) that the new land use will be achieved as East Carbonics, Inc. has already purchased the 0.83 acres.

The disturbed area at Banning Siding Loadout is **approximately** 30 acres. The most complete legal description of this area is found in Exhibit of the Purchase and Sale Agreement between Canyon Fuel Company L.L.C and East Carbonics, Inc., dated May 9, 2003, found in Appendix 1-5 of the MRP.

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TECHNICAL MEMO

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**TECHNICAL ANALYSIS:**

**REQUIREMENTS FOR PERMITS FOR SPECIAL  
CATEGORIES OF MINING**

**COAL PREPARATION PLANTS NOT LOCATED WITHIN THE PERMIT  
AREA OF A MINE**

Regulatory Reference: 30 CFR Sec. 785.21, 827; R645-302-110, R645-302-260, et seq.

**Analysis:**

As outlined in the subsequent sections of this technical analysis, the application was reviewed under the Utah Rules for Coal Processing Plants Not Located Within the Permit Area of a Mine, R645-302-260. All provisions of R645-300 and R645-301 apply to this category of mining unless otherwise specified under R645-302.

**Findings:**

As discussed in this Technical Analysis, the information provided does not meet the minimum requirements for Coal Processing Plants Not Located Within the Permit Area of a Mine. The Division's Findings are outlined under the R645-301 headings that follow.

**GENERAL CONTENTS**

**IDENTIFICATION OF INTERESTS**

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

**Analysis:**

The MRP indicates that Canyon Fuel Company, LLC operates the Banning Loadout C/007/034 (Section 111). However, revised page 5-9 of Chapter 5 still states that the Banning Loadout is operated by Soldier Canyon Mine. However, the permit was transferred to Canyon Fuel Company, LLC on 12/20/1996 (see correspondence folder) and the information in Section 111 is correct.

The phrase, “Savage Coal Service Corporation (Coal Service) under an agreement with the Applicant,” (found on page 5-9) is not a complete thought and should be deleted.

Volume 1 of the Banning MRP refers the reader to the General Chapter 1, dated February 2005 legal and financial information for Arch Coal. (This information was reviewed and approved under Task # 2069.) The applicant and operator is Canyon Fuel Company, LLC (Section 112.200). The Resident Agent is C.T. Corporation Systems (50 W. Broadway; SLC UT 84104). Canyon Fuel has offices in Colorado, a contact is provided in Section 112.200.

Ownership and control information for Canyon Fuel Company, LLC was recently updated (February 11, 2005) and is presented in Figure 1-1 and in Section 112 of the General Chapter 1 Volume. The information provided in Section 111 and 112 of General Chapter 1 indicates that the Permittee (Canyon Fuel Co., LLC) is owned by Arch Coal and its subsidiaries. Figure 1A outlines the corporate structure. And section 112.100 indicates that Delta Housing Inc has a minor (1%) interest in the Arch Western Resources, LLC.

Officers and directors of Canyon Fuel Co., LLC, Arch Western Bituminous Group, LLC, Arch Western Resources, LLC and Arch Coal, Inc are found in Appendix 1-1. Coal mining and reclamation operations related through corporate structure are listed in Table 1-1 and include the active sites: Dugout, SUFCO, Skyline and Soldier Canyon mines and the reclaimed sites: Gordon Creek No 3 & 6, Gordon Creek No. 2, 7, & 8, and Huntington No. 4 mines in Utah.

The Permittee’s registered agent is listed as CT Corporation in the MRP.

### **Findings:**

The information provided meets the requirements of the Regulations for Identification of Interests, but contains a couple of errors. Prior to approval, the Permittee must provide the following, in accordance with:

- R645-301-121.200, •** The MRP indicates that Canyon Fuel Company, LLC operates the Banning Loadout C/007/034 (Section 111). However, page 5-9 of Chapter 5 states that the Banning Loadout is operated by Soldier Canyon Mine. The first statement is correct, as the permit was transferred to Canyon Fuel Company, LLC on 12/20/1996. The statement on p. 5-9 should be changed accordingly. • The phrase, “Savage Coal Service Corporation (Coal Service) under an agreement with the Applicant,” (found on page 5-9) is not a complete thought and should be deleted.

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TECHNICAL MEMO

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## **VIOLATION INFORMATION**

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

### **Analysis:**

General Chapter 1 provides a three year violation history in Table 1-2 for mines related by corporate structure (listed in Table 1-1).

### **Findings**

The information provided meets the requirements of the regulations.

## **RIGHT OF ENTRY**

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

### **Analysis:**

Right of way information is described in the text, Section 114 pages 1-31 through 1-33 and Appendix 1-5. The Rights of Way are illustrated on Exhibit 4-1. Rights of way have been obtained from the BLM, the State of Utah, and the Railroad.

The disturbed area at Banning Siding Loadout is approximately 26 acres (p.5-9). The most complete legal description of the area to be reclaimed is found in Exhibit B of the Purchase and Sale Agreement between Canyon Fuel Company L.L.C and East Carbonics, Inc., dated May 9, 2003, found in Appendix 1-5 of the MRP.

The Purchase and Sale Agreement between Canyon Fuel Company, L.L.C. and East Carbonics Inc., dated May 7, 2003, is included in Appendix 1-5. This agreement indicates the Buyer's willingness to retain the substation for post-mining land use. The agreement does not transfer the State Lease or BLM Right of Ways. No water rights are conveyed with this agreement.

### **Findings:**

The information provided meets the Right of Entry 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:

Information is provided in Section 115 of the MRP.

### Findings:

The information provided meets the requirements of the Regulations.

## PERMIT TERM

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

### Analysis:

The Mining and Reclamation Plan (MRP) for the Banning Loadout was originally approved by the Division of Oil, Gas and Mining on October 24, 1988 and renewed subsequently on October 24, 1993, October 24, 1998, and on October 24, 2003. The permit term expires October 2008.

The Loadout went into Temporary Cessation on March 7, 2000.

### Findings:

The information provided is adequate to meet the permit term requirement 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:

In accordance with R645-301-414 *et seq*, the post mining land use change application is subject to the requirements of R645-300-120 public participation. The notice was published in

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TECHNICAL MEMO

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the Sun Advocate (Price, Utah) on consecutive Tuesdays from August 31 through September 21, 2004. No comments were received.

An Affidavit of Publication was provided to the Division and placed in Appendix 1-2. This appendix has been moved to the General Contents Volume One.

**Findings:**

The information provided meets the requirements of the Rules.

**PERMIT APPLICATION FORMAT AND CONTENTS**

Regulatory Reference: 30 CFR 777.11; R645-301-120.

**Analysis:**

Exhibit 5-4 and 5-5 in the MRP provide information on surface ownership. Exhibit 5-4 is being revised with this application. Exhibit 5-5 provides information on coal/subsurface ownership.

**Findings:**

Information provided meets the requirements of the Rules.

**MAPS AND PLANS**

Regulatory Reference: 30 CFR 777.14; R645-301-140.

**Analysis:**

Exhibit 5-4 shows the location of the Banning Siding Loadout and surrounding surface ownership. Exhibit 5-1 shows the Banning Siding disturbed area and the location of the acreage to be transferred to adjacent surface owner, East Carbonics Inc.

**Findings:**

The information provided is adequate for the purpose of the Maps and Plans 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:

The permit and disturbed areas are shown on Exhibit 5-1. The disturbed area and area of postmining land use change is shown on Exhibit 5-2. The surface ownership is shown on Exhibit 5-4. The permit area (36 acres) and disturbed area (26.3 acres) are described in Section R645-301-521. The facilities occupy 21.6 acres. The haul road accounts for 4.7 acres.

The Division's bond file indicates the permit area is 36.42 acres and the disturbed area is 21.6 acres.

The Reclamation Agreement indicates that the legal description of the permit area is all or portions of sections 15, 16, 21, 22 in T 15 S, R 12 E, and "described more precisely in the Banning Mining and Reclamation Permit." The legal description of the disturbed area is found in Appendix 5-4, as well as in the Purchase Agreement between Canyon Fuel Company, L.L.C. and Carbonics Inc. included in Appendix 1-5 of the MRP.

The acreage undergoing post mining land use change is 0.41 acres of pad area associated with the substation within the disturbed area and 0.83 acres of the permit area (pp 4-6 and 4-7).

#### Findings:

The information provided meets the requirements for reporting of permit area.

## 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:

At Banning Loadout, the precipitation is seven to nine inches annually. The climate regime is aridic or torric.

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TECHNICAL MEMO

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Soil resource information for the Banning Loadout is provided in Chapter 2, Volume 1 of the MRP. The native soil is the Ravola series. The site was disturbed pre-law and no topsoil was salvaged. Appendix 2-3 provides an SCS Map Unit description of the Ravola-Slickspot Complex. An excerpt is rewritten below:

*The Ravola soil is very deep and well drained. It formed in alluvium derived dominantly from sandstone and shale. The present vegetation in most areas is mainly greasewood, alkali sacaton, pricklypear, Russian thistle, galleta, and Indian ricegrass. Typically, the surface layer is light brownish gray loam about 8 inches thick. The underlying layer to a depth of 60 inches or more is light brownish gray loam. This soil is strongly alkaline below a depth of 20 inches.*

*Slickspots are barren or nearly barren areas. They have a very strongly alkaline, nearly impervious surface layer of loam about 4 inches thick. The underlying layer is light grayish brown loam and silt loam. This layer is strongly saline and is moderately alkali or strongly alkali.*

Test pits and laboratory analysis are found in Appendix 2-2. Three soil pits were dug to a depth of 54 inches. Sample locations are shown on Exhibit 3-1. Test Pit 1 in the vicinity of the equipment storage area seems to represent the native Ravola soils. The pH of the soil in TP-1 ranges from 8.3 to 8.5; the Electrical Conductivity of TP-1 is 0.8 to 0.9 mmhos/cm; the SAR of TP-1 is 1.4 in the surface six inches and from 3.1 to 3.7 from six to 54 inches. The soil texture was reported as a loam.

Test Pits 2 and 3 were dug in soils below the coal storage area and conveyor and seem to represent the native Slickspots. These soils were very high in pH (from 9.0 to 9.8) and have very high SAR values (from 37 to 78). The soil was sampled down to a depth of 54 inches. Sample locations are shown on Exhibit 3-1. The texture of these in-place sodic soils was described as silt loam (predominantly).

The SCS concludes their discussion of the Ravola soil in Appendix 2-3 with the statement, "It is not practical to revegetate large areas of the Ravola soil because of the low annual precipitation and the content of alkali in the soil."

Reclamation test plots at Banning Loadout were started in November 1991 and were monitored through 1998 to evaluate the use of organic matter to alleviate extremely harsh soil conditions (Appendix 3-4). One of the conclusions from test plot monitoring was that the most successful treatment was to rip and gouge the surface then seed and mulch. None of the other treatments, such as applying manure, sawdust, or fertilizer, appeared to increase the amount of vegetation. The control areas that were simply gouged and mulched with no seed applied had little or no vegetation. The test plots showed vegetation could be established. However, in final reclamation, greater diversity than was found in the test plots will be required.

The practice of discing was used in preparation of the 1991 test plots, but has been removed from the reclamation plan. Discing may have skewed the 1991 test plot results, as the creation of a powdery surface would only compound the impervious nature of alkaline clay soils.

In about 1993, an area near the substation was gouged, seeded with Gardner saltbush (probably *Atriplex gardneri* Var. *tridentata*) and crested wheatgrass (*Agropyron desertorum*), and mulched. This revegetation effort was successful. However, stunted plants may have been due to the Slickspot soils underlying the substation location.

Approximately 700 cu yds of sediment from the Dugout pond was brought to the Banning Loadout site for use as substitute topsoil (MRP, pg 2-9). Laboratory analysis of composite samples of the sediments are found in Appendix 2-2. The sediment has a pH of 7.4 and an SAR of 2.34. These sediments have a texture of clay loam. The total organic carbon content of the sediments is approximately 10%. Section R645-301-231.200 of the MRP describes using these sediments as a top-dressing over the sodic Slickspot soils represented by TP-2 and TP-3 on Exhibit 3-1. Laboratory analysis of composite samples of the sediments are found in Appendix 2-2.

700 cu yds Banning sediments = 18,900 cu ft.  
 $18,900 \text{ cu ft} \div X = 0.5 \text{ ft cover over slickspots.}$   
 $X = 18,900 \text{ cu ft} \div 0.5 \text{ ft} = 37,800 \text{ sq ft.}$   
 $37,800 \text{ sq ft} \div 43,560 \text{ sq ft/ac} = 0.86 \text{ acres of TP2 and TP3 area covered with Banning sediments.}$

The removal of 0.43 acres from the disturbed area will not affect the topsoil resource available for reclamation.

**Findings:**

The removal of 0.43 acres from the disturbed area will not affect the topsoil resource available for reclamation. The information provided meets the requirements for Environmental Resource Information-Soils.

## OPERATION PLAN

### TOPSOIL AND SUBSOIL

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TECHNICAL MEMO

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**Analysis:**

**Removal and Storage**

Exhibit 3-1 of the MRP shows the soil resources for the Banning Loadout. No stockpiled soil is identified on the map.

Approximately 700 cu yds of sediments brought to the site (in August 2001) from the Dugout Mine are stored in the equipment storage area and/or within the disturbed area of ASCA Area #2 (Exhibit 5-2, page 2-9). The MRP page 2-9A describes the placement of these sediments in a two foot thick layer, surrounded by a berm, gouged for water retention, and seeded with the reclamation mix presented in Table 3-3 of the MRP. Laboratory analysis of this soil is found in Appendix 2-2.

**Findings:**

The information provided in the submittal meets the minimum requirements of the Regulations.

## RECLAMATION PLAN

### POSTMINING LAND USES

Regulatory Reference: 30 CFR Sec. 784.15, 784.200, 785.16, 817.133; R645-301-412, -301-413, -301-414, -302-270, -302-271, -302-272, -302-273, -302-274, -302-275.

**Analysis:**

The pre-mining land use of the area was rangeland and wildlife (MRP, Chap. 4, p.4-7). The area is zoned for mining and grazing (Exhibit 4-1).

The approved postmining land use proposed in the MRP is a return to rangeland and roadways. The rangeland postmining land use is supported by a letter from the BLM Area Manager, dated February 21, 1989 (Appendix 4-5).

The Utah Coal Rules governing a change in post mining land use are R645-301-412.130, R645-301-413.300, and R645-301-414.

Section 112.500, page 1-11 of the MRP indicates the surface owners of the land within the permit area are United States (Bureau of Land Management), the State of Utah, Union Pacific Railroad, and East Carbonics Inc (ownership is illustrated on Exhibits 5-4 and 5-5). East Carbonics owns the land being considered for post mining land use change.

This post-mining land use change is for 0.41 acres of pad area associated with the substation within the disturbed area and an additional 0.42 acres of undisturbed area within the permit area (pp 4-6 and 4-7). The area being considered for post mining land use change totals 0.83 acres as shown on the revised Plate 5-2. The 0.83 acres were purchased by East Carbonics, Inc.

The Purchase and Sale Agreement between Canyon Fuel Company, L.L.C. and East Carbonics Inc., dated May 7, 2003, is included in Appendix 1-5. The agreement transfers ownership of lands in Section 16, SE/4SE/4; and Section 21 E/NE4, Township 15 South, Range 12 East, Carbon County Utah. An acreage figure is not included in the agreement, but as previously noted, the Permittee indicates the area is 0.83 acres. The Purchase agreement indicates the Buyer's willingness to retain the substation for post-mining land use.

The agreement does not transfer the State Lease or BLM Right of Ways. No water rights are conveyed with this agreement. Item 2.2 of the agreement indicates that the entire reclaimed area will be transferred to the buyer after Canyon Fuel Company, L.L.C. receives full bond release.

The Division concludes that there is a likelihood for achievement of the industrial/commercial postmining land use for the 0.41 acres and that the use is impractical, nor inconsistent with other existing land uses: roadway and railroad and rangeland.

### **Findings:**

The information provided meets the requirements of the Regulations.

## **TOPSOIL AND SUBSOIL**

Regulatory Reference: 30 CFR Sec. 817.22; R645-301-240.

### **Analysis:**

#### **Redistribution**

The Banning Loadout has disturbed approximately 20 acres (Exhibit 5-2).

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TECHNICAL MEMO

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Chapter 2 (pages 2-9 through 2-15) and Chapter 3 (pages 3-8 through 3-17) describe the soil reclamation plans for the Banning Loadout. The MRP describes removing surface coal (the surface will not exceed 50% coal); ripping to a depth of 18 inches; gouging the surface (MRP Section R645-301-231.300 and R645-301-233.100 and R645-301-552.100 (page 5-83); grading to contour; and creation of depressions for moisture retention; addition of 40 lbs/acre of sulfur coated urea (45-0-0); incorporation of 2000 lbs of alfalfa or native grass hay; broadcast or drill seeding according to Table 3-3; and application of 2000 pounds/acre wood fiber mulch with chemical tackifier.

Approximately 700 cu yds of sediment from the Dugout pond was brought to the Banning Loadout site for use as substitute topsoil (MRP, pg 2-9). Laboratory analysis of composite samples of the sediments are found in Appendix 2-2. The sediment has a pH of 7.4 and an SAR of 2.34. These sediments have a texture of clay loam. The total organic carbon content of the sediments is approximately 10%. Section R645-301-231.200 of the MRP describes using these sediments as a top-dressing over the sodic Slickspot soils represented by TP-2 and TP-3 on Exhibit 3-1. Laboratory analysis of composite samples of the sediments are found in Appendix 2-2.

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 $37,800 \text{ sq ft} \div 43,560 \text{ sq ft/ac} = 0.86 \text{ acres of TP2 and TP3 area covered with Banning sediments.}$

The MRP indicates on page 3-13 of Section R645-301-341.220 that soils of the regraded site will be sampled.

**Findings:**

The information provided meets the requirements for topsoil and subsoil redistribution.

**STABILIZATION OF SURFACE AREAS**

Regulatory Reference: 30 CFR Sec. 817.95; R645-301-244.

**Analysis:**

Chapter 5 describes soil roughening in section R645-301-552.100 (page 5-83) of the MRP. Chapter 3 pages 3-8 through 3-17 describes incorporation of 2000 lbs of alfalfa or native grass hay into the soil surface. Mulch will be used at the site as described in R645-301-341.230, page 3-13, at a rate of 2000 lbs wood fiber mulch per acre anchored by a chemical tackifier.

**Findings:**

The information provided meets the requirements of the Regulations.

**BONDING AND INSURANCE REQUIREMENTS**

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

**Analysis:**

**General**

Bond Number 400SA1916 in the amount of \$350,000 was issued May 18, 2000. The Permit area described in Exhibit A of the Reclamation Agreement is 36.42 acres and the disturbed area is 21.6 acres. Exhibit 2.1-1 provided as Exhibit B of the Reclamation Agreement illustrates the permit and disturbed area.

Appendix 8-1 contains current bonding information.

**Form of Bond**

St. Paul Fire & Marine Insurance Company of Knoxville, TN issued a surety bond.

**Determination of Bond Amount**

Appendix 8-1 of the MRP outlines the bond cost and includes ripping, gouging and seeding of 21.6 acres (p 5-82).

**Terms and Conditions for Liability Insurance**

Current liability insurance is routinely kept at the Permittee's offices. A copy of the current insurance is found in Appendix 1-2. The Division is named as the Certificate Holder and will be notified if the policy is cancelled.

**Findings:**

The information provided meets the requirements for Bonding.

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TECHNICAL MEMO

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**RECOMMENDATIONS:**

Two minor errors should be corrected prior to approval.

When incorporating this amendment into the MRP, the Division should compile information received on May 26, 2004, November 2004 (Chap. 1), and January 2005.

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