

# TECHNICAL MEMORANDUM

## Utah Coal Regulatory Program

September 27, 2005

TO: Internal File

THRU: Stephen J. Demczak, Environmental Scientist III/Engineering, Team Lead

FROM: Jerriann Ernstsens, Ph.D., Environmental Specialist/Biology

RE: Full Extraction Pillar 1<sup>st</sup> South, Consolidation Coal Company, Emery Deep Mine, C/015/015, Task ID #2321

### **SUMMARY:**

The Division received an amendment in May 2005 that addresses full extraction mining of 1<sup>st</sup> south panel at the 4<sup>th</sup> east portal area. This memo describes the review of the biology and cultural sections.

The project is in Emery County, Utah, in Township 22 South, Range 6 East, Sections 27 and 28. This project will not increase the permit area. Subsidence caused from undermining operations would cause surface disturbances.

### **TECHNICAL ANALYSIS:**

## **GENERAL CONTENTS**

### **PERMIT APPLICATION FORMAT AND CONTENTS**

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

#### **Analysis:**

The Mine and Reclamation Plan (MRP) meets the requirements of R645-301-121 because there is clear information in the Biology chapter or archeology section.

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### **Findings:**

Information provided in the plan meets the Permit Application Format and Contents in General Contents requirements of the regulations.

## **REPORTING OF TECHNICAL DATA**

Regulatory Reference: 30 CFR 777.13; R645-301-130.

### **Analysis:**

The MRP meets the requirements of R645-301-130 because qualified professionals conducted or directed the surveys and analysis for the supporting biologic- and historic resource-related documents.

### **Findings:**

Information provided in the plan meets the Reporting of Technical Data in General Contents 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.

## **HISTORIC AND ARCHEOLOGICAL RESOURCE INFORMATION**

Regulatory Reference: 30 CFR 783.12; R645-301-411.

### **Analysis:**

The MRP meets the requirements of R645-301-411 regulations pertaining to historic resources. The MRP (Chap. X, Part A; Confidential Binder in Division PIC room) includes numerous evaluations of historic resources that focus on the permit area. It also includes narratives and maps (Confidential Binder: Plate X A-1 and individual surveys) of historic resources that may be included in or eligible for inclusion in the National Register. There is proof of previous coordination efforts and clearances from the SHPO.

The Permittee previously surveyed the area near the 1<sup>st</sup> South panel for historic resources (Chap X, Apps. 5.0, 5.1, 5.2, XII-3 [IBC 2005]). The results show that there are many historic resource sites including the Spanish Trail (488/11). The 1<sup>st</sup> South panel is at least 3000' southeast to a portion of the Spanish Trail, and parallels parts of the Christiansen Wash.

The results of the surveys near the 1<sup>st</sup> South panel also showed at least five historic resources (42EM: 625, 626, 627, 2822, and 1385) of concern. One of the sites (42EM2822) is eligible for inclusion in the NRHP. The recommendations from the surveyors for these five sites include avoiding disturbance, or excavating or photographing prior to disturbance. The Division makes the determination that long-wall mining of this panel will have "no effect" on these five sites because: 1) There is no proposed facilities area; 2) The five sites are greater than 400' from the proposed panel as well as the subsidence zone; 3) There is low probability of surface effects from subsidence at the sites.

### **Findings:**

Information provided in the plan meets the Environmental - Historic and Archeological Resource Information requirements of the regulations.

## **VEGETATION RESOURCE INFORMATION**

Regulatory Reference: 30 CFR 783.19; R645-301-320.

### **Analysis:**

The MRP meets the requirements of R645-301-321 because there is adequate discussion of plant communities observed within the permit area. The MRP contains supporting documents on vegetation for the permit area [refer to Chap. III (Reclamation); Chap. V, Vol. 2/3 of 3 for Plate V-4; Chap. VIII (Environmental Resources), Apps. VIII 1 and 2, and Plate VIII-1; 2005 IBC: Chap. XII, App. XII 2, and Vegetation Map].

The 1<sup>st</sup> South panel is over and adjacent to Christiansen Wash. DWR considers all drainages with riparian habitat as critical habitat. The MRP includes stream buffer zone that includes this Wash. The 1<sup>st</sup> South panel will include continuous extraction mining under the stream buffer zone. The Permittee will monitor the area for subsidence. If subsidence occurs within this zone, the Permittee will contact the Division of the effects prior to repairing the surface (Chap. V, p. 39).

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**Findings:**

Information provided in the plan meets the Environmental - Vegetation Resource Information requirements of the regulations.

**FISH AND WILDLIFE RESOURCE INFORMATION**

Regulatory Reference: 30 CFR 784.21; R645-301-322.

**Analysis:**

GENERAL WILDLIFE

The MRP meets the R645-301-322 requirements of the regulations because there is adequate discussion, supporting documentation, and maps on fish and wildlife resource for the permit and adjacent areas. [Refer to Chap. III (Reclamation); Chap. IX (Environmental Resources), Apps. IX 1 and 2; and Plates IX 1, 2, and 3; Confidential Binder, Chap. IX for Plate 10-1 (map supports report in Chap. IX, App. IX-1); Chap. VII, App. VII 1, 2, and additional documents in this appendix section; 2005 IBC: Chap. XII, App. XII 2, and Wildlife Map]. There is sufficient information to design the protection and enhancement plan.

Mining operations of the 1<sup>st</sup> South panel may impact small mammals and reptiles. The Permittee predicts that subsidence will include minor surface cracks. The Permittee will monitor the area for subsidence. If subsidence occurs within this zone, the Permittee will contact the Division of the effects prior to repairing the surface (Chap. V, p. 39).

*Ungulates*

Confidential Binder, Chap. IX, Plate 10-1 (map supports report in Chap. IX, App. IX-1) shows that the 1<sup>st</sup> South panel is not in an area designated as critical habitat for ungulates.

*Raptors*

The Permittee conducted a single fly-over raptor survey (2002) to obtain baseline data prior to disturbance at the 4<sup>th</sup> east portal (Chap. VIII, App. VIII-1, Collins 2002). DWR observed no raptor nest during the 2002 fly-over survey and decided that further surveys were not necessary for the 4<sup>th</sup> east portal, only (Chap. VIII, Collins 2003). The Permittee will need to survey to obtain baseline when the company expands beyond the surface disturbance at 4<sup>th</sup> east portal.

THREATENED, ENDANGERED, AND SENSITIVE (TES) ANIMAL/PLANT SPECIES

The MRP meets the requirements of R645-301-322 because there is adequate discussion, supporting documentation, or maps on TES species that could occur within or adjacent to the permit area. (Refer to Chap. VIII, App. VIII 1, 2, and other supporting documents; Chap. IX; Chap. IX, App. IX 1.)

All supporting documents show that there were no observations of TE animal species. The reports show that there were occurrences of two TE plant species adjacent to the 4<sup>th</sup> east portal project area. There are no federal protection measures for TE plant species at this time.

The Division, in consultation with USFWS, considered that the 4<sup>th</sup> east portal project (May 2002) and associated transmission line (Oct. 2002) would have no impact on the TE species that could occur within or adjacent to the permit area.

For the 1<sup>st</sup> South panel, the existing supporting documents for TES are adequate to determine that this project will have no impact on TE species or their critical habitat.

**Findings:**

Information provided in the plan meets the Environmental - Fish and Wildlife Resource Information requirements 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:**

**Archeological Site Maps**

The MRP meets the requirements of R645-301-411.141 because there are archeological maps showing known resource locations within the permit area. These maps are in the Confidential Binder (Division PIC room).

**Vegetation Reference Area Maps**

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The MRP meets the requirements of R645-301-323.100 because vegetation maps illustrate community types within the disturbed area.

### **Findings:**

Information provided in the plan meets the Environmental - Maps, Plans, and Cross Section Resource Information requirements of the regulations.

## OPERATION PLAN

### PROTECTION OF PUBLIC PARKS AND HISTORIC PLACES

Regulatory Reference: 30 CFR 784.17; R645-301-411.

#### **Analysis:**

There are no known public parks or historic places within the permit area that require protection.

#### **Findings:**

Information provided in the plan meets the Operations - Protection of Public Parks and Historic Places requirements of the regulations.

## FISH AND WILDLIFE INFORMATION

Regulatory Reference: 30 CFR Sec. 784.21, 817.97; R645-301-322, -301-333, -301-342, -301-358.

#### **Analysis:**

The MRP meets the requirements of R645-301-333, R645-301-342, and R645-301-358 because the Permittee plans to use the best technology available to minimize impacting wildlife and its critical habitat.

### Protection and Enhancement Plan

The 1<sup>st</sup> South panel will protect the area by avoiding full extraction over the stream buffer zone.

### **Endangered and Threatened Species**

There are no TE species that require a protection plan for the 1<sup>st</sup> South panel.

### **Bald and Golden Eagles**

There are no known bald eagle nests and no known golden eagle nests within the permit area.

### **Wetlands and Habitats of Unusually High Value for Fish and Wildlife**

For the 1<sup>st</sup> South panel, the Permittee will not conduct full extraction mining above the stream buffer zone.

### **Findings:**

Information provided in the plan meets the Operations - Fish and Wildlife Information requirements of the regulations.

## **VEGETATION**

Regulatory Reference: R645-301-330, -301-331, -301-332.

### **Analysis:**

The MRP meets reclamation, revegetation, and performance standard requirements (R645-301-340, R645-301-350).

For the 1<sup>st</sup> South panel, the Permittee provides a mitigation plan for subsidence.

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**Findings:**

Information provided in the plan meets the Operations - Vegetation requirements of the regulations.

## **RECLAMATION 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:**

The 1<sup>st</sup> South panel amendment does not include facilities, therefore, there is no additional discussions concerning reclamation.

**Findings:**

Information provided in the plan meets the Reclamation - General Requirements of the regulations.

### **RECOMMENDATIONS:**

Approve the amendment.