

# TECHNICAL MEMORANDUM

## Utah Coal Regulatory Program

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May 25, 2005

TO: Internal File

THRU: Pamela Grubaugh-Littig, Permit Supervisor

FROM: Jerriann Ernstsens, Ph.D., Environmental Specialist, Biologist

RE: SITLA Lease, Canyon Fuel Company, LLC, Dugout Canyon, C/007/0039, Task ID #2181

### **SUMMARY:**

The Division received an amendment in April 2004 that addresses the expansion of the proposed SITLA lease area east of current permit boundary. This memo describes the review of the biology and cultural sections for the third revision of the amendment dated March 2005.

This proposed project would increase the permit area by 2,360 acres with zero acres allotted for facilities and operations. The acreage and section numbers do not include transportation or power-line corridors. Subsidence caused from undermining operations would cause surface disturbances. The Division has included a map showing the location of the proposed area.

The Dugout Mine is in Carbon County, Utah. The 7.5 Minute Quadrangle maps that cover the permit area are Mount Bartles (Geological Survey of the U.S. Department of the Interior). The proposed area includes Township 13 South and Range 13 East with Sections 17, 20, 21, 28, 29, and 30 (partial and entire sections).

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**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.

The MRP includes many different volumes, including the following “stand-alone” documents (as of January 2005):

- “Dugout Canon Mine – Leach Field Addendum A-1” (LFA, March 2001)
- “Refuse Pile Amendment – Dugout Canyon Mine” (RPA, January 2003)
- “Methane Degassification Amendment” (MDA, 2003/2004).

The “stand-alone” volumes provide exclusive information, supporting documents, and maps for each proposed project. The current “SITLA Lease” amendment is not a stand-alone document. The Permittee provided a current TES list and copied requested information (MSO survey reports) from certain stand-alones to the MRP. The Permittee will incorporate the final approved amendment to the MRP.

**Findings:**

Information provided in the plan meets the minimum 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 minimum 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 (Vol. 3, App. 4-1; see Confidential Files in Division PIC room after June 2005) includes numerous evaluations of historic resources that focus on the permit area. It also includes narratives and maps 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 submitted two ground surveys (Senco-Phenix, June 2001 and May 2004) conducted within the proposed SITLA lease area. Both surveys were relatively limited in size and not far into the permit boundary (2000' east of the permit boundary). Regardless, both surveys show that there are no sites included in or eligible for inclusion in the NRHP within the surveyed area of the SITLA lease.

It is important that employees avoid all historic properties during the life of the project. In the event that construction or operations uncover historic properties, Section 106 of the National Historic Preservation Act and 36 CFR 800.13 require that the Permittee stop all work in the vicinity and notify the Division. The Permittee, Division, and other appropriate parties will develop a strategy to avoid the site or mitigate the impacts at that time.

### **Findings:**

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

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## 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 many supporting documents on vegetation for the permit area. The baseline vegetation information is adequate for assessing reclamation potential and success as well as productivity values for the surface area affected by mining operations.

### **Findings:**

Information provided in the plan meets the minimum 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 provides narrative, supporting documentation, or maps on ungulates, bats, aquatics, raptors, migratory birds, and reptiles. This information is adequate to meet the requirements of R645-301-322.

#### *Ungulates*

The MRP (Vol. 3, App. 3-2) provides general information on many wildlife species including ungulates. A letter in the MRP (Vol. 3, App. 3-3) marginally details elk and deer range in the region including the permit area.

The permit area has both critical summer and winter big game habitat. There are areas designated as critical winter and summer deer habitat as well as high value winter and yearlong elk habitat (Confidential Files, Plate 3-2).

### *Bats*

A previous bat survey includes information on bat species and numbers as well as roosting and foraging habits near a portion of Dugout Creek (Vol. 3, App. 3-3). The Permittee will conduct a 2005 bat surveys in cliff habitat adjacent to the Pace Canyon fan breakout (Vol. 1, Sec. 322, p. 3-17). The Permittee will also survey riparian areas where subsidence may impact bats.

The Permittee will survey for all Utah sensitive bat species and conduct all bat surveys between May and September. The Permittee will conduct follow up surveys within one to two years of disturbance and between May and September if bats were observed during the baseline surveys and if operations resulted in subsidence.

It is difficult for the Permittee to predict, for the life of the mine, exactly when they will subside certain areas. The Permittee, however, should be able to accurately predict when an area is likely to subside on annual basis. The Permittee is already required to submit updated projections of their mine plan in the Annual Reports. The Permittee should also include, in the Annual Report, projections of whether or not there is a need for follow up bat surveys. For example, if the baseline survey was positive and a cliff or riparian area was subsided in January 2005, the Permittee would commit to conduct the follow up survey in the 2004 Annual Report. The Permittee would conduct the follow up survey between May and September of 2005 or 2006. These efforts will help the Division and DWR develop a mitigation plan, if necessary.

### *Aquatics*

The MRP does not include fish or macroinvertebrate surveys. There are water resources within the Pace Creek and SITLA lease areas that include small stretches of channels considered as ephemeral or perennial within the permit area. The Division, in consultation with DWR, does not recommend surveying for macroinvertebrates or fish within these stretches at this time.

### *Amphibians and Reptiles*

The MRP does not include amphibian and reptile surveys that are project specific, but has general information on a variety of species, including reptiles (Vol. 3, App. 3-2).

### *Raptors*

The Permittee will conduct annual raptor surveys to obtain baseline data prior to mining disturbances including subsidence of cliff habitat (Vol. 1, Sec. 322, p. 3-13). The Permittee will also conduct follow up surveys within one year if nests were observed during the baseline surveys and if operations resulted in subsidence. This follow up will help determine the degree of impact to the nests. Annual reports will provide the results of the over-flight surveys.

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The 2004-raptor survey apparently covered the Pace and SITLA project areas. The MRP states that the results were positive for two golden eagle nests approximately 1 mile from the Pace project site. This distance is not within the 0.5 buffer zone.

Previous raptor surveys include information on the prairie falcon, Cooper's hawk, and golden eagle observed along the access corridor to the mine facilities area (Vol. 3, App. 3-3). Flyover maps show nests for a diversity of raptor species including redtail hawk, prairie falcon, raven, and golden eagle.

### THREATENED, ENDANGERED, AND SENSITIVE ANIMAL/PLANT SPECIES

The MRP meets the requirements of R645-301-322 because there is adequate discussion, supporting documentation, and maps on TES species that could occur within or adjacent to the permit area. All supporting documents on TES plant and animal species show that there were no observations of threatened or endangered species.

The Permittee has conducted site-specific TES surveys over the years. There is, however, no general threatened, endangered and sensitive species (TES animal and plant) official evaluation that focuses on the SITLA lease area. The Division was concerned of subsidence possibly impacting TES plant and animal species. DWR provided an updated TES list and reported that there are no records of occurrence for any TES species in T13 S, R13 E, S17, 19-21, 28-30. They mentioned, however, that there are recent records of occurrence in the vicinity for ferruginous hawk (over 2 miles from area) and historical records of occurrence for Northern goshawk (approximately 4 miles from area).

#### *Mexican Spotted Owl (MSO)*

The Permittee conducted a two-year calling survey in 2003 and 2004 that adequately covers the required evaluation for the Pace fan and SITLA lease projects. The results for both surveys show that there were no MSO observed, but show there were northern saw-whet and great horned owls. The Division does not consider that additional MSO ground-truthing or calling surveys are necessary for the Pace fan or SILTA lease projects.

#### **Findings:**

Information provided in the plan meets the minimum Environmental - Fish and Wildlife Resource Information requirements of the regulations.

### **MAPS, PLANS, AND CROSS SECTIONS OF RESOURCE INFORMATION**

**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 Files (Division PIC room after June 2005).

**Vegetation Reference Area Maps**

The MRP meets the requirements of R645-301-323.100 because vegetation maps illustrate community types within the disturbed and reference areas as well as illustrate the location of reference areas. The SITLA lease amendment does not include facilities, therefore, there is no reference area associated with this project.

**Findings:**

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

## **OPERATION PLAN**

### **PROTECTION OF PUBLIC PARKS AND HISTORIC PLACES**

Regulatory Reference: 30 CFR784.17; 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 minimum 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.

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**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. The Permittee also plans to use enhancement measures during the reclamation and postmining phases that consider planting species appropriate for PMLU.

**Protection and Enhancement Plan**

*Bats*

The Permittee will conduct a bat survey in the summer of 2005. The Division requests baseline surveys in cliff and riparian habitat. The Division also requests follow up surveys within one to two years of disturbance and between May and September if bats were observed during the baseline surveys and if operations resulted in subsidence.

*Raptors*

The Permittee will conduct annual raptor surveys to obtain baseline data prior to mining disturbances including subsidence of cliff habitat (Vol. 1, Sec. 322, p. 3-13). The Permittee must also conduct follow up surveys within one year if nests were observed during the baseline surveys and if operations resulted in subsidence.

**Endangered and Threatened Species**

*Colorado River Fish*

The MRP provides estimates of water consumption as of February 2005 that includes the Pace fan and SITLA projects.

For new amendments, the Permittee must resubmit water consumption calculations with the midterm application to provide actual (vs. estimated) consumption values.

**Bald and Golden Eagles**

There are no known bald eagle nests within the SITLA lease area.

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

Mining operations for the SILTA lease may result in subsidence of water resources within the permit area. The Permittee provides a monitoring plan and will mitigate if operations impact the Pace Creek stream channel (Vol. 2, Sec. 731.200, p. 7-62). The plan includes filling cracks with bentonite. If mitigation efforts are not successful and there is impact to streambank

habitat, the Permittee must coordinate with the Division and DWR to develop a mitigation plan that may have a vegetation component. (Refer to R645-301-332; R645-301-320).

**Findings:**

Information provided in the plan meets the minimum 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). The Permittee provides a mitigation plan for the subsidence to the Pace Creek channel that includes filling cracks with bentonite. If mitigation efforts are not successful and there is impact to streambank habitat, the Permittee must coordinate with the Division and DWR to develop a mitigation plan that may have a vegetation component.

**Findings:**

Information provided in the plan meets the minimum 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 SITLA lease amendment does not include facilities, therefore, there is no additional discussions concerning reclamation.

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**Findings:**

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

**RECOMMENDATIONS:**

Approve the amendment.

The letter drafted by Barry Barnum (1996, Utah Fuel Company; Vol. 3, App. 3-3) details a raptor nest protection plan as it relates to subsidence. The DWR no longer supports this approach. The Permittee states they will evaluate raptor nests on a case-by-case basis and will mitigate using the best technology available. Any mitigation effort, however, is dependent on results of the on-ground surveys of that year, safety, degree of subsidence, and the availability of alternative nest sites outside the subsidence area. The Permittee must contact the Division prior to any protection efforts.

For future reference, the Division would like the Permittee to know that calling surveys are only required after ground-truthing results are positive for MSO. The cost and time involved in the ground-truthing surveys are considerably less than for the calling survey.