

TECHNICAL MEMORANDUM

Utah Coal Regulatory Program

February 24, 2005

TO: Internal File

THRU: D. Wayne Hedberg, Permit Supervisor

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

RE: SITLA Lease, Canyon Fuel Company, Dugout Canyon, C/007/00039, Task #2083

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 second revision of the amendment dated November 2004.

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) does not meet R645-301-121.100 and R645-301-121.200 because there unclear information in the Biology chapter or archeology section. See “Findings” for the list of deficiencies.

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 does not meet the minimum Permit Application Format and Contents in General Contents requirements of the regulations. Prior to approval, the Permittee must act in accordance with the following:

R645-301-121.200, The Permittee must clarify the method of conducting bat surveys along with raptor surveys (Vol. 1, Sec. 322, p. 3-19).

REPORTING OF TECHNICAL DATA

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

Analysis:

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

There are mislocated confidential documents in certain volumes. The Permittee will attend to these documents as a response to the Division's request dated December 8, 2004.

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 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.

It is important for the Permittee to understand that workers must avoid all historic resources during the life of the project. In the event that construction or operations uncover historic resources, the Permittee must stop all work near the resources and notify the Division. At that time, DCM, DOGM, and other appropriate parties will develop a strategy to avoid the site or mitigate the impacts.

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Findings:

Information provided in the plan meets the minimum 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 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. Most of the information is adequate to meet R645-301-322, except the Permittee is not clear or does not provide adequate information on protection and enhancement plans for raptors.

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. However, there is a more descriptive deer and elk

habitat map (Plate 3-2) in confidential. This map belongs in confidential because it also illustrates raptor nest locations.

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 commits to conducting a 2005 (SILTA Lease area) and future bat surveys (along with raptor surveys) in cliff habitat before subsidence (Vol. 1, Sec. 322, p. 3-19).

The Division, in consultation with DWR, requests that the Permittee also conduct baseline bat surveys in riparian habitat within zones of expected subsidence. The Permittee must survey for all Utah sensitive bat species and conduct all bat surveys between May and September. The Permittee must also 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. The Permittee must add this commitment for the follow up survey in the bat-related text (R645-301-322, R645-301-332). The Permittee must clarify the method of conducting bat surveys along with raptor surveys (Vol. 1, Sec. 322, p. 3-19; R645-301-121.200).

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 must 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).

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Raptors

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. The Division will verify the distance once the Permittee submits the Annual Report.

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. The Permittee commits to conducting 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. This follow up will determine the degree of impact to the nests. The Permittee must add this commitment for the follow up survey in the raptor-related text. These efforts will help the Division and DWR develop a mitigation plan, if necessary (R645-301-322, R645-301-332).

THREATENED, ENDANGERED, AND SENSITIVE ANIMAL/PLANT SPECIES

In order for a person to conduct official surveys, they must fulfill the following sequential requirements: belong to the permit holding corporation, take the species-specific course and exam, submit the application for permit to the USFWS, and record name to the corporate permit records.

The MRP meets 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.

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 does not meet the minimum Environmental - Fish and Wildlife Resource Information requirements of the regulations. Prior to approval, the Permittee must act in accordance with the following:

R645-301-322, - 332, SITLA 3/05:

- The Division, in consultation with DWR, requests that the Permittee also conduct baseline bat surveys in riparian habitat within zones of expected subsidence. The Permittee must survey for all Utah sensitive bat species and conduct all bat surveys between May and September. The Permittee must also 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. The Permittee must add this commitment for the follow up survey in the bat-related text.
- 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. The Permittee commits to conducting 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. This follow up will determine the degree of impact to the nests. The Permittee must add this commitment for the follow up survey in the raptor-related text. These efforts will help the Division and DWR develop a mitigation plan, if necessary.

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 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

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The MRP meets 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.

Analysis:

The MRP meets 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. (See Fish and Wildlife Resource Information section for the deficiency).

Raptors

The Permittee commits to conducting 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. (See Fish and Wildlife Resource Information section for the deficiency).

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).

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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 R645-301-330, R645-301-331, and R645-301-332 because 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.

Findings:

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

RECOMMENDATIONS:

Do not approve the amendment until the Permittee addresses all deficiencies.

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.