0031

TECHNICAL MEMORANDUM

Utah Coal Regulatory Program

September 11, 2008

TO: Internal File

THRU: James D. Smith, Permit Supervisor
Steve Christensen, Team Lead

FROM: Joe Helfrich, Biology, Land Use, Cultural Resources

RE: Dugout Canyon Mine, 560-Acre Extension, Canyon Fuel Company, LLC, C/007/0039, Task ID #3018

SUMMARY:

The Division of Oil, Gas and Mining received the Application for the Dugout Canyon 487 Acre Extension. The proposed extension is located in Carbon County, Utah (7.5 Minute USGS Quadrangle map is Mt. Bartles). The proposed extension is located in T13S R13E Sections 16 W1/2 and 17 all but the N1/2N1/2. The surface owners are SITLA and private (Plate 1.1), while the subsurface owners are SITLA and BLM (Plate 5.7). The proposed extension would not include any surface disturbance for facilities.

In Jerriann Ernstsen's absence Joe Helfrich has been assigned the review of the remaining deficiencies for this task #2958 formerly task #2873.

TECHNICAL ANALYSIS:

GENERAL CONTENTS

PERMIT APPLICATION FORMAT AND CONTENTS

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

Analysis:

Information provided in the application, Cultural Resource Inventory #555 dated September 18, 2007, is in color, the map is in color and the legend is color-coded.

The MRP includes many different volumes, including Chapter 3 and 4 Volumes and the following "stand-alone" documents (as of September 2005):

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

The "stand-alone" volumes provide exclusive information, supporting documents, and maps for each proposed project. This proposed extension would be incorporated as part of the primary MRP Volumes Chapter 3 and 4 for biology and archaeology, respectively.

Findings:

The information in the application is adequate to meet the requirements of this section 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 biological and archeological 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 Application includes a literature search of cultural inventories previously conducted for other projects, and an inventory for this proposed extension area (Senulis September 18, 2007). The area surveyed, 580 acres, can be located on the Mount Bartles 7.5 minuet quad map included in the application.

The 2007 results show that there was one archeological site observed within the surveyed area, an aspen art inscription, photo included in the application. According to the report ***"a finding of no effect is appropriate and archaeological clearance without stipulations are recommended".*** The Division concurs with the survey findings of no effect. The SHPO provided concurrence wit the Division determination of no effect by way of "E" mail on June 18, 2008. A copy of the correspondence has been forwarded to the division files for the Dugout mine.

Findings:

The information in the application is adequate to meet the requirements of this section of the regulations.

VEGETATION RESOURCE INFORMATION

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

Analysis:

The Application meets the requirements of R645-301-321 because there is adequate discussion of plant communities observed within the extension area.

This action would not include any facility or road related surface disturbances, therefore there is no need for a quantitative vegetation survey. The Permittee modified MRP Volume Chapter 3 Plate 3.1 to include this extension area and to provide a more accurate description of the community types. The Permittee derived the additional information from November 2006 aerial photographs.

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 Application does not meet the requirements of R645-301-322 because the Application or MRP does not include adequate or applicable narrative, supporting documentation, or maps on wildlife within or adjacent to the extension area.

The Division projects that there would be minimal subsidence impacts, in general, to the surface because of the geology of the area and depth of the proposed mining. However, there may be high value habitats or species of concern that may require additional surveys, evaluations, agency coordination, or other concentrations.

The archaeology report (Senulis 2007; SPUT 555) states that there is a salt lick just above the permit area. The DOGM would like more information about this lick – is it natural, man-made, actively being used by domestic or wild animals, and is this lick within the angel of draw? (R645-301-322.220).

Ungulates

DWR has designated the extension area as elk high value yearlong and deer critical summer range and there is habitat for pronghorn in the lower valley.

Raptors

The Permittee supports that the extension includes steeply sloped cliffs (refer to Volume Chap 3 Plates 3.2 and 6.1). This type of cliff habitat is considered critical raptor habitat and may be more susceptible to subsidence impacts than to geology that is more elastic that experience a general ground-lowering effect. The Permittee supports (meeting 2/1/07) that these cliff and adjacent areas could be designated as habitat for raptors.

The Permittee mentions a 2007 flyover raptor report, but did not provide the report with this Application. It is not clear to the Division whether Sections 16 W1/2 and 17 N1/2 were surveyed during the 2007 flyover survey for cliff dwellers. The Permittee must provide the 2007 report (R645-301-322).

There are Douglas fir, mixed conifer or aspen communities at higher elevations that DWR considers as goshawks and northern saw whet owl habitat within or adjacent to the extension area. Annual flyover surveys typically would not be able to detect these or other tree

nesters, unless the flyover is conducted in early spring before the tress leaf out. The most effective method to detect these birds is ground calling surveys. For Northern saw-whet owls, the survey should be one or two nights within a 300-meter perimeter of disturbance.

Bats

The Division considers that cliff and tree habitats in the extension area may provide roosting/nesting habitat for bats and other cliff dwellers. The Application does not include additional information on bats or their habitat.

When the Permittee is required to conduct bat surveys, the Permittee will focus on all Utah sensitive bat species (four for that area) and conduct all bat surveys between May and September. The Division may require surveys for proposed projects that may include subsidence or other possible impacts to foraging habitat or known colony roosting/nursing habitats. The Permittee will consult with the Division if baseline surveys are positive for bats or if operations may significantly impact bat habitat. The Permittee may need to conduct follow up surveys and implement a mitigation project (Vol. 1, Sec. 322, p. 3-17).

JBR Environmental Consultants conducted a bat survey in June 2002 for the Degas Wells MW-6 and –8 (pg. 3; sec. 322.200; amendment withdrew). The amendment paraphrased the results, which showed no observations for TES species. The amendment never included a copy of the report. The Permittee mentioned (personal communications 8/11/03) that the bat survey in 2002 was originally required because Dugout planned to mine under escarpments. The Permittee changed plans and never mined in those areas of concern.

The Permittee conducted a bat survey near the Pace Canyon fan breakout (May 2005; Vol. 3, App. 3-3). The results showed that there were 3,000 calls recorded and that there were at least 7 species of bats. There were no TE species observed, but there was one sensitive species (fringed myotis) observed primarily at a pond near survey site "Stop 7". The results show that the area has a high diversity of bats, which suggests that the area provides sufficient foraging and roosting habitats.

Many of the species of bats in that area probably forage and drink from the perennial areas of Pace Creek, drinking trofts, and springs. They could, however, visit resources (including water) as far as 30 miles away, nightly! It is not uncommon for bats to forage up to 10-15 miles away from roosting areas, but there are a few that limit their travel to around 1 mile. The Division and Permittee should consider that 1) the area is diverse in bat species regardless of survey results, 2) the area provides forage and water resources, and 3) bats could potentially be impacted by mining-related disturbances.

JBR conducted the 2007 bat survey along Pace Creek and drainages above the creek, which included the proposed area for G19. The results were negative for bat responses. JBR

supports that there have been bat responses in the area during previous surveys, but cooler temperatures may have limited bat activity during this survey.

THREATENED, ENDANGERED, AND SENSITIVE ANIMAL/PLANT SPECIES

The Application meets the requirements of R645-301-322 because the Application or MRP provides applicable and adequate discussion, supporting documentation, and maps on threatened, endangered, and sensitive (TES) species that could occur within or adjacent to the extension area.

The Carbon County TES list includes Graham Beardtongue, Uinta Basin hookless cactus, bonytail chub, Colorado pikeminnow, humpback chub, razorback sucker, Mexican spotted owl (MSO), black-footed ferret, bald eagle, and western yellow-billed cuckoo (candidate).

All supporting surveys (MRP) on TES plant and animal species show that there were no observations of threatened or endangered species in the areas surveyed.

DWR and Dr. Patrick Collins (Mt. Nebo Scientific) support that it is unlikely that there are animal or plant TE species within the extension area that could be impacted by this action. Dr. Collins projects that the USFS sensitive plant species – canyon sweet vetch may occur within the extension area. The Division considers that subsidence would not likely impact this species' population or habitat because of the type of subsidence (general ground-lowering) that may occur in their specific habitat type.

The archaeology report (Senulis 2007; SPUT 555) states that there is a salt lick just above the permit area. Page 4-8 of the application includes the following description;
"the lick is a 12"X12" block of commercially produced salt". Typically salt licks are placed in the forest to supplement the mineral needs of livestock, they are not considered to be a cultural resource.

The 2007 raptor survey was provided as confidential information in the 2007 Annual Report for the Dugout mine. The survey flight path and data indicate that sections 16 W1/2 and 17 N1/2 were surveyed during the 2007 flyover survey. In the W1/2 of section 16 there were no nests identified. In the N1/2 of section 17 there were no nests. Additionally no mining is planned for these areas.

Findings:

Information provided in the application is adequate to meet the requirements of this section of the regulations.

LAND-USE RESOURCE INFORMATION

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

Analysis:

The Application meets the R645-301-411.100 requirements of the regulations because the Application or MRP narrative describes the land uses and capability of the land and maps (Plate 4-1) illustrate the land uses.

Findings:

Information provided in the plan meets the minimum Environmental - Land-Use 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 Application meets the requirements of R645-301-411.141 because there are archeological maps showing known resource locations within the proposed area.

Cultural Resource Maps

The Application meets the requirements of R645-301-411.141 because there are cultural maps showing known resource locations within the proposed area.

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 proposed area.

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 application includes a mitigation plan for raptor protection that is described on pages 3-31 through 3-33. Furthermore the applicant will not be mining in the W1/2 of section 16 and the N1/2 of section 17 and the 2007 raptor survey data indicates that there are no raptor nests in the noted portions of these two sections.

R645-301-333, although the Permittee already adheres very stricktly to exclusionary periods, there is no commitment in the MRP. The Permittee must provide this commitment. As standard operating procedure, the Division will always coordinate the Permittee and DWR to discuss any conflicts that may arise. This commitment must be located in the 333 section of the MRP. • The Division requires the Permittee to provide an update on the mitigation plans (two) discussed in Vol. Chap 3, Sec 322.200, pg. 3.24. This brief summary must be included just below the current insertion. Page 3-56 of the application includes a commitment to adhere to exclusionary periods.

The wildlife exclusionary periods include: raptors (Feb 1 – July 1), deer/elk winter range (Dec 1 – April 15), deer/elk calving (May 15 – July 5), and pronghorn (May – June 20).

The Division requires the Permittee to provide an update on the mitigation plans (two) discussed in Vol. Chap 3, Sec 322.200, pg. 3.24. This brief summary must be included just below the current insertion (R645-301-333).

Ungulates

There is habitat within or adjacent to the permit area for deer and elk. The Permittee will adhere to exclusionary periods when initiating construction and final reclamation projects (R645-301-333).

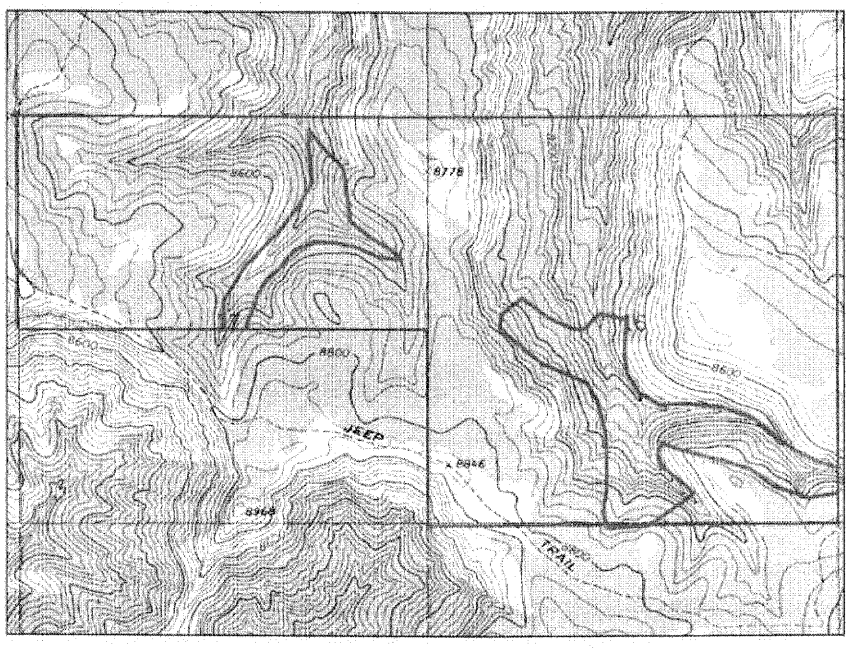
The Division considers that because there would be a low probability of instantaneous and significant subsidence-related impacts to ungulate-type habitat, there is little likelihood this action would impact elk or deer populations in the area or their habitat (elk high value yearlong and deer critical summer range).

Raptors

The DWR considers that prior to disturbance of these raptor's habitat type, the Permittee should conduct on the ground calling surveys. This recommendation should be considered project specific and always implemented with consultation among the parties prior to disturbance. The Permittee commits to conducting raptor nest surveys annually in the spring prior to mining activities or potential subsidence within the permit area and to collect baseline data (Vol. Chap 3 Sec 322.200, pg. 3.21). The Permittee has been very diligent about contacting

DWR concerning goshawks and saw-whet owl nesting habitat and nesting birds prior to possible disturbance.

The mature conifer/quaking aspen stand in Sections 16 and 17 (refer to map below; Tony Wright DWR email 12192007) will be undermined in years 2010 and 2011.



The Permittee does not provide information concerning this expansion action and these two stands. The Division considers that the Permittee must provide a protection or mitigation plan for possible tree-nesting raptors that may be impacted by subsidence (R645-301-332, -333).

Bats

The Permittee commits to conducting bat surveys along with raptor surveys in cliff habitat before subsidence (Volume Chap 3 pg 3-21). The need for future bat surveys is rather questionable. The Division considers that there would be a need if there is a known cave, abandoned mine, or building that could be impacted by mining-related operations. With these types of habitat, a single impact could be detrimental to an entire colony. Another need may be if there are possible impacts to perennial water supplies. Most likely the need for a survey even if this situation is remote. It would probably be best to just monitor the known water supply and mitigate the impact to the source.

The Division, DWR, and Permittee met on October 11, 2007 to discuss the need for bat surveys for this extension. DWR (George Oliver) recommended that there is really no need to conduct surveys for tree- or cliff-roosting bats. DWR considers that there is ample tree- and cliff roosting habitats in the area and that if subsidence occurred the bat would have time to move to safety. Even in the event of instantaneous subsidence, the impact would most likely be to individuals and not large populations of bats.

Endangered and Threatened Species

The application includes calculations for mine water consumption as described on page 3-17 of the application. Calculations are provided for October 2007 at 103 acre feet per year and April 2008 at 131 acre feet per year. The average for the two sets of calculations would be a depletion of 117 acre-feet of water per year. According to the criteria established by the US Fish and Wildlife Service, (USFWS), any depletion greater than zero would result in a ***"may affect is likely to adversely affect"*** determination that requires formal consultation between the Office of Surface Mining, (OSM), and the USFWS and any depletion greater than 100 acre feet of water per year requires a payment of 17.79/acreft for each acre foot of water depleted. Calculating 117 acreft/yr X 17.79/acreft equals an estimated payment of 2081.43 as mitigation for the Colorado Fish Recovery Program. The application includes a commitment to comply with any requirements imposed by the FWS resulting from the outcome of the Section 7 consultation. The Consultation between the agencies (OSM and FWS) is pending.

Findings:

Information provided in the application is adequate to meet the requirements of this section of the regulations pending the outcome of the OSM, USFWS Section 7 consultation.

VEGETATION

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

Analysis:

The Application meets the requirements of R645-301-330, R645-301-331, and R645-301-332 because the Permittee will disturb the smallest area as possible for facilities, apply interim or contemporaneous reclamation when applicable, and mitigate for subsidence-related impacts.

For the 487-acre extension, there will be no facilities at this time. However, this mine experiences high levels of gases and will most likely need to develop degas wells shortly after they begin mining in this extension area. Vegetations surveys will be required for those well pads and associated roads.

The MRP states in Sections 322.200 (Volume Chapter 3 p. 3-22) and 525 that the Permittee will ground-survey certain areas of the permit area for subsidence and will repair any damage. If there were any impacts observed from coal mining operations such as subsidence that warrants revegetating, Plate 3.1 (Volume Chapter 3), a general description of vegetation

communities and condition of the extension area, as well as, the NRCS soil data would provide adequate information to design a mitigation plan.

Findings:

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

RECOMMENDATIONS:

As the assigned Biologist to review the remaining deficiencies noted in this technical memo, I have provided analyses and findings to the information submitted on April 18, 2008 by the applicant. The amendment is recommended for approval.

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