

TECHNICAL MEMORANDUM

Utah Coal Regulatory Program

July 13, 2009

TO: Internal File

THRU: Steve Christensen, Lead *SKC*

FROM: Ingrid Wieser, Environmental Scientist II *WW*

RE: Add Degas Wells G25 and G26, Canyon Fuel Company LLC, Dugout Canyon Mine, C/007/0039 and Project # 3348

SUMMARY:

On April 30, 2009, Canyon Fuel Company LLC submitted an amendment to the Division to add two Degas wells (G-25 and G-26) to the Dugout Canyon Mine Mining and Reclamation Plan. The amendment would increase the disturbed area by approximately 3.6 acres. Vegetation reports as well as archeological reports were included in the amendment. The Division sent a deficiency letter and list to the permittee on June 11, 2009. The permittee responded to this list on July 7, 2009. This memo will address the biology and cultural resource aspects of the amendment to assess compliance with the associated R-645 rules.

The amendment is recommended for approval.



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TECHNICAL ANALYSIS:

GENERAL CONTENTS

PERMIT APPLICATION FORMAT AND CONTENTS

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

Analysis:

The amendment application does not include incorporated changes from task 3251 that received final approval on April 6, 2009. The following deficiency was sent to the permittee on June 11, 2009:

R645-301-120: *Please include incorporated changes from all approved amendments that occurred since November 4, 2008.*

The Permittee updated the submittal to include the incorporated changes from the previous approved amendments.

Findings:

The information provided is adequate to meet the minimum regulatory requirements for this section.

ENVIRONMENTAL RESOURCE INFORMATION

Regulatory Reference: Pub. L 95-87 Sections 507(b), 508(a), and 516(b); 30 CFR 783., et. al.

GENERAL

Regulatory Reference: 30 CFR 783.12; R645-301-411, -301-521, -301-721.

Analysis:

The environmental description of all degas sites is located in chapter four. The wells are located on land administered by Milton & Ardith Thayn trust and zoned as mining and grazing.

The land capability for all degas well sites is described on page 4-1. Archaeological surveys were completed on the degas wells and are located in the confidential binder.

Findings:

The information provided in the amendment application is adequate to meet the minimum regulatory requirements.

HISTORIC AND ARCHEOLOGICAL RESOURCE INFORMATION

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

Analysis:

A description of the cultural resource survey conducted for well sites G-25 and G-26 is located on page 4-5. SPUT-577 was conducted for the proposed well sites, and access corridors. The actual report is located in the confidential folder.

Cultural Resource Survey SPUT-577 was conducted by John A. Senulis of Senco-Phenix on July 28, 2008. The survey area includes eleven proposed drill holes and the corresponding access corridors in the Pace and Dugout Canyon Areas. Two items were identified in the survey but neither was recommended for nomination to the National Register of Historic Places. A map is included in the report of the survey area. Well sites G-25 and 26 are included in the survey area. This report was submitted as part of another amendment and received SHPO approval.

Findings:

The information provided in the amendment is adequate to meet the minimum regulatory requirements for this section.

VEGETATION RESOURCE INFORMATION

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

Analysis:

A vegetation survey was completed in October of 2008 by Patrick Collins of Mt. Nebo Scientific and is located in Attachment 3-1 of the amendment. The report includes surveys of the proposed degas well site, chosen reference areas as well as a threatened and endangered plant species survey. The reference areas were chosen to represent the native plant communities that

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were present prior to any disturbances (some sites were previously disturbed). In some situations, it was found that it was unreasonable to return a previously disturbed site to native conditions and therefore, alternate success standards were recommended by Dr. Pat Collins.

Transects and quadrats were randomly placed within the proposed disturbed area. Cover, composition, and woody species density were recorded for the sites and the reference areas. Color photographs were also included in the report.

Results

G-25

According to the report, it is assumed this site was previously disturbed by heavy equipment or grazing because of the dominance of weedy or exotic plant species and low cover on the site. Mr. Collins also believed that the site was a sagebrush/grass community prior to disturbance. Total living cover was estimated at 47% and density was measured at 2074 individuals per acre.

G-26

This relatively healthy site supports a mountain brush/ sagebrush plant community. Total living cover was measured at 56.5% and density at 3463 individuals per acre. The Mountain brush/ sagebrush/ snowberry reference area was recommended as a success standard. It was found that there was no statistical difference between the understory cover of the reference and the site.

Mountain Brush/Sagebrush/Snowberry Reference Area

Total living cover was 64.5% and density was 5137 plants per acre.

Threatened and Endangered Plant Species Survey

According to the report, state databases listed Canyon vetch (*Hedysarum occidentale*) as the only potential sensitive species to be located near the proposed disturbed sites. Canyon vetch or any other T& E plant species was not found in the survey.

Productivity

Page 3-4 was revised to state that a letter from Dean Stacy of the NRCS, dated June 16, 2008, is included in attachment 3-2. Dean Stacy estimated the production at G-25 to be 1500 pounds per acre and did not include an estimate for G-26.

The following deficiency was sent to the permittee on June 11, 2009:

R645-301-321.100: *Please update page 3-5 to reflect the production estimate made by Dean Stacy (NRCS) on June 16, 2008 for site G-25.*

The NRCS letter dated June 16, 2008 regarding production does not include a production estimate for proposed site G-26. Please include a production estimate for this site from the NRCS.

The Division contacted Dean Stacy of the NRCS on June 15, 2009 regarding the above deficiency. The error was corrected and identified in the email the permittee included in attachment 3-1. Table 3-5 was updated to reflect the production estimate made by Dean Stacy for G-25 and the estimate made in the email for G-26.

Findings:

The information provided is adequate to meet the minimum regulatory requirements for this section.

FISH AND WILDLIFE RESOURCE INFORMATION

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

Analysis:

Fish and wildlife information can be found beginning on page 3-6.

Raptors

A raptor survey is conducted annually for each well pad in operation. In 2008, no raptor nests were located in sections 20 or 29 (the locations of G-25 and G-26).

A Mexican Spotted Owl survey was conducted on May 5, 2004 in the area of the two proposed well sites by EIS Consulting. It was found that suitable habitat existed within the project area but no MSO were found. An abundance of Northern Saw Whet owls was identified during this survey near the proposed well sites.

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Bats

Page 3-9 includes a description of two bat surveys conducted by JBR environmental consultants in 2005 and 2007. There is no description of the bat or bat habitat presence near the proposed drill sites.

T& E Species

Page 3-10 states that all Carbon county T&E species are listed in attachment 3-2 which includes a justification as to why each one is not located in the proposed drill areas. Attachment 3-2 includes a listing from 2008 of Carbon county T & E species, and a justification as to why they are not located in the G-22 drill site. The Utah state list of threatened, endangered and sensitive species is not included.

The following deficiency was sent to the permittee on June 11, 2009:

R645-301-322.210 *Please update attachment 3-2 to include a current list of Utah state's threatened, endangered or sensitive species. As described on page 3-10, please provide a justification as to why each species is not found within the proposed drill areas.*

Please include a narrative explaining the proximity of bat habitat and survey areas to the proposed degas wells G-25 and G-26.

The permittee responded by including appendix 3-2 and a narrative of bat habitat on page 3-9. Appendix 3-2 includes a letter from Pat Collins of Mt. Nebo Scientific which describes habitat for TES species and its relation to the project area. No TES species should be affected by the project. Page 3-9 of the MRP now states that both items of interest in the bat study conducted in 2007 (a pond and escarpments) are both located at least ½ mile from the project site. The project should have no affect on bats.

Findings:

The information provided in this section is considered adequate to meet the minimum regulatory requirements for this section.

LAND-USE RESOURCE INFORMATION

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

Analysis:

The pre-disturbed land use description is located on page 4-1. The permittee states that the area is used for private use such as hunting or range for livestock and wildlife.

Findings:

The information provided is adequate to meet the minimum regulatory requirements.

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:

Vegetation Reference Area Maps

The reference areas are depicted on figure 3-1. Proposed sites G-25 and 26 are not included on the map.

The following deficiency was sent to the permittee on June 11, 2009:

R645-301-323: *Please update figure 3-1 to include proposed sites G-25 and G-26.*

The permittee updated figure 3-1 to include G-25 and 26.

Findings:

The information provided is considered adequate to meet the minimum regulatory requirements of this section.

OPERATION PLAN

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:

Protection and Enhancement Plan

This plan is found on pages 3-14 through 3-16. The permittee states that previously drilled degas wells were drilled after certain dates as to comply with seasonal buffer periods. No information is provided regarding the timing of drilling of G-25 or 26.

Endangered and Threatened Species

There are no known TES species within the proposed degas well sites.

Bald and Golden Eagles

No raptor nests were identified near the two proposed degas well sites during the 2008 raptor survey.

Wetlands and Habitats of Unusually High Value for Fish and Wildlife

This information is located in the MRP Chapter 3. Deer and Elk habitat exist in the proposed drill areas. The permittee commits to disturb the smallest practical area during the construction and operation of the wells.

The following deficiency was sent to the permittee on June 11, 2009:

R645-301-333 *Please include the two proposed degas well sites in section 333 Plan to Minimize Disturbances and Adverse Impacts specifically regarding Northern Saw Whet Owls which have been identified by previous surveys near the proposed sites. Include the date of proposed activity in relation to seasonal buffers identified in the U.S. Fish and Wildlife Guidelines for Raptor Protection.*

The permittee updated section 333. Page 3-15 describes a mitigation plan which was suggested by DWR sensitive species biologist Tony Wright in order to offset potential impacts to Northern Saw Whet Owls. The permittee has agreed to attach signs to a minimum of 15 snags within a ¼ mile of the well sites that will potentially prevent them from being cut down. Snags provide nesting structures for the Northern Saw whet Owls.

Findings:

The information is considered adequate to meet the minimum regulatory requirements of this section.

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:

Located on page 4-6, the postmining land use for the well sites will be livestock and wildlife grazing.

Findings:

The information provided in the application is adequate to meet the minimum regulatory requirements of this section.

PROTECTION OF FISH, WILDLIFE, AND RELATED ENVIRONMENTAL VALUES

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

Analysis:

Enhancement measures taken by the permittee are listed on page 3-18. The permittee will perform several habitat enhancement measures post bond release to establish vegetation for wildlife food, cover and diversity.

In 2004, the permittee conducted a mitigation project for Northern saw whet owls in coordination with UDWR and the Division to compensate for drilling during the exclusionary period.

Findings:

The information provided is considered adequate to meet the minimum regulatory requirements of this section.

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REVEGETATION

Regulatory Reference: 30 CFR Sec. 785.18, 817.111, 817.113, 817.114, 817.116; R645-301-244, -301-353, -301-354, -301-355, -301-356, -302-280, -302-281, -302-282, -302-283, -302-284.

Analysis:

Revegetation: General Requirements

The reclamation plan begins on page 3-16. Proposed sites G-25 and 26 will be reclaimed in one phase. The sites will be fenced during reclamation to discourage wildlife and livestock from grazing until bond release.

Revegetation: Timing

The timing information is located on page 3-17. Figure 5-26 of chapter 5 lists the reclamation timetable.

Revegetation: Mulching and Other Soil Stabilizing Practices

The mulching information is found on page 3-17. Wood fiber mulch will be applied by hydroseeding at 2000 pounds per acre and anchored with a tackifier.

Revegetation: Standards For Success

G-25

Due to the site's poor condition, Mr. Collins recommended that alternate success standards be instituted rather than those of a healthy reference area. According to R-645-301-356.250, if the land was previously disturbed, the cover shall be not less than the ground cover existing before redisturbance and will be adequate to control erosion. Mr. Collins suggested that the success standards are as follows: living cover is at least 47% and must be dominated by desirable, non-weedy plant species; woody species density is 2000 individuals per acre and no diversity standard. These are the measurements of the current vegetation and are therefore acceptable alternate success standard for cover and density.

G-26

The density of the reference area was statistically higher than the proposed site, making it a more stringent success standard. Mr. Collins suggested that DOGM consider a lower density standard for this site of 2500 individuals per acre.

The Division sent the following deficiency to the permittee on June 11, 2009:

R645-301-356: *Page 3-13 of the amendment states that proposed site G-25 will be compared to the Aspen/ Maple/Douglas Fir reference area. Please amend this to reflect Mr. Collins' recommendations of success standards found in the vegetation inventory in attachment 3-1.*

The permittee corrected the discrepancy on page 3-13. The reclamation plan for G-25 is found in Dr. Collins' vegetation inventory in attachment 3-1.

Findings:

The information provided is considered adequate to meet the minimum regulatory requirements for this section.

RECOMMENDATIONS:

This amendment is recommended for approval.