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State of Utah
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

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July 28, 1997

TO: File

THRU: Joe Helfrich, Permit Supervisor

FROM: Susan White, Senior Reclamation Biologist

RE: Round II Permit Application, Canyon Fuel Company, LLC, Dugout Canyon Mine, PRO/007/039, Folder #2, Carbon County, Utah

SUMMARY:

Response to the Round I permit application deficiencies were received by the Division May 21, 1997. The initial permit was submitted March 15, 1996 and the Division responded May 18, 1996. Numerous deficiencies still exist in the permit application and therefore a permit should not be issued.

TECHNICAL ANALYSIS:

ENVIRONMENTAL RESOURCE INFORMATION

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

HISTORIC AND ARCHEOLOGICAL RESOURCE INFORMATION

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

Analysis:

Appendix 4-1 of the permit provides a Cultural Resource Evaluation of the Dugout Canyon Mine. An intensive archeological surface evaluation of the Dugout Canyon

Mine area was conducted in 1980 under the direction of Eureka Energy Company by Archeological-Environmental Research Corporation (AERC). Four of the sites reported as possible nominations are in the area of the current proposed mine. The four sites include one prehistoric rock art locus (42CB 92) and three historic coal mine loci: The Dugout Creek Mine (42CB 2005/291), the Fish Creek Mine (42CB 204/290) and the Pace Canyon Mine (42CB 206/292/574). The Fish Creek Mine and the Pace Canyon Mine were subsequently determined to not be eligible for nomination to the National Register of Historic Places (NRHP).

Files at the State Historic Preservation Office, Bureau of Land Management Office, and records of the NRHP were consulted. Further field evaluations were conducted by AERC on the prehistoric rock art and the Dugout Creek Mine in November 1995. In this study the Dugout Creek Mine was determined not eligible for inclusion on the NRHP due to the lack of context and cultural integrity.

Findings:

Information provided in the plan meets the minimum requirements of this section.

VEGETATION RESOURCE INFORMATION

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

Analysis:

Numerous vegetative communities are represented within the proposed permit area. The permit area ranges in elevation from 7000 feet to 8600 feet. The permit describes the plant communities as having been heavily impacted from man's activities throughout the years. Baseline sampling has occurred in 7 of the eleven communities within the permit area in 1980 and 1981. The permit area vegetation map (Plate 3-1) does not designated eleven plant communities within the permit area as stated in the text. The permit describes vegetative cover, production and shrub density of those plant communities which were sampled. Several of the described sampled communities are not within the permit area and the descriptions and supporting data should be removed from the text and appendix.

The deciduous streambank community occurs within the proposed area to be disturbed. Generally this community consists of deciduous trees and shrubs such as narrowleaf cottonwood, Rocky Mountain maple and Douglas Fir. The understory is occupied largely by shrubs due to past grazing pressures on the grasses and forbs. Productivity of the understory in this community was measured at 912 pounds per acre in 1980. In 1991 this community was described in fair to poor range condition by the Bureau of Land Management. A site visit in 1996 suggested that this area had not been as heavily grazed as reported in the past but still in a somewhat degraded condition. This community type is the most productive in terms of forage availability in the area.

The area of proposed disturbance is described as once dominated by sagebrush/grass with a potential forage production of 1400 pounds per acre. A pinyon/juniper community surrounds the area of proposed disturbance. The proposed disturbed area was sampled in 1996. This area had been disturbed by past mining and coal exploration activities. The dominant shrub species by cover was big-toothed maple while rubber rabbitbrush had the greatest number of individuals present. The area is dominated by species which indicate the site has been disturbed. Yellow sweetclover contributed the most vegetative cover to the total cover of 37 percent (Appendix 3-1).

A review of literature and field studies for the area indicate no threatened or endangered plant species are present in the area or likely to be present (Section 322.200). Field studies were conducted 1979 through 1984. A letter from Robert Thompson, 1995, is stated to be in Appendix 3-1 stating a negative finding of threatened and endangered plant species. No letter could be found in Appendix 3-1. The permit fails to comment on the potential presence of the listed sensitive species Canyon Sweetvetch. Canyon Sweetvetch is likely present and populations of this species should be documented. A site specific search should be made of the area within the proposed disturbed area.

Findings:

Information provided in the application does not meet the minimum requirements of this section. Prior to approval, the Permittee must provide the following in accordance with:

R645-301-321, the vegetation resource information provided does not seem to accurately describe the permit area and proposed disturbed area as represented by the vegetative communities which are shown on Plate 3-1. The current plan describes a much broader area than the proposed permit area. The unneeded information makes the resource information confusing and not correct and must be removed and/or corrected.

R645-301-322.210, a letter from Robert Thompson, 1995, is said to be in Appendix 3-1 stating a negative finding of threatened and endangered plant species within the permit area. No letter could be found in Appendix 3-1. The permit must document that the area has been searched for threatened and endangered plant species. A site specific survey must be made and documented in the permit for the presence of the sensitive species Canyon sweetvetch.

FISH AND WILDLIFE RESOURCE INFORMATION

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

Analysis:

A Fish and wildlife resource survey was conducted December 1979 through November 1981 for the proposed Sage Point - Dugout Canyon coal mining project (Appendix 3-3). Wildlife count data were collected along eight experimental and four control transects through four different vegetation types: riparian, desert scrub, Pinyon-juniper and conifer-bush. Each transect monitored reptiles, non-game birds, big game, medium sized mammals and small mammals. Upland and migratory game birds were not documented in this study due to their low frequency of occurrence in the survey area. A limited number of species of macroinvertebrates were found in 1979 and since the creek is not a fishery resource further studies were not conducted.

Detailed information such as numbers and species presence was collected in these studies within the then proposed permit area in 1979 through 1981. All though this study has provided valuable site species information these data should not be considered as baseline information in 1996. The current designated permit area and facilities area is much smaller then the earlier proposed design. The study was designed to monitor the effects of coal mine development on wildlife and not a baseline description.

Wildlife Plate 3-2 designates the disturbed area as Mule Deer Critical Summer Range. DWR states (letter dated April, 1996) that much of the area is classified as critical deer winter range and is heavily used by deer and occasionally by elk and antelope. Mule deer in the area are considered part of Herd Unit 32 and the elk as part of Herd Unit 24. Designated critical range and/or any riparian areas are considered high value habitats for wildlife.

Section 322.200, Site-specific Resource Information, states that no threatened or endangered plant and wildlife species were discovered in recent inventories by DWR, Forest Service and qualified personnel. Three listed species (black-footed ferret, bald eagle, and

peregrine falcon) could potentially inhabit the area. The peregrine falcon has been observed in several recent surveys of the Carbon County area. No confirmed sitings of black-footed ferrets have occurred within Carbon County during 1995, 1996, and the first quarter of 1997 (Bill Bates, UDWR, Section 322.200).

A raptor nest survey was conducted by the DWR in 1995. The nest locations identified in that survey are shown on Plate 3-2. No raptor nests are within the area to be disturbed by facility construction, although a golden eagle if frequently sited soaring at the cliff edge in full view of the proposed facilities. Since bird nest surveys can change from year to year, the permit should be stipulated with the condition that prior to any site disturbing activities an on the ground nest survey must be conducted for all raptors and bird species of special interest.

No information was provide on the presence of bats in the area. Prior to site disturbing activities, cliff or escarpment areas surrounding the facilities areas should be surveyed for the presence of bats. The permit should also commit to conducting surveys prior to any cliff disturbing planned subsidence. Prior to permit approval, a map must be included in the permit detailing the location of all cliff escarpments, if any, within the permit area.

Findings:

Information regarding the requirements of this section is not considered to be complete at this time. Additional information must be provided by the permittee in order for the Division to approve all the requirements of this section.

R645-301-322.220, the plan fails to adequately identify habitats of unusually high value for fish and wildlife such as critical deer summer and winter range, cliff escarpments and important riparian habitat.

R645-301-322.220, no information was provide on the presence or potential habitat for bats in the area of disturbance by facilities or subsidence. Prior to site disturbing activities cliff or escarpment areas surrounding the facilities areas must be surveyed for the presence of bats by a qualified person. The permit must commit to conducting survey prior to any cliff disturbing planned subsidence. A map showing all areas of cliff escarpments within the permit area must be provided in the permit.

LAND-USE RESOURCE INFORMATION

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

Analysis:

Land use resource information is given in Chapter 4 of the plan. The stated premining landuse for the permit area is rangeland for cattle and sheep grazing and wildlife habitat. The land has not been developed nor improved for these uses. Recreational use of the permit area is limited due to lack of access through private property. Carbon County has zoned the permit area for mining and grazing (Section 4.11.120). A logging operation was conducted within the permit area in 1996 as shown on a map in Appendix 4-1, Exhibit A, as part of the cultural and historic resource information. This map is nearly illegible with no permit boundary shown. The map must not be included within the historic and cultural resource report. Cascade Resources, logging contractor, reported harvesting six million board feet from the areas shown in Exhibit A.

Current productivity of the land surrounding the proposed disturbed area was estimated by George Cook, National Resources Conservation Service, on August 6, 1996 to be 1400 pounds per acre air dry herbage and in low good condition. Previous productivity statements about the Dugout Canyon showed the area to be severely overgrazed and degraded in the late 1970's and early 1980's. Currently the proposed disturbed area shows very little evidence of grazing.

Coal mining has occurred within Dugout Canyon since 1925. The Red Glow Mine on the east side of Dugout Canyon was hand-developed by D. J. Collins in 1925. The Rock Canyon seam on the west side of Dugout Canyon was first mined in 1952 by E.S.O. Coal Company. The Knight Ideal Coal Company mined the Rock Canyon and Gilson coal seams between 1958 and 1964. They extracted approximately 1,326,000 tons of coal in that period. No coal has been extracted since 1964, although the portals have been opened and explored several times since then.

Fish Creek and Pace Canyon Mines which operated in the early 1900's are also located within the permit area.

Findings:

Information regarding land use classification does not meet the minimum regulatory requirements of this section. Additional information must be provided by the permittee in

order for the Division to review and approve all the requirements of this section.

R645-301-411, the map which shows the areas of past logging is nearly illegible and no permit boundary shown, this must be corrected. The map of logging should not be included within the Historic and Cultural Resource report.

OPERATION PLAN

MINING OPERATIONS AND FACILITIES

FISH AND WILDLIFE INFORMATION

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

Analysis:

Protection and enhancement plan.

The proposed disturbed area will be limited to that area which was previously mined and not reclaimed. The operator further committed to limiting the extent of the disturbance and to reseed with an interim seed mixture. The Permittee commits to a wildlife awareness and protection training in it's annual training curriculums for all employees and haulage contractors. A stream buffer zone has been established around Dugout Creek. The Permittee should consider an enhancement plan for the riparian community within the disturbed area.

The permit states the SCM will request that power lines on the Dugout Canyon mine site be construct with approved methods. This statement contradicts another statement in the permit committing to raptor safe powerlines. The permit must not contradict and it must state that all power lines within the disturbed area will be raptor safe.

The Permittee further proposes to minimize impacts by controlling and monitoring the surface water discharge and water quality.

Endangered and threatened species

No endangered or threatened plant or animal species are known within the area. As required by R645-301-358.100 the permittee must promptly report to the Division any state or federally listed endangered or threatened species within the permit area of which the operator becomes aware. Seasonal or migrating Bald Eagles are expected and a wintering Bald eagle would not need to be reported.

Bald and golden eagles.

The Permittee proposes to prevent subsidence disturbance to nesting raptors by covering the specific raptors nest during the period of potential subsidence to prevent habitation (Section 333.300). "Alternate methods will be discussed with agencies and determination of methods being made during the period of subsidence". Any action such as described must first be approved by the Division who will consult with U.S. Fish and Wildlife Service (USFW) and DWR prior to potential subsidence. The statement in the text of the permit must be modified. A commitment is made to continue monitoring of the permit area by helicopter for any new or previously undisturbed raptor nests. Annual monitoring will concentrate in the areas which will be mined in the next two years. If any nests are found, the Permit must be updated with this information and an assessment will be made at that time if the mining will affect the nest.

The statement is made that golden eagle nests only need to be avoided while they are inhabited mid-April to mid-June (Section 322.200). Breeding and nesting territories must be avoided February to early July. Raptor nests are legally protected year long whether active or not. The avoidance comment must be modified with correct information.

Wetlands and habitats of unusually high value for fish and wildlife.

The statement is made in the text that habitats within the proposed disturbed area are not considered to be of unusually high value. However, most all water areas and associated stream side vegetation in Utah are considered high value habitat. Additionally, the wildlife map, Plate 3-2 indicates that the area is considered critical mule deer summer range. The permit must be modified to acknowledge these high value areas as required in **Fish and Wildlife Resource Information** of this Technical Analysis.

Cliff escarpments within the permit area are considered high value habitats. If present these habitats could potentially be effected by subsidence should be identified on a map.

Findings:

Information found in the plan does not meet the minimum regulatory requirements of this section. Additional information must be provided by the permittee in order for the Division to approve this section.

R645-301-333, the plan has stated the methods used in wildlife protection however, no plan is given for enhancement of critical resources and how this will be achieved.

R645-301-358.200, the plan must qualify the statement that any nesting raptor nests will be covered to prevent habitation in the case of potential subsidence. This method may possibly be used, but only after the Division has consulted with DWR and USFW and identified whether and under what conditions the operator may proceed. The stated period of nest avoidance must be corrected to reflect actual protection periods.

R645-301-333, powerline construction information within the permit is contradictory and must state that all power lines within the disturbed area will be raptor safe.

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:

The stated postmining landuse is livestock grazing and wildlife habitat (Section 412.100). Final reclamation activities such as grading and seeding will be completed in a manner to provide lands able to support the postmining land use. The disturbed area was previously mined and not reclaimed to the current standards. No topsoil was saved in initial development. However, adequate substitute material should be available to support the proposed postmining land use.

The surface of the lands which will be reclaimed is owned by Sage Point, which is the parent company of SCCC. Therefore, the stated land use is that of the surface owner.

Findings:

Information found in the plan meets 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:

The plan identifies the seed mixture to be used in revegetation of the reclaimed areas. Since the postmining land use includes wildlife habitat, this mixture must be desirable for wildlife species of interest. The seed mixture provides for a variety of grass, forb and shrub species which have a high value as big game forage use. Additionally, 300 tree seedlings per acre will be planted at the time of reclamation. The transplanted trees and shrubs are Douglas fir, Rocky Mountain maple, mountain mahogany, and bitterbrush. The trees and shrubs should provide for both a food source and cover.

Reclamation of the streambanks will use the same seed mixture as the entire site. The banks will have additional trees and shrubs planted with cottonwoods, willows, and rose (Section 341.200). Planting of cottonwoods may require the use of an auger or drill inorder to place the roots close to the water table.

Findings:

Information provided in the plan meets the minimum requirements of this section.

CONTEMPORANEOUS RECLAMATION

Regulatory Reference: 30 CFR Sec. 785.18, 817.100; R645-301-352, -301-553, -302-280, -302-281, -302-282, -302-283, -302-284.

Analysis:

Contemporaneous reclamation activities should be well documented in the plan and monitored to determine whether or not the reclamation treatments used in the area can be proven successful. These areas can provide invaluable information as well as demonstrating by field trials that reclamation treatments will be successful. However, contemporaneous reclamation at this small site is unlikely due to the space constraints.

Findings:

Information provided in the plan meets the minimum requirements of this section.

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:

General requirements.

The details of the revegetation procedures are given in Section 340. The seed mixture is specified in Section 341.200. The seed mixture is composed primarily of species native to the area and is as follow:

SPECIES	DRILL RATE #PLS/ACRE
GRASSES	
Mountain brome	3.0
Western wheatgrass	5.0
Indian ricegrass	2.5
Kentucky bluegrass	2.5
Bluebunch wheatgrass	2.5
Indian ricegrass	2.5
FORBS	
Blueleaf aster	.5
Blue flax	1.0
Palmer penstemon	0.5
Northern sweetvetch	1.0
SHRUBS	
Mountain big sagebrush	1.0
Curl-leaf mountain mahogany	1.0
Snowberry	1.0
Utah serviceberry	1.0
TOTAL	22.5

TRANSPLANTS

TREES	Seedlings/acre
Douglas fir	50
Rocky Mountain maple	150
Mountain mahogany	50
Bitterbrush	50
TOTAL	300

STREAMBANK ENHANCEMENT

TREES	Seedlings/acre
Narrowleaf cottonwood	100
Willow	100
Woods rose	1000
TOTAL	2100

Seed will be spread by broadcast or drill seeding methods (Section 341.200). Grasses and forbs will be spread by drill seeding on slopes less than 3:1. The shrub and tree seed will be broadcast seeded. All seeded will be broadcast seeded on slopes greater than 3:1. When seed is broadcast the seeding rate will be doubled. Slopes steeper than 3:1 will have the soil surface treated by dozer tracking or pocking by a trackhoe. Dozer tracking has not proven as successful as pocking with a trackhoe. Trackhoe pocking or creating depressions two to three feet deep and two to four feet wide has been very successful in providing water catchment basins for plant establishment. The Division highly recommends the use of any methods which creates the greatest surface roughness.

This roughened state has proven to be very important to the success of the reclamation project. Drill seeding and discing may reduce the surface roughness to an undesirable level. The operator may find at the time of reclamation that broadcast seeding will maintain the desired surface roughness. Running on contour is an important practice in revegetation operations. A commitment has been made to traverse dozers perpendicular to or on the contour of the slope.

Timing.

The plan commits to seeding late August through early October (Section 341.100). Generally, fall planting has ensured good early spring moisture for seed germination and meets the cold stratification requirements for several of the forb and shrub species. Areas which cannot be seeded during the fall window will be stabilized by seeding with an annual grain until the seeding window has opened.

Mulching and other soil stabilizing practices.

Mulch will be spread following seeding. The permit states that Division-approved mulch will be used but for bonding purposes assume that wood mulch will be used. This is somewhat confusing but acceptable that the Permittee obtain approval prior to reclamation for the specific mulch to be used. A commitment is made to use plastic netting to anchor the Division approved mulch on all slopes 3:1 or steeper. A high quality erosion control blanket is recommended on all slopes 2:1 and steeper.

Standards for success.

Section 356.100 states that the success of revegetation will be judged on the effectiveness of the vegetation for the postmining land use, and the extent of the cover in comparison to the reference area. Section 356.200 discuss success standards based on

production, shrub and tree stocking densities, and cover based on surrounding area. Section 323.100 makes reference to three separate reference areas. Yet another section of the permit states that SCM will meet a minimum cover standard of 37 percent. The permit must be made noncontradictory and clear as to what success standards will be met as the time of bond release. Applicable standards in R645-301-356 must be met. A method to demonstrate that the site is diverse must be proposed.

Findings:

Information found in the plan does not meet the minimum regulatory requirements of this section. Prior, to approval, the permittee must provide the following in accordance with:

R645-301-356, the permit is not clear as to what vegetation success standards will be met at the time of bond release. The application must clearly state which success standards will be used for bond release purposes. A method to demonstrate that the site has a diverse vegetative cover must be proposed.

RECOMMENDATION:

Prior to approval the requirements of R645-301-300 must be provided as outlined above. The permit should be stipulated with the following:

R645-301-358, prior to any site disturbing activities an on the ground nest survey must be conducted for all raptors and bird species of special interest by a qualified person.