

TECHNICAL MEMORANDUM

Utah Coal Regulatory Program

August 27, 2004

TO: Internal File

THRU: Peter H. Hess, Environmental Scientist III/Engineering, Team Lead *PHH by an*

FROM: Jerriann Ernstsens, Ph.D., Environmental Scientist, Biology *JE*

RE: Minor Coal Exploration, SITLA Muddy Tract, Canyon Fuel Company, LLC., SUFCO, C/041/002, Task #1986

SUMMARY:

The Division received the Notice of Intention on July 30, 2004 that addresses the minor coal exploration drilling of a single hole. This memo reviews the biology and archeology sections of the Notice. The disturbed acreage for drill hole A is approximately 8 X 12 feet (0.002 acres).

The Permittee plans to use helicopter-assisted wireline core-drill system to drill hole A in 2004. The plan shows that the drill hole is located within the proposed SITLA Muddy Coal Tract (SMCT). The operator will reach the staging site using USFS roads 007 and 044, then transport equipment to the drill hole site using the helicopter. There are five other drill holes planned for the overall drilling project – drill holes B-F. These five holes are within the BLM Muddy tract lease and require a separate amendment. The elevation of the overall drilling project is above 8,000 feet.

The SILTA Muddy Coal tract is in Sevier County, Utah. The 7.5 Minute Quadrangle USGS maps that cover the permit area are Heliotrope Mountain and Flagstaff Peak. The proposed area for drill hole A is in Township 20 South and Range 4 East in Section 32.

EXPLORATION TECHNICAL ANALYSIS:

COMPLIANCE DUTIES

Regulatory Reference: 30 CFR 772.13; R645-202.

OPERATIONAL STANDARDS

Regulatory Reference: 30 CFR 772.13; R645-202-100.

Analysis:

Archeology

The Permittee plans to use helicopter-assisted wireline core-drill system for drill hole A in 2004. Drill hole A is near the north central edge of the SMCT in section 32.

The Notice originally stated that the area had been evaluated during the EIS process. The study of focus for the EIS (1999) only included sites within the Pines coal lease, Quitchumpah 150-acre lease modification, Box Canyon amendment, northern portion of Link canyon, and Muddy Creek Canyon. The Permittee, therefore, submitted cultural/historical resource data (July 2004 submittal) from a survey of the exploration sites (Revised Notice of Intent to Conduct Minor Coal Exploration – SITLA July 2004; Appendix C):

Billat S (July 13, 2004) A Cultural Resource Inventory of Six Drill Locations and Access.

- Utah State Project Authorization No. UO4EP0650f.
- Location: Township 20 South and Range 5 East with Sections 20, 28, 29, 31, 32, and 33.
- Method: Surveys of drill holes A-F, staging area, and Muddy Creek water pump area.
 - o Class I – Literature search: Six inventories of the vicinity with no cultural resource properties identified within or near the drill hole locations. The report provides a complete list of the six inventories.
 - o Class II – Drive-by oversight visit.
 - o Class III – Intensive field survey:
 - Inventoried 100 x 100' areas for each of the drill hole sites and access trails.
 - Identified 42Sp535.
- Recommendations: The area near 42SP535 has been impacted by recreational activities. Cultural deposition is unlikely. It does not meet criterion D, therefore, is ineligible for NRHP.
- SHPO communications: The Division will initiate the consultation process with SHPO prior to the approval of this amendment.

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The Division assesses that the Permittee should receive clearance because there are no known historical resources within the drill hole areas and access trails. The Division supports a finding of "no effect" to cultural or historical properties and that the permit should receive clearance without stipulations. The Division received SHPO clearance for the SITLA Muddy Tract in a letter from that agency dated August 24, 2004.

It is important for the Permittee to understand that all workers must avoid all known historical resources during the exploration program. In the event that exploration uncovers historical resources, all work near the resources must stop and the Permittee must notify the Division. We will then work with appropriate agencies and the Permittee to develop a strategy to avoid or mitigate the effects of continuation of the exploration program.

Biology

The Division has concerns for elk and deer populations. DWR wildlife map shows that the drill hole sites (A-F) are in elk and deer critical ranges. The Permittee plans to drill hole A in September, which is well past the calving exclusionary period (May 15 through July 5). The Division believes that the exploration project will not impact these ungulate populations because of the time schedule. Furthermore, that the project drilling sites (A-F) are small and should not have significant impact to foraging habitat. The USFS predicts that there may be cumulative effects because the ungulates may migrate away from drilling projects and increased traffic, but will not prevent the ungulates from using the area (1).

The Division does not consider that the drill hole A project will affect raptor nests or nesting raptors. DWR conducted a helicopter survey of the canyon and steep tributaries of Muddy Creek (Revised Notice of Intent to Conduct Minor Coal Exploration – SITLA July 2004; Appendix D). The results show there are nests on the Canyon wall, but this type of habitat is a considerable distance from the drill hole A. Furthermore, exploration and reclamation operations are not planned during exclusionary periods (approximately January 1 through August 31).

Drill holes A-F and adjacent areas include habitat requirements for golden eagles. The closest nest is approximately 0.75 mile from one of the proposed drill sites and there are many nests within 2 miles of drill holes A-F. The USFS predicts that the project will have no direct effect to existing nests or nest habitat. The project will most likely not impact individual birds because the project time schedule is after the exclusionary period. The project could impact foraging birds. There may be cumulative effects because they may migrate away from drilling projects and increased traffic. The USFS predicts, however, that the possible cumulative effects will not prevent the birds from using the area or increase mortality or reproductivity. (1).

Areas around the holes provide habitat for tree-nesting and cliff-nesting raptors. If the Permittee plans to drill during exclusionary periods for drill holes B-F, the Division recommends helicopter and ground raptor surveys for nests near the drill hole sites. Helicopter surveys for

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tree-nesting species are not an effective means of spotting nests within tree canopies (Tony Wright, DWR, 3/19/04). One important element of tree-nesting habitat is northern slopes. There is a red-tailed hawk nest within the buffer zone of a proposed drill hole near the rim of Cowboy Creek.

There is no formal threatened, endangered, or sensitive (TES) species survey for the disturbed area. The Notice mentions that bald eagles, peregrine falcons (no longer listed), and sage grouse are likely to exist within the exploration area. DWR shows that the area may also have Northern Goshawk and the three-toed woodpecker. The TES information below is from the USFS Biological Evaluation and Assessment [BEBA], 2004, SUFCO Helicopter-Assisted Coal Exploration Drilling Project. The USFS evaluation and review team (Terry Nelson, Pam Jewkes, and Robert Thompson) presents their assessments based on literature search and previous years field and technical visits to the area.

There are four TE and seven sensitive plant species that could occur in Sevier or San Pete Counties or the Manti-La Sal National Forest, but none are expected to occur within the drill hole site A (or B-F). Of the TES species, the USFS considered the heliotrope milkvetch (T), last chance townsendia (T), and Wright fishhook cactus (E). The USFS predicts the project will have no effect to these species because the project sites do not include habitat requirements for the species.

Four TE, ten sensitive, and five USFS 'management indicator' animal species could occur in Sevier County or the Manti-La Sal National Forest. Of these listed species, the USFS considered the species discussed below for the BEBA and Wildlife Resource Report. The USFS prepared the following findings for the TES and sensitive species.

- Bald eagles
 - Areas within and adjacent to drill holes A-F do not provide nesting or foraging habitat.
 - Incidental occurrence is likely.
 - Drill hole A-F project will have no direct/indirect effect or cumulative effects to this species.
- Spotted and Townsend's big-eared bats
 - Areas adjacent to drill holes A-F may have suitable roosting and foraging habitats.
 - Drill hole A-F project will have no effect to roosting habitats because the nearest roosting habitats for the spotted-bat and Townsend's big-eared bat are approximately 0.5 and 2 miles from the project locations, respectively.
 - Drill hole A-F project will have no effect on foraging habitats of these species because the Permittee will conduct the project during the day and drill hole disturbances are small.
 - Drill hole A-F project will not have a cumulative effect because there is no direct effect.

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- Sage grouse
 - Areas within and adjacent to drill holes A-F may have suitable nesting and foraging habitat in or near the proposed project area.
 - Drill hole A-F project will have no effect to sage grouse habitat because the project time schedule is after important lekking or brood rearing seasons.
 - Drill hole A-F project will not have a cumulative effect because there is no direct effect.
- Peregrine falcon
 - Areas within and adjacent to drill holes A-F may have suitable nesting and foraging habitat.
 - Drill hole A-F project will have no effect to peregrine falcon habitat because the project time schedule is after the nesting season.
 - Drill hole A-F sites are small and should not significantly affect foraging habitat.
 - Drill hole A-F project will not have a cumulative effect because there is no direct effect.
- Elk and mule deer
 - Areas within and adjacent to drill holes A-F have suitable foraging habitat.
 - Drill hole A-F project will have no direct effect to these ungulates or their habitat because the project time schedule is brief (7 days for each consecutive hole) and is after the calving and fawning season.
 - Drill hole A-F sites are small and should not significantly affect foraging habitat.
 - Drill hole A-F project may have a cumulative effect because the ungulates may migrate away from drilling projects and increased traffic.
 - Cumulative effects from the drill hole A-F project most likely will not prevent the ungulates from using the area.
- Golden eagles
 - Areas within and adjacent to drill holes A-F have suitable foraging and nesting habitat.
 - Drill hole A-F project will have no direct effect to existing nests or nest habitat.
 - Drill hole A-F project most likely will not impact individual birds because the project time schedule is after the exclusionary period.
 - Drill hole A-F project could impact foraging birds.
 - Drill hole A-F project may have a cumulative effect because the eagles may migrate away from drilling projects and increased traffic.
 - Cumulative effects from the drill hole A-F project most likely will not prevent the birds from using the area or increase mortality or reproductivity.

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- Virginia's warbler, and Brewer's and sage sparrows
 - Areas within and adjacent to drill holes A-F includes habitat requirements for Virginia's warbler, and Brewer's and sage sparrows.
 - Warbler is not known to nest in the Sevier or San Pete counties.
 - Drill hole A-F sites are small and should not significantly affect foraging or nesting habitat.
 - Drill hole A-F project time schedule is after nesting season, therefore, should not impact the birds.
 - Drill hole A-F project should not cause cumulative effects to these three bird species.

The Permittee plans to drill hole A after September 1 to avoid Mexican spotted owl (MSO) possibly nesting near the project. The Division considers that because of the size of the sites, the project should not significantly affect the foraging or nesting habitat of this species. The Division recommends that the Permittee either drill holes B-F after September 1 or conduct a ground-truthing survey if models support potential MSO habitat within or adjacent to the area of surface disturbance. The more extensive 'calling survey' is only required if the ground-truthing survey is positive for MSO.

The Permittee mentioned that drilling hole A will include pumping water from Muddy or Quitchumpah Creek. The Permittee shows the anticipated volume of extracted water during the drilling operations (A) will be no more than 0.5-acre feet. This volume of water will impact the four Colorado River endangered fish species (USFWS): the Colorado pikeminnow, the humpback chub, the bonytail chub, and the razorback sucker. However, the volume is below the threshold volume (100-acre feet per year) that necessitates mitigation.

The information from the USFS supports that the drill hole A-F project is not expected to impact TES or indicator species. No TE animal species are expected to nest or roost near the project (A-F). The project schedule is after exclusionary and sensitive periods and the drill holes sites (A-F) are small. The Division supports the USFS that because of timing and the size of the sites, the project should not affect TES animal species. The Division does not require a protection plan at this time.

(1) USFS Biological Evaluation and Assessment [BEBA], 2004, SUFCO Helicopter-Assisted Coal Exploration Drilling Project.

Findings:

The Division considers the information adequate to meet the minimum requirements of the Biology section of the Operational Standards regulations.

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RECLAMATION STANDARDS

Regulatory Reference: 30 CFR 772.13; R645-202-200.

Analysis:

Approximate original contour

Revegetation

The Notice mentions that drill hole A is within a mountain brush plant community consisting primarily of oak, service berry, and mountain mahogany. The Division could not find a vegetation survey that specifically lists the species within the SMCT (Notice or SUFCO MRP).

The Permittee plans to immediately recontour and seed the 0.002-acre disturbed site approximately four weeks following the start of the drilling project. The Division recommends that the Permittee recontour the site, but omit the seeding portion of the plan. The size of disturbance is so small that natural invasion by the native plant species should quickly stabilize the site.

The Permittee will use a mix that the USFS developed if the Permittee insists on reseeding the site. This mix includes natives to Utah and many introduced species. The Division does not recommend using this mix. The seed mix contains the following:

Species	Pounds PLS/sq.acre
Western wheatgrass	2
Basin wild ryegrass	1
Intermediate wheatgrass	2
Paiute orchardgrass	2
Rambler Alfalfa	1
Blueleaf aster	0.25
Lewis flax	0.5
Small burnet	1
Mountain big sage	0.25
Bitterbrush	1
TOTAL	11

Findings:

The Division considers the information adequate to meet the minimum requirements of the Revegetation section of the Reclamation Standards regulations. The Division, however, recommends that the Permittee recontour the site, but omit the seeding portion of the plan.

RECOMMENDATIONS:

Approve the amendment after receiving clearance from SHPO.