



State of Utah

Department of Community & Economic Development
 Division of State History
 Utah State Historical Society

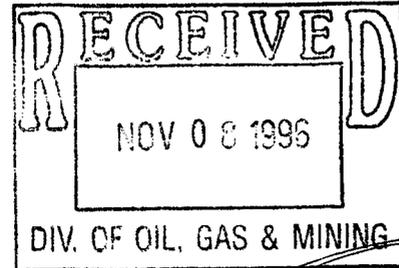


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October 29, 1996

Daron R. Haddock, Permit Supervisor
 Division of Oil, Gas and Mining
 355 West North Temple
 3 Triad Center, Suite 350
 Salt Lake City UT 84180-1203



RE: Alkali Lease Tract, Soldier Creek Coal Company, Soldier Canyon Mine, ACT/007/018-96-1, Folder #3, Carbon County, Utah

In Reply Please Refer to Case No. M967

Dear Mr. Haddock:

The Utah State Historic Preservation Office received the above referenced report on October 11, 1996. After review of the material provided, the Utah Preservation Office recommends that there would be **No Effect** upon cultural resources by the project.

This information is provided on request to assist the Division of Oil Gas and Mining with its Section 106 responsibilities as specified in 36CFR800. If you have questions, please contact me at (801) 533-3555, or Barbara L. Murphy at (801) 533-3563. My **new** computer address on internet is: cehistoy.jdykmann@email.state.ut.us

As ever,

James L. Dykmann
 Compliance Archaeologist

JLD:M967

UTAH DIVISION OF OIL, GAS AND MINING
STATE DECISION DOCUMENT AND
TECHNICAL ANALYSIS

Soldier Creek Coal Company
Soldier Canyon Mine
Incidental Boundary Change #2
Federal Lease UTU-69635
Alkali Lease Tract
ACT/007/018
Carbon County, Utah

November 5, 1996

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 - State Historic Preservation Office, October 29, 1996
 - Bureau of Land Management, R2P2, September 17, 1996
 - Coal Lease Assignment, UTU-69635, October 1, 1995
- * Environmental Assessment, dated March 1995 (Prepared by BLM and OSM)
- * AVS Recommendation, Memo dated November 4, 1996

**State of Utah
Division of Oil, Gas and Mining
Utah Coal Regulatory Program**



**Soldier Creek Coal Company
ACT/007/018
Technical Analysis and Findings for Alkali IBC #2
October 23, 1996**

TECHNICAL ANALYSIS

Last Revised - October 23, 1996

TECHNICAL ANALYSIS

Soldier Creek Coal Company
Alkali Tract Incidental Boundary Change #2
ACT\007\018-96-1

INTRODUCTION

Soldier Creek Coal Company has requested an incidental boundary change within the boundary of the Alkali lease. The IBC consists of 186 acres of land which will all be mined using underground methods as an extension of the existing Soldier Canyon Mine. Soldier Creek has applied for a permit to mine the entire Alkali lease but it is unlikely that the whole lease could be permitted in the time frame required so this IBC was applied for in order to allow them to continue mining.

This Technical Analysis (TA) is written as part of the permit review process. It documents the Findings that the Division has made to date regarding the application for a permit and is the basis for permitting decisions with regard to the application. The TA is broken down into logical section headings which comprise the necessary components of an application. Each section is analyzed and specific findings are then provided which indicate whether or not the application is in compliance with the requirements.

It may be that not every topic or regulatory requirement is discussed in this version of the TA. Generally only those sections are analyzed that pertain to a particular permitting action. TA's may have been completed previously and the revised information has not altered the original findings. Those sections that are not discussed in this document are generally considered to be in compliance.

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ADMINISTRATIVE INFORMATION

IDENTIFICATION OF INTERESTS, VIOLATION INFORMATION, AND RIGHT OF ENTRY INFORMATION

Analysis:

The applicant has not provided new information for this portion of the mining and reclamation plan. Ownership and control and violation information does not change with this amendment.

The area proposed to be included in the incidental boundary change does not border land (either surface or subsurface) owned by entities not already shown in the mining and reclamation plan. Therefore, no new land ownership information is required.

The proposed incidental boundary change is within federal lease UTU-69635 . The Division received a letter from the Bureau of Land Management on September 27, 1995, saying the lease has been issued to Sage Point Coal Company. Right of entry information for the new incidental boundary change area is already in the mining and reclamation plan.

Findings:

The application is considered adequate with regard to this section of the regulations.

UNSUITABILITY CLAIMS

Analysis:

There are no roads or buildings within the proposed incidental boundary change. The Division is unaware of any proposal to designate the area as unsuitable for mining. The Bureau of Land Management, in its decision to hold a lease sale, determined the lease application was in

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conformance with the approved land use plan. They also determined that the lease application, using the standard lease stipulations, will have no significant impacts on the human environment.

Findings:

The application is considered adequate with regard to this section of the regulations.

The Division is unaware of any proposal to designate the area as unsuitable for mining, and the Bureau of Land Management has found the lease application to be in conformance with the approved land use plan.

PERMIT TERM, INSURANCE, PROOF OF PUBLICATION, NOTARIZED SIGNATURE

Analysis:

The application does not address most of these regulations. The permit term would not change as a result of this application, and the permittee has insurance coverage meeting the division's requirements. The amendment is not a significant revision, so no public notice is required.

The application includes a statement with the notarized signature of Barry Barnum indicating he is a responsible official of the applicant and that the information in the application is true and correct to the best of his information and belief.

Findings:

The application is considered adequate with regard to this section of the regulations.

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ENVIRONMENTAL RESOURCE INFORMATION

SOILS RESOURCE INFORMATION

Analysis:

The only soil resource information provided in the Revision document is Exhibit 2.22-1, Soil Resource Map for Soldier Canyon Mine. The map is taken directly from the Order-3 Carbon County soil survey published by the U. S. Department of Agriculture, Soil Conservation Service. The Order-3 soil survey information is sufficient for lease expansions since no surface disturbance is associated with the Alkali expansion area. Exhibit 5.21-5, the Rock Canyon Seam Mine Plan, was revised to eliminate and indication of breakouts or any other surface disturbance within the Alkali lease area.

The Soil Conservation Service reviewed soil mapping data for the LOM permit area including the Alkali lease area, and gave a negative determination for prime farmland status based on slope, soil erodibility and percent rock fragments. The May 30, 1996 SCS letter does not specifically state the Alkali lease area but acknowledges the Soldier Creek Coal Company Expansion area.

Findings:

This portion of the permit application is complete and accurate.

VEGETATION RESOURCE INFORMATION

Analysis:

The application contains no new vegetation information.

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Lease stipulation nine requires the lessee to establish a monitoring system to locate, measure and quantify the progressive and final effects of underground mining on the topographic surface, underground and surface hydrology, and vegetation. This is a standard stipulation in federal leases. The applicant intends to take color infrared photographs of the area to document effects of mining on the condition of vegetation resources.

Since no new surface disturbance is proposed, the Division does not require the application to contain additional vegetation information.

Findings:

The application is considered adequate with regard to this section of the regulations.

FISH AND WILDLIFE RESOURCE INFORMATION

Analysis:

The applicant conducted a raptor and bird survey in the Alkali Lease area in May 1995 and another in 1996. Map 3.10-2 shows the results of the surveys. This map shows four golden eagle nests in the area of the first incidental boundary change, including two nests that were tended in 1995. The map has a designation "NF96" which may mean they were not found in 1996. This should be explained on the map legend.

Map 3.10-2 does not accurately depict the proposed permit area either for this amendment or for the Alkali Lease revision. The version of Map 3.10-2 in the revision (updated September 24, 1996) does not contain the survey information from 1996. The map needs to be revised to show

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both the 1996 survey information and the correct permit area. This is not a critically important issue at this time, and it could be addressed in the revision.

The Division does not anticipate significant effects on other wildlife species, so additional wildlife information is not required. The Utah Division of Wildlife Resources was consulted about the need for further wildlife information for the first incidental boundary change area and concurred with the decision not to require more information. The Bureau of Land Management's environmental assessment says it is not likely longwall mining could be justified, and no subsidence is anticipated with room and pillar mining. No subsidence has been detected at two adjacent mines that mine with room and pillar methods.

The application includes no new threatened or endangered species information. The entire surface of the proposed addition to the permit area is owned by Louise Iriart. The most likely threatened, endangered, proposed or candidate species to be in the proposed addition to the permit area is canyon sweetvetch. It is extremely unlikely this species would be affected by underground mining operations. It is possible it could occur in breakouts that might be built in the future. The species has no protection on private land, but the Bureau of Land Management does give it some protection on their lands. No new information is required at this time.

Other species with some potential of being affected include bald eagles, peregrine falcons, and the threatened and endangered fish of the Colorado River. No peregrine falcons were found in the raptor survey. Bald eagles frequent the general area in the winter, but they are usually found roosting in trees at lower elevations, especially near water. No bald eagle nest sites are known to occur in the proposed addition to the permit area.

The Fish and Wildlife Service has determined that water depletions in the Upper Colorado River Basin may affect certain threatened and endangered fish of this area. For this reason, they require a mitigation fee for water use in excess of 100 acre feet per year. As documented in Figure 7.28-20 in

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the application to add the entire Alkali Tract, annual water usage in the mine from 1985 to 1991 averaged about 41 acre feet. This includes losses from evaporation and water added to coal.

The amount of water used in conjunction with mining is not expected to increase substantially with addition of the Alkali Tract. In addition, as documented in the Probable Hydrologic Consequences document, there is little effect on surface water caused by use of water encountered in the mine. Nearly all of the water used in the mine is from perched aquifers not associated with surface flow. Therefore, since water use is less than 100 acre feet per year and since use is not expected to increase, no mitigation should be required.

Soldier Creek's current plan discusses a few candidate threatened or endangered plant species that could occur in the area. Even if there is subsidence, there is virtually no likelihood of subsidence cracks or other surface expressions of subsidence negatively affecting these species. The plants do not grow in areas, such as cliffs, that are particularly susceptible to subsidence damage.

The Division and the Office of Surface Mining need to obtain approval from the Fish and Wildlife Service. No issues of concern are anticipated; the Division is aware of no threatened or endangered species that could possibly be affected by this proposal.

Findings:

Information provided in the proposed amendment is not considered adequate to meet the requirements of this section. The applicant must provide the following in accordance with:

- R645-301-120 Map 3.10-2 needs to be revised to accurately depict the proposed permit area and to show the meaning of "NF96." This is not a critically important issue at this time, and it could be addressed in the Alkali Lease permit revision proposal.

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LAND USE RESOURCE INFORMATION HISTORIC AND ARCHAEOLOGICAL RESOURCES POSTMINING LAND USES AIR QUALITY

Analysis:

The only surface land owner in the proposed incidental boundary change area is Louise Iriart. Mrs. Iriart was notified of the potential mining beneath her property and responded by letter dated September 1, 1995. Her letter is included in the application for the Alkali Tract revision. It says she expects the postmining use of the surface properties to be the same as the current usage, including wildlife habitat, livestock grazing, and big game hunting and other recreational activities.

The archaeological study of the Alkali Lease concentrated on upper ridges and escarpment crests. Two isolated artifacts were observed. They consisted of chert primary and secondary flakes. The presence of these together with two similar artifacts found nearby suggests the terrain feature may have been used anciently as a transportation corridor linking lower elevations with the Whitmore Park area. However, these items are not considered significant historic or prehistoric resources that could be susceptible to surface subsidence. The Division should recommend to the Division of State History that they give their clearance for this project.

By adding the incidental boundary change to its permit area, Soldier Creek is not proposing to increase the amount of coal it mines. Because of this and because all disturbance will be underground, there are no requirements to change the air quality section of the mining and reclamation plan.

Findings:

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The application is considered adequate with regard to this section of the regulations. Based on the information in the application, the Division should recommend that the Division of State History give its clearance for this amendment..

HYDROLOGIC RESOURCE INFORMATION

Regulatory Reference: 30 CFR Sec. 701.5, 784.14; R645-100-200, -301-724.

Analysis:

This incidental boundary change will not directly affect the surface water hydrology in the Soldier Canyon Mine permit area. Groundwater resources in the area of the boundary change area minimal. Water rights are nonexistent in the area.

Findings:

The hydrologic portion of the application for the incidental boundary change is complete and accurate. Based on this portion the amendment to the Solder Canyon Mine permit should be approved.

CHIA

Analysis

A CHIA covering the entire Soldier Canyon Mine, including the Alkali Tract Significant Revision, was completed October 7, 1996. The proposed IBC is within the boundary of the Cumulative Impact Area (CIA) for that CHIA. It is also within the CIA of the previous CHIA, dated February 4, 1987. The effects to surface and ground water from the proposed mining in the IBC should not extend outside either the new or old CIA. There should be no material damage to the hydrologic balance outside the permit area from the proposed mining in the IBC area.

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There are only ephemeral surface drainages and no known springs or seeps within or adjacent to the IBC. The mining for the IBC will advance entries by room-and-pillar method, with no second mining. There has been no measured subsidence in other mined areas of the Soldier Canyon Mine and there should be no subsidence from the mining proposed in the IBC. This mining activity should create no hydrologic consequences at the surface. Exhibit 5.21-5 submitted for this IBC shows projected mining in the IBC.

Finding:

The IBC is included in the area covered by the CHIA. No change or modification to the CHIA is required by this IBC.

PHC

Analysis

The only probable hydrologic consequence of mining coal in this area is interception of perched water in the Blackhawk Formation. When a perched water table is encountered by the coal mines in the Book Cliffs, water flow rapidly diminishes and often ceases soon after the water bearing zone is breached. Water intercepted in this manner in the Soldier Creek Mine is collected in sumps and used for in-mine operations, with excess water discharged into Soldier Creek. The mine was discharging roughly 130 gpm in 1987 when, in addition to water intercepted by mining, water was being pumped to dewater a sealed area where a fire had occurred. From 1988 to 1991 water discharge increased from 259 acre-feet (approximately 160 gpm) to 927 acre-feet (approximately 580 gpm) as the mine intercepted a fracture zone with flowing water. In 1993 the discharge from the mine was down to 528 acre-feet (330 gpm). In 1994 it was down to 503 acre-feet (312 gpm), and 397 acre-feet (245 gpm) in 1995. Mining in the Alkali Tract is projected to intercept 460 acre-feet of ground water yearly. No appreciable change in the amount of ground water intercepted or discharged should be expected from the proposed mine operations in the area of the IBC.

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Finding

Probable Hydrologic Consequences (PHC) of mining in the IBC will be similar to those from mining in the currently permitted mine area. No additional monitoring is required.

OPERATION PLAN

FISH AND WILDLIFE PROTECTION

Analysis:

As discussed under "Fish and Wildlife Resource Information," the Bureau of Land Management does not expect subsidence. Even if subsidence does occur, the potential for damage to most wildlife species is very small.

Subsidence has caused cliff spalling at some mines in Utah. This has resulted in loss of golden eagle nests. The current plan contains a commitment to complete a nesting survey if significant subsidence occurs or is about to occur during the April to July nesting period. If active nests are found, the Division and the Division of Wildlife Resources will be notified so all appropriate actions can be taken.

The commitments in the existing plan are considered sufficient for wildlife in the new lease area.

Findings:

The application is considered adequate with regard to this section of the regulations.

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RENEWABLE RESOURCES SURVEY

The Operator did not address this issue. In the approved MRP and in the Alkali Tract proposal the Operator identified grazing and recreational uses as renewable resources in the IBC. In the MRP the Operator has committed to mitigating any subsidence related damage. That commitment would apply to all permitted lands.

Findings:

The Operator has met the minimum regulatory requirements.

SUBSIDENCE CONTROL PLAN

The Operator stated in a letter dated October 17, 1996 that a subsidence monitoring in the IBC would be monitored by adding a station. The monitoring station is labeled 120 and shown on Exhibit 5.25-1. Since only development mining will be done in the IBC area, the effects of subsidence should be minimal. One monitoring station should be sufficient to cover the area.

Findings:

The Operator has met the minimum regulatory requirements.

COAL RECOVERY

Regulatory Reference: 30 CFR Sec. 817.59; R645-301-522.

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Analysis:

The Operator did not address this section in the PAP. From information outside the PAP the Operator has stated that mining in the IBC will be development mining only. The Division's main concern is that the Operator will conduct mining in a manner that will allow the maximum recovery of the coal in the Alkali Tract.

In a letter dated September 17, 1996, to Mr. Reid Olsen, general manager of Soldier Creek Coal Company, Mr. Mark E. Bailey, area manager for the BLM, stated in a letter to Mr. Reid Olsen, general manager of Soldier Creek Coal Company, that the BLM had approved the revisions to Soldier Creek's resource recovery and protection plan (R2P2). The Division contacted Mr. Barry Grosely of the BLM, by phone on October 16, 1996. Mr. Grosely has investigated the coal recovery program at the mine. He is satisfied that Soldier Creek is attempting to recover as much coal as possible.

Coal recovery at Soldier Creek will be hampered by burn areas and seam splitting. It is difficult to develop a mine plan that will insure maximum economic recovery until the mining conditions are fully known. Those conditions usually are not known until development work takes place. During development work the Operator may modify the mining plan due to local mining conditions.

Findings:

The Operator has met the minimum regulatory requirements for maximum economic coal recovery.

RECLAMATION PLAN

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REVEGETATION

Analysis:

Soldier Creek does not plan any surface disturbance with the proposed incidental boundary change.

Findings:

The application is considered adequate with regard to this section of the regulations.