

PERMIT CHANGE TRACKING FORM

Permit Renewal due 5/19/97
Need DOC by 3/10/97

- Significant Permit Revision
- Permit Amendment
- Incidental Boundary Change

DATE RECEIVED: <i>1/21/97</i>	By: <i>PLK</i> (Initial)	PERMIT NUMBER: ACT/041/002	
Title of Proposal: <i>PERMIT RENEWAL</i>		PERMIT CHANGE #: <i>97 PR</i>	
Description: <i>Need DOC by</i>		PERMITTEE: <i>SOUTHERN UTAH FUEL COMPANY</i> <i>Chapman Fuel</i>	
		MINE NAME: <i>CONVULSION CANYON MINE</i> <i>Chapman, LLC</i>	

	DATE DUE	DATE DONE	RESULT
<input type="checkbox"/> 15 DAY INITIAL RESPONSE TO PERMIT CHANGE APPLICATION			<input type="checkbox"/> ACCEPTED <input type="checkbox"/> REJECTED
<input type="checkbox"/> Notice of Review Status of proposed permit change sent to the Permittee.			COMMENTS
<input type="checkbox"/> Responses Received.			
<input type="checkbox"/> Notice of Affidavit of Publication. (If change is a Significant Revision.)			

REVIEW TRACKING	INITIAL REVIEW		MODIFIED REVIEW		FINAL REVIEW AND FINDINGS	
DOGM REVIEWER	DUE	DONE	DUE	DONE	DUE	DONE
<input type="checkbox"/> Lead						
<input type="checkbox"/> TA (See Attached)						
<input type="checkbox"/> Reviewers						
<input type="checkbox"/> Administrative (AVS)						
<input type="checkbox"/> Biology		<i>2/3</i>				
<input type="checkbox"/> Engineering						
<input type="checkbox"/> Geology						
<input type="checkbox"/> Soils						
<input type="checkbox"/> Hydrology						

COORDINATED REVIEWS	SENT	DUE	RECEIVED	SENT	DUE	DONE
<input type="checkbox"/> OSMRE						
<input type="checkbox"/> US Forest Service						
<input type="checkbox"/> Bureau of Land Management						
<input type="checkbox"/> US Fish and Wildlife Service						
<input type="checkbox"/> US National Parks Service						
<input type="checkbox"/> UT Environmental Quality						
<input type="checkbox"/> UT Water Rights						
<input type="checkbox"/> UT Wildlife Resources						
<input type="checkbox"/> UT State History (SHPO)						
<input type="checkbox"/> State Trust Lands						

<input type="checkbox"/> Public Notice / Comment / Hearing Complete. (If the permit change is a Significant Revision)	<input type="checkbox"/> Permit Change Approval Form signed and approved effective as of this date. <input type="checkbox"/> Permit Change Denied.
<input type="checkbox"/> Copies of permit change marked and ready for MRP.	<input type="checkbox"/> Notice of <input type="checkbox"/> Approval <input type="checkbox"/> Denial to Permittee.
<input type="checkbox"/> Special Conditions/Stipulations written for approval.	<input type="checkbox"/> Copy of Approved Permit Change to File.
<input type="checkbox"/> TA and CHIA modified as required.	<input type="checkbox"/> Copy of Approved Permit Change to Permittee.
<input type="checkbox"/> Permit Change Approval Form ready for approval.	<input type="checkbox"/> Copies to Other Agencies and Price Field Office.

Renewed 5/19 with 2 conditions



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

Michael O. Leavitt
Governor
Ted Stewart
Executive Director
Lowell P. Braxton
Division Director

1594 West North Temple, Suite 1210
PO Box 145801
Salt Lake City, Utah 84114-5801
801-538-5340
801-359-3940 (Fax)
801-538-7223 (TDD)

November 25, 1997

Ken May, General Manager
Canyon Fuel Company, LLC
397 South 800 West
Salina, Utah 84654

Re: Approved Permit Renewal Information, Canyon Fuel Company, LLC, SUFCO Mine, ACT/041/002-97PR, Folder #3, Sevier County, Utah

Dear Mr. May:

It was recently brought to our attention that during the distribution of your approved permit renewal information, we inadvertently forgot to return a stamped copy to your office. The information was approved effective May 19, 1997 and a copy is enclosed for insertion to your Mining and Reclamation Plan. We apologize for any inconvenience this may have caused.

Thank you for your help in completing the permitting process. Please call if you have any questions.

Sincerely,

A handwritten signature in cursive script that reads "Daron R. Haddock".

Daron R. Haddock
Permit Supervisor

TRANSACTION REPORT

P. 01

MAY-12-97 MON 11:45 AM

SEND (M)

DATE	START	RECEIVER	TX TIME	PAGES	TYPE	NOTE	M#	DP
MAY-12	11:44 AM	18016364499	1'27"	2	SEND	(M) OK	198	
TOTAL						1M 27S PAGES:	2	



United States Department of the Interior
FISH AND WILDLIFE SERVICE

UTAH FIELD OFFICE
LINCOLN PLAZA
145 EAST 1300 SOUTH, SUITE 404
SALT LAKE CITY, UTAH 84115

Fox News

In Reply Refer To
(CO/KS/NE/UT)

April 16, 1997

801-~~57343296~~
636-4496

Mary Ann Wright
Associate Director of Mining
Utah Coal Regulatory Program
Division of Oil, Gas and Mining
1594 West North Temple, Suite 1210
Box 145801
Salt Lake City, UT 84114-5801

ACT/041/002
Folder #2
Copy Aaron

RE: Determination of Administrative Completeness for Permit Renewal, ACT/041/002-97PR, SUFCo Mine, Canyon Fuel Company, LLC, Folder #3, Sevier County, Utah

Dear Ms. Wright:

We have received your letter of March 19, 1997 and are concerned about how current the information is in the permit renewal application. A map of the known inactive and active nests in the application appears outdated. Twelve nests were identified and were dated in which they

→ DWR - does report
→ Raptor Survey
→ Fly on 5/26 Memorial Day ←
→ 60 days most recent *7/19*



United States Department of the Interior
FISH AND WILDLIFE SERVICE

UTAH FIELD OFFICE
LINCOLN PLAZA
145 EAST 1300 SOUTH, SUITE 404
SALT LAKE CITY, UTAH 84115

In Reply Refer To
(CO/KS/NE/UT)

April 16, 1997

Mary Ann Wright
Associate Director of Mining
Utah Coal Regulatory Program
Division of Oil, Gas and Mining
1594 West North Temple, Suite 1210
Box 145801
Salt Lake City, UT 84114-5801

RE: Determination of Administrative Completeness for Permit Renewal, ACT/041/002-97PR, SUFCo Mine, Canyon Fuel Company, LLC, Folder #3, Sevier County, Utah

Dear Ms. Wright:

We have received your letter of March 19, 1997 and are concerned about how current the information is in the permit renewal application. A map of the known inactive and active nests in the application appears outdated. Twelve nests were identified and were dated in which they were surveyed. Ten of these nests were dated 1987 and 1988, and two nest had the dates 1981 and 1982. In Chapter 3, the application states that known raptor nests will be monitored on a yearly basis using helicopter flights near the end of May. However, the results of these flights were not found in the renewal application, in the yearly reports, or on any map. All text, maps and appendices should be updated with current data and information.

The U.S. Fish and Wildlife Service recommends that the raptor surveys should not only continue to monitor known nests, but should be expanded to include the entire permit area to locate any new nests. Three nests (2 inactive, 1 active) are currently located on the edge of the subsidence zones. Any nest located within the subsidence zone should be monitored and appropriate actions taken (nest relocation, removal, etc.) to protect them if subsidence occurs. "Taking" of any nest requires the appropriate federal permits.

In Section 3.5.8.3 it states that the applicant knows it is illegal to take any endangered or threatened species, nests, or eggs because of the Endangered Species Act. A similar statement should be included about the taking of other raptors and migratory birds, their nests, eggs, and young (especially golden eagles). Raptors and migratory birds are protected under the Migratory Bird Treaty Act and the Bald Eagle Protection Act.

The application stated that the electric power lines were modified in 1981 for the protection of raptors. Because of additional experience, design development, and research, the FWS

Jay New Swenson

801-57343296
636-4499

ACT/041/002

Folder #2
Copy Aaron

recommends that all power lines that are temporary or permanent, conform with designs shown in both the Avian Power Line Interaction Committee's (APLIC) 1994 and 1996 publications, "Mitigating Bird Collisions with Power Lines: The State of the Art in 1994," and, "Suggested Practices for Raptor Protection on Power Lines: The State of the Art in 1996," prepared for the Edison Electric Institute/Raptor Research Foundation, Washington, D.C.

Thank you for the opportunity to review the renewal application. Should additional issues of concern arise, we may provide comments at a later date.

Sincerely,



Reed Harris
Field Supervisor

ATTACHMENT A
SPECIAL CONDITION

This permit is effective July 6, 1994. If any public comments are received between the time of expiration and the extended public comment period (July 27, 1994), those comments will be given appropriate programmatic consideration.

- Sec. 15 PERMIT RENEWAL** - Upon expiration, this permit may be renewed for areas within the boundaries of the existing permit in accordance with the Act, the approved Utah State Program and the Federal Lands Program.
- Sec. 16 CULTURAL RESOURCES** - If, during the course of mining operations, previously unidentified cultural resources are discovered, the permittee shall ensure that the site(s) is not disturbed and shall notify the Division. The Division, after coordination with OSM, shall inform the permittee of necessary actions required. The permittee shall implement the mitigation measures required by the Division within the time frame specified by the Division.
- Sec. 17 APPEALS** - The permittee shall have the right to appeal as provided for under R645-300-200.
- Sec. 18 SPECIAL CONDITIONS** - In addition to the general obligations and requirements set out in the leases, the federal mining plan approval, and this permit, the permittee shall comply with the special conditions appended hereto as Attachment A.

The above conditions (Secs. 1-18) are also imposed upon the permittee's agents and employees. The failure or refusal of any of these persons to comply with these conditions shall be deemed a failure of the permittee to comply with the terms of this permit and the lease. The permittee shall require his agents, contractors and subcontractors involved in activities concerning this permit to include these conditions in the contracts between and among them. These conditions may be revised or amended, in writing, by the mutual consent of the Division and the permittee at any time to adjust to changed conditions or to correct an oversight. The Division may amend these conditions at any time without the consent of the permittee in order to make them consistent with any federal or state statutes and any regulations.

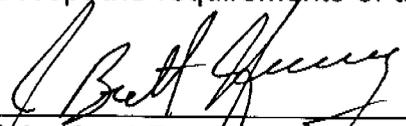
THE STATE OF UTAH

By: 

Date: July 8, 1994

ACT/015/019
FEDERAL
Page 7 of 8

I certify that I have read, understand and accept the requirements of this permit and any special conditions attached.



**Authorized Representative of
the Permittee**

Date: 7-14-94



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

Michael O. Leavitt
Governor
Ted Stewart
Executive Director
James W. Carter
Division Director

1594 West North Temple, Suite 1210
Box 145801
Salt Lake City, Utah 84114-5801
801-538-5340
801-359-3940 (Fax)
801-538-7223 (TDD)

May 13, 1997

To: File

From: Pamela Grubaugh-Littig, Permit Coordinator 

Re: 510 (c) Recommendation for Permit Renewal, SUFCO Mine,
ACT/041/002, Canyon Fuel Company, LLC, Folder #3, Sevier County,
Utah

As of this writing of this memo, there are no NOVs or COs which are not corrected or in the process of being corrected for the SUFCO Mine. There are no finalized civil penalties which are outstanding and overdue in the name of Canyon Fuel Company, LLC. Canyon Fuel Company, LLC does not have a demonstrated pattern of willful violations, nor have they been subject to any bond forfeitures for any operation in the state of Utah.

Attached is an OSM recommendation from the Applicant Violator System with an issue recommendation for the SUFCO Mine for this permit renewal.

State : UT	Permit No : ACT041002	Appl No : ACT041002
Applicant : 142816(CANYON FUEL CO LLC)		Seqno : 1

SYSTEM RECOMMENDATION IS BASED ON ENTITY OFT

SYSTEM RECOMMENDATION	: ISSUE	05/13/97
PREVIOUS SYSTEM RECOMMENDATION	: ISSUE	12/19/96

RCM_MNT(F7) PERMIT/APPL(F8)
 PRV_SCR(F3) EVOFT(F5) REPORTS(F9) CHOICES(F10)

■ avsdg

16 28

State : UT	Permit No : ACT041002	Appl No : ACT041002
Applicant : 142816(CANYON FUEL CO LLC)		Seqno : 1

SYSTEM RECOMMENDATION IS BASED ON ENTITY OFT

SYSTEM RECOMMENDATION	: ISSUE	05/13/97
PREVIOUS SYSTEM RECOMMENDATION	: ISSUE	12/19/96

RCM_MNT(F7) PERMIT/APPL(F8)
 PRV_SCR(F3) EVOFT(F5) REPORTS(F9) CHOICES(F10)

■ avsdg

16:28

State : UT	Permit No : ACT041002	Appl No : ACT041002
Applicant : 142816(CANYON FUEL CO LLC)		Seqno : 1

SYSTEM RECOMMENDATION IS BASED ON ENTITY OFT



Canyon Fuel Company, LLC

SUFCO Mine

397 South 800 West

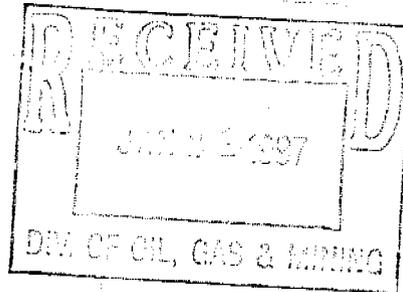
Salina, Utah 84654

(801) 637-4880

Fax (801) 636-4499

January 20, 1997

Utah Coal Regulatory Program
1594 West North Temple, Suite 1210
Box 145801
Salt Lake City, Utah 84114-5801



Re: SUFCO Mine M&RP Renewal ACT/041/002

Dear Permit Supervisor:

The enclosed eight copies of materials needed to update the SUFCO Mine M&RP are being submitted 120 days before the expiration of the permit on May 20, 1997 as required by Utah Coal Mining Rules 645-303-230. Please proceed to process Canyon Fuel Company's Permit No. ACT/041/002 for renewal. Forms C1 and C2 are included showing changes needed in legal, financial, compliance and bonding. A proposed newspaper notice and a current liability insurance certificate are also included.

Chapter 1 has been extensively revised because of the merger of Coastal States Energy into Canyon Fuel Company, LLC and the resulting change in ownership. Therefore, the text is being completely resubmitted. Chapter 8 is being resubmitted in its entirety with changes shown in redline and strikeout format. Plate 5-6 was revised to update a change in surface ownership on some fee ground.

Sincerely,
CANYON FUEL COMPANY, LLC


Richard D. Pick
Chief Executive Officer

WKS:kb

F:\WORK\GOVT\1997\DOGMMRP\RENEWAL.LTR

APPLICATION FOR PERMIT CHANGE

Title of Change:

Application Number: 97A

Permit Number: ACT/041/002

SUFCO Mine M&RP Renewal

Mine: SUFCO

Permittee: Canyon Fuel Company, LLC

Description, include reason for change and timing required to implement:

Mining Permit Renewal is due May 20, 1997.

<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	1. Change in the size of the Permit Area? _____ acres	<input type="checkbox"/> increase <input type="checkbox"/> decrease.
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	2. Change in the size of the Disturbed Area? _____ acres	<input type="checkbox"/> increase <input type="checkbox"/> decrease.
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	3. Will permit change include operations outside the Cumulative Hydrologic Impact Area?	
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	4. Will permit change include operations in hydrologic basins other than currently approved?	
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	5. Does permit change result from cancellation, reduction or increase of insurance or reclamation bond?	
<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	6. Does permit change require or include public notice publication?	
<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	7. Does permit change require or include ownership, control, right-of-entry, or compliance information?	
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	8. Permit change as a result of a Violation? Violation # _____	
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	9. Permit change as a result of a Division Order? D.O.# _____	
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	10. Permit change as a result of other laws or regulations or policies? Explain: _____	
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	11. Does the permit change affect the surface landowner or change the post mining land use?	
<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	12. Does permit change require or include underground design or mine sequence and timing? (Modification of R2P2?)	
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	13. Does permit change require or include collection and reporting of any baseline information?	
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	14. Could the permit change have any effect on wildlife or vegetation outside the current disturbed area?	
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	15. Does permit change require or include soil removal, storage or placement?	
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	16. Does permit change require or include vegetation monitoring, removal or revegetation activities?	
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	17. Does permit change require or include construction, modification, or removal of surface facilities?	
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	18. Does permit change require or include water monitoring, sediment or drainage control measures?	
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	19. Does permit change require or include certified designs, maps, or calculations?	
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	20. Does permit change require or include subsidence control or monitoring?	
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	21. Have reclamation costs for bonding been provided or revised for any change in the reclamation plan?	
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	22. Is permit change within 100 feet of a public road or perennial stream or 500 feet of an occupied dwelling?	
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	23. Is this coal exploration activity ?	

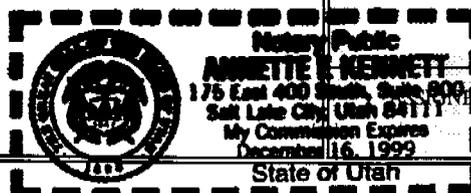
X Attach 8 complete copies of proposed permit change as it would be incorporated into the Mining and Reclamation Plan.

I hereby certify that I am a responsible official of the applicant and that the information contained in this application is true and correct to the best of my information and belief in all respects with the laws of Utah in reference to commitments, undertakings, and obligations, herein.

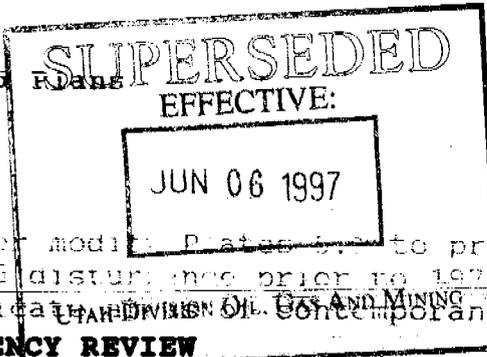
Richard D. Pick 1/16/97
Signed - Richard D. Pick, Chief Executive Officer - Date

Received by Oil, Gas & Mining

Subscribed and sworn to before me this 16 day of January, 1997
Annette Kennett
Notary Public
My Commission Expires: Dec 16 1999
Attest: STATE OF UT
COUNTY OF SL



PERMIT CHANGE NUMBER



SUFCO must review or modify Plates 5-11 to provide information of the above ground disturbance prior to 1971, and/or 5-12 to indicate Utah Division of Oil, Gas and Mining

**TECHNICAL DEFICIENCY REVIEW
PERMIT RENEWAL**

SOUTHERN UTAH FUEL COMPANY

RESPONSE

R645-301-120 Permit Application Format and Contents:

Deficiencies:

1. Provide legible Water Quality data for Appendix H-A, page 1, located in Appendix 7-2 Hydrometrics reports Volume 9; and provide legible Plates H-I, H-II, and H-III located in the 1981 Supplement on a map of adequate scale. Compiled well elevation data must include the month sampled on presented graphs.

Response:

A legible copy of Water Quality data for Appendix H-A, page 1 is included. Also include for your reference are larger scale maps for Plates H-I, H-II, and H-III.

R645-301-121.200. Be clear and concise:

Deficiencies:

1. SUFCO must modify the text of page 5-13 to reflect the accurate location of the Quitcupah ventilation entry.

Response:

The correction has been made on page 5-13.

Response:

SUFCO must correct the error statement made in Section 2.3.3.3 and date final substitute topsoil will be selected from the fill and contemporaneously revegetated slopes and correct legends have been added to Plate 2-1 to allow approximate locations to be determined. Topsoil may be required depending upon

R645-301-224. Substitute Topsoil:

Deficiencies:

1. SUFCO must identify contemporaneously reclaimed areas which will be redisturbed for substitute topsoil on a map and in the plan and distinguish these areas as interim revegetation/substitute topsoil storage.

Response:

Topsoil piles are shown on Plate 5-2a. The fill slope shown on Plate 2-1 will be redistributed with suitable soils segregated for use as substitute topsoil. The sedimentation pond dam soils will also be salvaged.

2. SUFCO must provide within the text of the M&RP: a) an evaluation of the soils which are presently within the pad, which have potential for substitute topsoil use and which are the best available material within the fill for cover; b) a commitment in Chapter 2 of the M&RP to test all proposed substitute topsoil material at the time of final reclamation according to Table 6 of UDOGM's 1988 "Guidelines for the Management of Overburden and Topsoil," and including the analysis of sulfate and chloride concentrations prior to utilizing any pad fill for substitute topsoil; c) an outline of the number of tests to be conducted based on the volume or tonnage of substitute topsoil to be utilized during final reclamation.

Response:

a) Analyses of soils within the pad that have been sampled is included in Appendix 2-3. b & c) Commitment to use only after regulatory approval is set forth in 2.3.3.3 p. 2-15.

3. SUFCO must correct the first statement made in Section 2.2.4 to indicate that substitute topsoil will be selected from pad fill and contemporaneously revegetated slopes, and correct the last statement of Section 2.3.2.7 to indicate that importation of substitute topsoil may be required depending upon revegetation success according to the standards of R645-301-356.

Response:

Corrections have been made to section 2.2.4 and 2.3.2.7.

R645-301-230. Operation Plan:

Deficiencies:

1. SUFCO must indicate in the text of the M&RP: a) an average depth which will be salvaged from proposed disturbances or indicate that a topsoil survey will be conducted prior to new disturbance (page 4-10); b) that minor disturbances where SUFCO does not anticipate topsoil removal will meet with prior UDOGM approval (Section 2.3.2.4); c) that salvaged and stored topsoil will not be moved without prior approval from the Division Section 2.3.4.3; d) that the A, B & C or A & AC & C horizons will be collectively segregated from the proposed disturbed area and stockpiled (Section 2.3.2.5 on page 2-13).

Response:

1. a) SUFCO has committed to collect the A soil horizon, B & C horizons and stockpile separately provided the thickness is greater than 6 inches. Where soil horizons are less than 6 inches the horizons will be collected as a unit and stockpiled. This commitment was made (pg. 2-10) because of the variable thicknesses of topsoil at the surface facility, and SUFCO's desire to collect all suitable soils.
- b) Section 2.3.2.4 has been revised to clarify applicant's compliance with R645-301-232.400.
- c) Already in M&RP; see section 2.3.4.2. last paragraph. Additional reference added in Section 2.3.4.3.

d) SUFCO has committed to segregate A horizon when greater than 6" from B & C horizons (section 2.3.1.1) B & C horizons will be collected as a unit because of poor subsoil quality.

2. SUFCO must indicate in the text of the M&RP the volume of topsoil presently stored at the mine facilities and subsoil stored in the substation binwalls intended for final reclamation cover material.

Response:

The topsoil and subsoil volumes have been indicated in section 2.3.1.4.

R645-301-240. Reclamation Plan.

Deficiencies:

1. SUFCO must commit to ripping the subsoil to an 18-24 inch depth and applying substitute topsoil cover depths of 12 inches on slopes less than or equal to 2h:1v; and ripping to a depth of 12 inches and applying substitute topsoil cover depths of 8 inches on slopes greater than 2h:1v up to the angle of repose, 1.5h:1v.

Response:

Subsoil and topsoil will be ripped to a suitable depth as noted in revised text in section 2.40.

R645-301-230. Operation Plan:

2. SUFCO must commit to applying an amendment (such as alfalfa hay at a rate of 3T/ac) and a complete (N, P, K) fertilizer to the topsoiled slopes prior to scarifying to a depth of 6 inches; as well as gouging with a track hoe all slopes less than 2h:1v after topsoiling and prior to seeding.

Response:

SUFCO will analyze the soil following Division guidelines to

determine which amendments and fertilizers are needed and appropriate application rates. Section 2.4.3 has been revised accordingly. Since site 13 "riparian reference area" is not going to be used, the vegetation information provided in Plate 5-3 of the EIS 1980 report should be adequate to describe the

3. SUFCO must provide the Division with cut and fill volumes derived from Plate 5-3 Post Reclamation Surface Configuration and Plate 5-4 Post Reclamation Cross-Sections submitted with the M&RP or revise Plates 5-3 and 5-4 to show cross-sections from which reported cut and fill volumes were calculated; and provide within the M&RP a supporting discussion of the angle of repose for the spoil slopes to which topsoil will be applied.

Response:

This information is already provided in Appendixes 2-4 and 2-5 at the level of detail required by the regulations.

R645-301-321. Vegetation Information

Deficiencies:

1. The plan must clarify if the information from vegetation sampling site 13 is to be used as a reference area, to validate similarity to a reference area, or if the baseline data method is to be used for the riparian area by the pond.

Response:

Site 13 will not be used as a reference or validation area. Site 13 will remain as a mapping unit only. It exists only to describe the "riparian" vegetation that exists on the permit area. Site 12 (pinyon-juniper reference area) will be used as a reference area for the sedimentation pond area. Section 3.2.3.1 has been revised to reflect this.

2. The plan must contain productivity information for the riparian reference area and adequate information to predict the potential for reestablishing vegetation in riparian areas. This should consist of, minimally, productivity estimates, woody species density, and vegetative cover by species measured by methods contained in the "Vegetation Information Guidelines Appendix A".

Response:

Since site 13 "riparian reference area" is not going to be use as such, the vegetation information provided in Table 35 of the EPS 1980 report should be adequate to describe this community (mapping unit). Density, relative frequency and age-class information are provided on the woody plant species in this community. Percent cover of under story vegetation (forbes and grasses) is not available. It was the judgement of EPS that there was not a sufficient amount of cover to warrant an estimate. Productivity estimates of this community can be extrapolated from the age class information by simple conversion to basal area.

3. The plan must include a map which shows locations and boundaries of reference areas which will be used in determining revegetation success. Plates 5-2A and 5-2B are suggested.

Response:

Plate 3-1 has been revised to show the reference areas and boundaries.

645-301-322. Fish and Wildlife Information:

Deficiencies:

1. The plan must contain a plan for monitoring known raptor nests.

Response:

A helicopter survey of nests in the Quitchupah Canyon area will be flown annually. The text of the M&RP has been revised accordingly. Section 3.2.2.2 has been revised to reflect this plan.

2. The plan must clarify the commitment for future monitoring of biological aquatic resources.

Response: been revised to clarify commitment

The applicant must develop an impact avoidance or mitigation
Baseline has been compiled. No fisheries exist in permit
area. Therefore no need to monitor.

3. The application must identify whether or not there are crucial periods of deer and elk use at the waste rock site and what steps the Operator will take to protect wildlife during critical periods.

Response:

This has been addressed already in the M&RP (Exhibit 3 Vol. 3).

R645-301-330. Operation Plan:

Deficiencies:

1. SUFCO must include a plan for monitoring effects of underground mining on vegetation within the permit area to satisfy the requirements of federal leases. Color infrared photography is recommended.

Response:

SUFCO will monitor with CIR every 5 years. This commitment has been added to the M&RP text in section 3.3.3.3.

2. The Applicant must present a plan to mitigate loss of wildlife habitats lost due to disruption of surface and ground water by subsidence. Water rights that may be used for this should be identified, but, more importantly, appropriate agencies, such as the Division of Wildlife Resources and Division of Water Rights should be involved at this time in identifying possible problems and planning the mitigation.

Response:

SUFCO has been conducting full extraction mining operations with the resulting subsidence since 1976. To date no mitigation measures have been needed. Section 3.3.3.3 has

been revised to clarify commitment.

3. The Applicant must develop an impact avoidance or mitigation seeding plan for the protection of raptor nests that could be affected by subsidence. Hydroseeding equipment operator to determine where seeds be a brand. Fertilizer must not be mixed with lime.

Response:

SUFCO will survey nests on an annual basis. If a nest is discovered where it may be effected by subsidence a mitigation plan will be jointly evaluated and developed with the Division, DWR and FWS.

R645-301-341.210. Species and Quantities of Seeds and Seedlings:

Deficiencies:

1. The unit for the quantity of seed to be planted at the portal area needs to be further specified, i.e. pounds of pure live seed per acre.

Response:

The seed quantity has been revised to be pounds of pure live seed per acre.

2. Pinyon and juniper must be replaced in the tree and shrub seedling planting mix by other more desirable species. Saskatoon serviceberry, Gambel oak and curlleaf mountain mahogany are recommended.

Response:

The reclamation mixture has been changed from the previous approved mix. Utah serviceberry and curlleaf mountain mahogany have been added instead of Pinyon and juniper.

R645-301-341.220. Seeding and Planting Methods:

Deficiencies:

1. Hydromulch must not be mixed with seed in hydroseeding operations except that a small amount could be used for the hydroseeding equipment operator to determine where seed had been broadcast. Fertilizer must not be mixed in the slurry.

Response:

Seeding and planting methods have been revised in text of M&RP.

R645-301-341.230. Mulching Techniques:

Deficiencies:

1. The amount of straw mulch to be used at the waste rock site needs to be increased to 1.5 tons to 2 tons per acre unless the Applicant can demonstrate that using a lower quantity is adequate.

Response:

Recommended quantities of mulch by EPS and in the literature is in the 1,500 lbs to 2,000 pounds per acre range. Heavier mulch quantities are believed to inhibit plant growth. This quantity has been adequate in the construction disturbance reclamation and all reclamation performed to date. EPS's report "Vegetation Monitoring of the Waste Rock Disposal Site and Vegetation Sampling of the Reference Area that details the amount of cover on the reclaimed area is included for reference.

2. Unless the Applicant demonstrates that hydromulch is at least as effective in controlling erosion and assisting in establishing seedlings, the mulching method for the portal site needs to be changed to 1.5 to 2 tons per acre of straw or hay anchored through netting or using a chemical tackifier.

Response: 8041-300-541 250. Success Determination Measures

Demonstration sites will be developed by the applicant and with Division input to investigate different seeding practices. This program will be completed such that seeding can take place in the fall of 1993.

3. The Commitment to use erosion matting on unstable slopes needs to be included in Chapter 3.

Response:

Already in Chapter 2.

R645-301-341.250. Success Determination Measures:

Deficiencies:

SUFCO must provide a schedule for establishing revegetation test plots to demonstrate the suitability of appropriate topsoil and final revegetation techniques at the mine site.

1. If the "Vegetation Information Guidelines" are included in the plan, the most recent edition must be used.

Response:

Guidelines in effect when plan was developed were included in Appendix for reference.

2. If the plan is to give a level of confidence for determining revegetation success, the confidence interval specified in R645-301-356.120 must be used.

Response:

R645-301-356.120 specifies the statistical confidence method required by regulation which SUFCO will adhere to. The conflicting confidence information in the M&RP text has been deleted.

3. The plan must include the woody species density standards for success, 20,000 stems per acre for the waste rock site and 1000 trees and shrubs per acre for the mine site, that have been obtained through consultation with Wildlife Resources.

Response:

Based on EPS recent sampling (2 September 1992) of the waste rock reference area, showed a density of 7,935 shrubs/acre. It appears that this would correspond with the 25,000 stems estimated by EPS in the 1980 report, and would probably approximate 7,935 individual shrubs. It is recommended that 7,900 shrubs/acre be used as a success standard. It is recommended that the tree/shrub density at the portal site be 500 per acre rather than 1000 per acre.

R645-301-341.300. Revegetation Feasibility Demonstration:

Deficiencies:

1. SUFCO must provide a schedule for establishing revegetation test plots to demonstrate the suitability of substitute topsoil and final revegetation techniques at the mine site.

Response:

SUFCO will develop a demonstration plot program with input from the Division such that seeding can be done in the fall of 1993.

R645-301-342. Fish and Wildlife:

Deficiencies:

1. SUFCO must provide a discussion of enhancement measures that will be used during reclamation and the postmining phase of operations or a statement explaining why enhancement is not practicable.

Response:

Enhancement measures are discussed in Section 3.4.2.2.

R645-301-411. Land Use Environmental Description:

Deficiencies:

1. The plan must contain a description of the land use classification, if any, under local law of the permit and adjacent areas.

Response:

Local law does not classify land use or zoning in the permit area; therefore, it is not included.

R645-301-412. Reclamation Plan:

Deficiencies: R645-301-514, 300 Impoundments

DEFICIENCIES

1. The plan must contain a copy of comments concerning the proposed postmining land use from the legal and equitable owners of record of the surface of the permit area. ~~rules.~~ Instead of

Response:

Comments of other land owners is included in Appendix 1-1 as right of entry. (UNELCO letter 1/15/81). Reference was added in section 4.1.2.2.

2. The Applicant must adequately address the requirements of R645-301-270 if approval of an alternative land use for retained highwall is sought. To obtain approval without meeting the requirements for an alternative land use, the plan must demonstrate that retained highwalls replace cliffs eliminated due to mining activities or that the highwalls were created prior to SMCRA.

Response:

All high walls were created prior to 1977 and SMCRA.

R645-301-500. Engineering:
R645-301-512. Certification:

Deficiencies:

1. The Applicant must provide the Division with cut and fill volumes derived from Plate 5-3 Post Reclamation Surface Configuration and Plate 5-4 Post-Reclamation Cross Section submitted with the M&RP or revise Plates 5-3 and 5-4 to show cross-sections from which reported cut and fill volumes were calculated.

Response:

Cut and fill volumes and cross-sections are contained in Appendices 2-5 and 2-4 respectively.

R645-301-514.300.5 Impoundment Residences:

Deficiencies:

1. The Applicant needs to cite the R645 rules, instead of R614.

Response:

All reference to R614 have been changed to R645.

R645-301-521.100. Cross-Sections and Maps:

Deficiencies:

1. The Applicant needs to show the location of all openings to abandoned and active workings, and the location of electrical transmission lines and pipelines.

Response:

Plate 5-1 shows openings to abandoned works and active works in normal fashion for mine maps. Does this need further clarification? Plates 5-2A and Plate 5-2B show electrical lines and pipelines as described in text.

R645-301-522. Coal Recovery:

Deficiencies:

1. The applicant will submit his resource recovery protection plan as an appendix to the permit application.

Response:

An approved R2P2 is on file with the BLM and has been determined to be adequate. The measures to maximize the use and conservation of the coal resource is included in the M&RP.

R645-301-525. Subsidence: Plate 5-10 as indicated in the PAP

Deficiencies:

1. The Permittee shall mark and identify the two experimental room-and-pillar extraction areas on an appropriate map and that map shall be referenced in the PAP narrative.

Response:

Room-and-pillar areas were not experimental, however areas have been marked on Plate 5-1.

R645-301-525.100. Subsidence control Plan:

Deficiencies:

1. The Permittee needs to address R645-301-525.160 by describing the measures that will be taken to mitigate or remedy any subsidence related material damage to the land or structures.

Response:

SUFCA has addressed in Subsidence section of the M&RP.

2. The applicant will commit to submit a copy of the subsidence survey in his annual report.

Response:

Already in text that report will be given to DOGM annually (pg 5-23 paragraph 2).

R645-301-525.140. Monitoring:

Deficiencies:

1. The locations of the subsidence monitoring points shall be

shown on Plate 5-10 as indicated in the PAP.

Response:

Structures are already completed and shown on Coastal dimensions are shown to scale on Plate 5-2A and 5-2B. Division inspections have demonstrated that structures

Plate 5-10 has been revised to show location of subsidence monitoring points.

R645-310-525.200. Subsidence Control:

Deficiencies:

1. The Applicant needs to submit a report to the Division explaining why some support pillars failed and what steps have been taken in pillar design and construction to prevent future failure.

Response:

A discussion of the pillar failure in the 5 North area is included in the M&RP text.

R645-301-526. Mine Structures and Facilities:

Deficiencies:

1. The Applicant will include the location of existing structure in the text as required by R645-301-526.111.

Response:

Shown on Plate 5-2A and 5-2B.

2. The Applicant will provide plans or photographs of the structures and their current conditions as required by R645-301-526.112.

Response:

The Applicant must describe each road and conveyor. Structures are already completed and owned by Coastal. Plan dimensions are shown to scale on Plate 5-2A and 5-2B. Division inspections have demonstrated that structures comply with applicable regulations. All structures are to be removed for reclamation.

3. The beginning and completion dates for the existing structure must be given as required by R645-301-526.113.

Response:

Best dates known are included in Table 5-4. This was adequate on prior permit approvals.

R645-301-527.100. Roads:

Deficiencies:

1. The Applicant must classify the roads in the mine complex as either primary or ancillary and what their post mining status will be.

Response:

This change has been made in the M&RP.

2. The Applicant must submit certified designs of the roads in the mine complex.

Response:

Road alignment and grade are shown on Plate 5-2A.

R645-310-527.200. The plan must include a detailed description of each road, conveyor,...

Deficiencies:

1. The Applicant must describe each road and conveyors in the mine complex.

The deficiency addresses slope stability in the case of drawdown. The regulation addresses surface erosion in the event of a rapid drawdown. Mr. Haddad on August 21, 1992. He suggested that surface erosion be addressed. In slope steepness, rapid drawdown due to a storm event, and rapid drawdown due to decant have been evaluated and discussed in reference to surface erosion. The regulation is found in 30 CFR 55.101(a)(1)(ii).

Response:

Location of roads and conveyors are shown on Plate 5-2A. A description of the roads and conveyors are included in the text of the M&RP.

2. The Applicant must describe how the roads in the mine complex will be maintained.

Response:

The M&RP has been updated to describe maintenance of the roads in the mine complex.

R645-301.531. General Operational Design Criteria and Plans:

Deficiencies:

1. The Applicant will provide additional information on the potential effects of subsidence from past workings on all structures.

Response:

R645-301-531. refers to ponds and impoundments; therefore, regulation has been addressed.

R645-301-533. Impoundments:

Deficiencies:

1. The Applicant will demonstrate to the Division that all the impoundments are stable in the event of a rapid drawdown.

Response:

This deficiency addressed slope stability in the case of rapid drawdown. The regulation addresses surface erosion in the case of rapid drawdown. This was discussed with Mr. Haddock on August 27, 1992. He requested that surface erosion be identified and addressed. In slope steepness, rapid drawdown due to a storm event, and rapid drawdown due to decant have been evaluated and discussed in reference to surface erosion. The revision can be found on page 5-46 of the M&RP plan that does not involve the

R645-301-553.620. Approval is obtained from the Division for incomplete elimination of highwalls in previously mined areas in accordance with R645-301-553.500;

Deficiencies:

1. SUFCO must provide a surface map with the highwall retention request of Appendix 5-2 to outline surface disturbance previous to the 1977 SMCRA regulations prior to receiving Division approval of this practice.

Response:

Plate 5-1 has been revised to show the surface disturbance previous to the 1977 SMCRA regulations.

R645-301-553.100. Disturbed Area Backfilling and Grading:

Deficiencies:

1. SUFCO must provide a surface map with the highwall retention request of Appendix 5-2 to outline surface disturbance previous to the 1977 SMCRA regulations prior to receiving Division approval of this practice.

Response:

See response to R645-301-553.100.

2. The Applicant must supply the Division with information on which the highwalls are to remain, when they were created and the justification for their retention.

Response: R645-301-622 Cross-Sections, Maps and Plans
R645-301-622 200 Natur. depth, and thickness

The highwalls that are to remain have been identified. All of these highwalls were created prior to 1977.

3. The Applicant needs to provide the Division with an alternative reclamation plan that does not involve the retention of highwall.

Response:

Such alternatives were investigated and reviewed with the Division during the 1987 review. Conclusions reached at that time was that such an alternative was not feasible. The Fishlake Forest Service, OSM, and the Division helped SUFCO and their consultants to arrive at the present reclamation plan for the pre-SMCRA site.

4. The Applicant will commit to cover all foundations and asphalt with a minimum of four feet of cover.

Response:

The applicant will dispose of foundations and asphalt in such a manner that adequate root penetration can occur.

R645-301-621. Geology within the proposed permit and adjacent areas:

Deficiencies:

1. The geology of the permit and adjacent areas is found in two different parts of the PAP. The Permittee shall cross-reference Volume 2, Chapter 6 with Volume 3, Part 2.

Response:

The mine permit area and the waste rock disposal area geology has been cross-referenced.

R645-301-622. of borehole **Cross-Sections, Maps and Plans.** If no ground
R645-301-622.200. Nature, depth, and thickness: reasons for this or to be
discuss

Deficiencies:

1. The Permittee shall show thickness and nature of the coal seams to be mined and the Duncan seam, interburden, and strata above and below the seams to be mined on isopach maps, multiple cross-sections, or other suitable maps, cross-sections, or plans. If this information is in the R2P2 then the Operator needs to reference the R2P2.

Response:

The approved R2P2 has been referenced in the M&RP. The Duncan Seam geology and mineability has also been addressed.

R645-301-623. Geologic information:

Deficiencies:

1. The Applicant shall remove the request for confidentiality from this section of the PAP. The Permittee may request that certain information in other parts of the PAP be held confidential, but the procedures in R645-300-124 should be followed.

Response:

The request has been removed.

R645-301-624.300. Samples from test borings or drill cores.
R645-301-624.310. Logs of drill holes.
R645-301-624.320. Chemical analyses for acid- or toxic-forming materials:

Deficiencies:

1. Information on ground water that was obtained during drilling

of boreholes shall be included in the PAP. If no ground water information was obtained, the reasons for this should be discussed.

Response:

When boreholes were drilled, either no water was encountered, or its occurrence was not noted on logs included in Appendix 6-1.

2. The Permittee shall make a clear and concise summary of the waste rock analyses performed to date. Locations from which samples were taken shall be clearly identified and, if needed, marked on a map or mine plan.

Response:

Waste rock site is sampled throughout the quarter as material is put in place. A composite sample is analyzed quarterly.

3. The Permittee shall clarify the notification and mitigation plan(s) described on page 3.3, Volume 3.

Response:

The notification and mitigation plan has been clarified.

R645-301-624.340. Thickness and engineering properties:

Deficiencies:

1. The Permittee shall include information necessary to determine pillar strength and prepare the subsidence control plan, such as thickness, strength and other engineering properties of rock above and below the coal seams to be mined and the engineering properties of the coal. Current information on rock and coal, such as that obtained during the advancement of mains and laterals into new areas, shall be incorporated into the data used to make these determinations.

Response: R645-301-722.200. Location of surface water bodies

SUFCO does not routinely collect geotechnical data on roof, floor and coal. A discussion of the 5 North pillar failure has been added to the M&RP text.

- Provide as reference the 1990 water resource survey
2. The PAP shall include an analysis of the failure of the non-subsidence design in Area 7 and shall show how the results of that analysis have been incorporated into the current non-subsidence design.

Response:

A discussion of the Area 7 (5 North) pillar failure has been added to the text of the M&RP. Precautions that are being taken in similar areas is also given in the text.

3. Maps 1 and 2 from the 1990 Subsidence Report should be included in Appendix 5-4.

Response:

Maps are included in annual report which is and has been submitted to the Division.

R645-301-700. Hydrology.

R645-301-722.100. Location and extent of subsurface water:

Deficiencies:

1. The Operator must remove the reference that North Horn is not considered an aquifer (although it may be recognized as relatively insignificant) or, prove that it does not store and transmit water in sufficient quantities for a specific use.

Response:

Applicant has revised reference to North Horn.

R645-301-722.200. Location of surface water bodies:

Deficiencies: Provide a discussion of groundwater seasonal quantity and quality in the past, present, using information obtained from baseline air operations data.

1. Provide or reference the 1981 water resource survey information or more recent survey, from the permit and adjacent area (previously Map 6-1 from the M&RP also found in Appendix 7-2).

Response:

Information is in Appendix 7-2. Reference in section 7.2.2.2 will be added.

R645-301-722.400. Cross-Sections and Maps

Deficiencies:

1. Provide the depth of the wells identified in Table 4.7.1-1, page 4-10 Volume 3.

Response:

Depth of wells is not available to applicant.

2. Provide the locations of all water rights identified on an applicable map. Include those identified at the Waste Rock Disposal site.

Response:

Plate 7-2 shows water rights identified within mine permit area. Three water rights have been identified near Waste Rock Disposal site. The locations are listed in Table 4.7.1-1. An additional map would not provide further clarification.

R645-301-724. Baseline Information:

Deficiencies:

- Thross and Cordy (1981) and Chapter 7 of the M&RP were reviewed for potential impacts to the hydrologic balance and begins in the fourth paragraph on page 7-11 and ends at the bottom of page 7-11.
1. Provide a discussion of groundwater seasonal quantity and quality for the waste rock site using information obtained from baseline and operational data.

Response:

Seasonal water level fluctuations measured in wells at the waste rock disposal site are addressed in Section 7.2.4.1 in the second paragraph on page 7-7. Figure 7-1a, Upper Price River Formations Hydrographs, has been added on page 7-7b. Seasonal quality is addressed in Section 7.2.4.1 in the third paragraph on page 7-14 and in the first paragraph on page 7-14a.

R645-310-724-600. Survey of Renewable Resource Lands:

Deficiencies:

1. Provide a survey showing the extent of recharge zones within the permit and adjacent area.

Response:

The geologic map (Plate 6-1) was examined for structural and topographic recharge-promoting features. Additionally, Plate 7-1 has been revised to delineate the location of the recharge zones identified by the potentiometric surface.

2. Discuss the potential of subsidence to cause material damage or diminution of reasonably foreseeable use of aquifers or areas for the recharge of aquifers, for surface waters as it relates to the recharge zones, include specific discussions of the Blackhawk aquifer as it relates to available information. Include pertinent information gathered by the U.S.G.S. Water Resources Investigations report 90-4084.

Response:

Thiros and Cordy (1991) and Chapter 7 of the M&RP were reviewed for potential impacts to the hydrologic balance due to subsidence. This survey and discussion begins in the second paragraph on page 7-13 and ends in the fourth paragraph on page 7-13a. Discussion of subsidence related impacts begins in the fourth paragraph on page 7-31 and ends at the bottom of page 7-31a. Table 7-12 shows the quality parameters that will be monitored.

R645-301-728. Probable Hydrologic Consequences (PHC) Determination.

Deficiencies:

1. Identify waters to be protected as required by applicable land agencies, such as protected surface resources for the U.S.F.S. and BLM.

Response:

SUFCO commits to replace the water rights of the U.S.F.S. if impacted by mining and to protecting all perennial streams (including those with BLM water rights) in the permit area from subsidence (page 7-35).

2. Correct the discrepancy in the statement on page 3-34, which indicates that monitoring with respect to wildlife watering sources is discussed in Appendix 7-1.

Response:

The appropriate reference has been added.

3. Provide information on how and when the Operator will survey or inventory ground water and surface water. The information gathered should be provided to the Division in addition to inclusion in the operation monitoring plan.

Response:

Tables 7-3 and 7-4 show the monitoring schedule for the Mine Lease area and the waste rock disposal site respectively. Revised Table 7-2 shows the quality parameters that will be monitored.

4. Remove the statement in the Subsidence plan page 5-30 indicating no significant surface water resources are required to be protected in the permit area. Numerous water rights exist within the permit and adjacent area indicating significant water resources do exist.

Response:

Applicant stated that no aquifers are present that serve as a significant source for any public water system. This is still a true statement.

5. Address the Potential Hydrologic Consequence of acid and toxic materials, identified in sample analysis for the waste rock site.

Response:

Acid- and toxic-forming materials analyses included in Volume 3 were evaluated using the Table 2 guidelines (Leatherwood and Duce, 1988). Borderline boron, sodium adsorption ratio, and specific conductance exceedances were found in the waste rock from the Convulsion Canyon Mine. Although localized potential for contamination of surface and groundwater exists, there has been no known impact to surface or groundwater in the permit and adjacent areas. Monitoring continues and all acid- and toxic-forming materials will be disposed of appropriately (pages 7-28 and 7-41 and Volume 3, page 3-3). There are no Table 2 exceedances for selenium.

Impacts due to water collection at the waste rock disposal site are discussed in Volume 3 on page 2-5.

6. Expand the PHC to discuss the affects of reclamation activities and post reclamation situations.

Response:

As stated in number one above, impact to mine discharge quantity is considered minor. Thus no stream water quality impact due to subsidence is anticipated.

Alternative Sediment Control Measures to be implemented during reclamation were evaluated using the Universal Soil Loss Equation. These calculations indicate that the implementation of each sediment control measure substantially reduces the amount of sediment erosion from the upland reclaimed areas (page 7-29 and Appendix 7-15).

7. Change or, justify the statement, "no alteration to perennial streamflow is expected".

Response:

No material damage to the stream channel is anticipated. Stream volume will, however, increase due to mine water discharge (page 7-31).

8. Specifically address the potential impacts identified by the U.S.G.S. report 90-40-84. Include impacts to aquifer recharge and potential changes in hydraulic conductivities.

Response:

1. The chemical composition of groundwater that flows into the mined area.

Subsidence would increase the surface area available in the mine for dissolution of the chemical constituents in the fractured rock and ionic concentrations could be increased. This impact was evaluated and considered minor due to lack of water available for dissolution, decreasing concentrations as dissolution progresses, and lack of evidence that this impact has affected water quality in subsided areas (page 7-30).

2. The quantity and quality of flow in nearby streams to which mine water is discharged.

Mine water discharge presently increases streamflow volume by 1000 gpm. Subsidence could contribute to increased streamflow if the subsidence cracks do not become blocked by swelling clays. After mining ceases, the mine will be sealed and no discharges will occur. It is expected that streamflow volumes will return to pre-mining volumes (page 7-31).

As stated in number one above, impact to mine discharge water quality is considered minor. Thus no stream water quality impact due to subsidence is anticipated.

3. The direction and quality of surface water runoff above underground mining areas due to tension cracks.

The potential for diversion of ephemeral streams and the impact thereof is discussed on page 7-31a. Potential impacts are interception of ephemeral stream channels by subsidence cracks and retention of runoff due to broad depressions created by subsidence. These impacts are considered to be minimal due to the nature of ephemeral streamflow which promotes the healing of these surface cracks and the filling of the depressions and due to the presence of bentonitic materials which are known to seal fractures.

The impacts to surface water quality due to tension cracks is discussed on pages 7-29 and 7-29a. Increased sediment load will be minor and short-lived and increased TDS concentrations will be small due to the small amounts of surface water available to be diverted into the groundwater.

4. The quantity of water recharging aquifers overlying a mined area (hydraulic conductivity).

Thiros and Cordy (1991) state that subsidence fractures reaching the surface can increase recharge locally if these fractures do not become blocked with bentonitic materials (page 7-31).

5. The quantity of groundwater moving vertically between aquifer layers.

The quantity of groundwater moving vertically was assumed to be equal to discharge (page 7-26b, first paragraph) and could increase vertical flow (hydraulic conductivity) unless swelling clays cause flow to decrease or cease (page 7-31 and 7-31a).

9. Address the hydraulic properties of the sealed subsidence cracks.

Response:

Thiros and Cordy stated that where fractures encounter mudstones containing bentonitic materials, the fractures can become sealed through the swelling of the clays and vertical flow could cease. Fractures that remain open or fill with

permeable material would locally increase the hydraulic conductivity of the strata (page 7-31).

R645-301-731. General Requirements:

Deficiencies:

1. The Operator will provide a sampling and de-watering plan for the materials removed from the sediment pond.

Response:

The sampling and de-watering plan for materials removed from the sediment pond is given Section 7.3.1.

R645-301-731.200. Water Monitoring:

Deficiencies:

1. The Applicant has made changes to the water monitoring plan within the renewal application. Approval of this revised monitoring plan is not recommended until additional information is submitted. I suggest the Operator set up a meeting to further discuss the monitoring requirements if the information requested is not clear. The Operator must continue to monitor according to the previously approved monitoring plan until approval is granted.

The Applicant must complete the following items:

1. Provide a map and a table summarizing present and past monitoring points and, identify periods of monitoring for each monitoring point.

Response:

Plate 7-3 shows monitoring points. Tables 7-2, 7-3 and 7-4 show monitoring.

2. Continue to monitor under the previously approved monitoring plan until approval for a monitoring plan amendment is granted by the Division.

Response:

MINING OF THE NORTH FORK OF QUITCHUBAN WITHIN THE
ETC.

Applicant will comply.

3. Submit a monitoring plan amendment which;

Point SUFCO-007 (Plate 7-3) is located near the plant.

- a. Justifies the proposed changes in Water monitoring parameters for reclamation and operational parameters based on the PHC, baseline and operational data, construction periods, and requirements for bond release.

Response:

SUFCO will continue as in item No. 2.

- b. Provides sampling for Boron and Selenium in the waste rock site water monitoring plan.

Response:

SUFCO has started monitoring for B, and Se.

- c. Briefly describes how the monitoring plan addresses each "potential" hydrologic impact and how the data will be used to determine impact/no impact.

Response:

SUFCO will continue to monitor in accordance with item No. 2.

- d. Provides a method for in mine sampling that accounts for significant mine water inflows, quantity and quality changes.

Response:

In place with UNPDES Point 003.

- e. Provides a monitoring plan that can identify the potential impacts of quantity and quality of water due to

mining on the North Fork of Quitchupah within the permit area.

Response: Interim sediment control measures to be used during construction are discussed in Section 7.6.3.2.

Point SUFCO-007 (Plate 7-3) is located near the lease boundary on the North Fork of Quitchupah and has been serving as a reference point for upstream water quality for a number of years. Mine discharge water is added at SUFCO-021. Point 042 monitors quality and quantity of combined flow of the North Fork and mine discharge.

R645-301-760. Reclamation, General Requirements:

Deficiencies:

1. Provide for complete fill of culverts proposed to be retained rather than removed. Provide the location on the reclamation map and include cover requirements and details of the fill process as required to meet engineering backfilling standards and prevent piping.

Response:

SUFCO will remove all culverts in the permit area during final reclamation.

2. Justify why the Sediment Pond can not be retained during reclamation.

Response:

The need for removal of the sedimentation pond is discussed in Section 7.6.3.2.

3. Describe how the Operator will minimize sediment movement off site during construction activities.

Response:

Interim sediment control measures to be used during construction are discussed in Section 5.40.

AGENCY LETTER
APRIL 24, 1992

R645-301-765. Permanent Casing and Sealing of Wells:

Deficiencies:

1. The Permittee shall describe the method used to seal the abandoned boreholes. If they have not been sealed, the Permittee shall prepare a plan and commit to a schedule to seal them or shall demonstrate that they are pre-SMCRA boreholes and are not required to be sealed.

Response:

The applicant has a number of bore holes open that are serving as piezometric wells. Four of these wells have the casing broken (US-81-1, US-81-2, 89-18-1W and 89-20-20) or other problems and have not been useable as piezometers. The need for these wells will be evaluated. If they cannot be salvaged, they will be plugged with concrete from TD to surface.

MANTI LASAL FOREST
DEFICIENCY LETTER
APRIL 24, 1992

SOUTHERN UTAH FUEL COMPANY
RESPONSE

Item 1. 4 East Fan Portal. This fan portal was approved previously in the existing M&RP. The text of the M&RP has been revised to reflect this previous approval for clarification.

Item 2. Backfilling under streams. The text has been revised to reflect SUFCo's commitment to use the best economically feasible technology to assure stream cross unders are supported upon abandonment of that area of the mine.

Item 3. Longwall panels outside the escarpment. This issue has recently been addressed by the Forest Service and the Division and has been approved.

Item 4. Vegetative monitoring. The text of the M&RP has been revised to include SUFCo's practice of monitoring the vegetation with color infrared air photos at least every 5 years.

Item 5. Water level in aquifer. The Castlegate Sandstone has very little soil cover in many areas to encourage infiltration of surface water. Monitoring wells near the outcrop have been consistently dry.

Item 6. Revegetation standard. The text of the M&RP has been revised to reflect the revegetation standard as set forth in the applicable regulations.

Item 7. Address corrections. The addresses have been corrected in the revised M&RP text.

Item 8. Address corrections. The addresses have been corrected in the revised M&RP text.

Item 9. Text change. The text has been revised to include "southern" as requested.

Item 10. Sage grouse. The text has been revised to include the sage grouse as a high interest species.

Item 11. Lynx status. The current status of the Lynx has been added.

Coastal States Energy Company
Southern Utah Fuel Company

WATER QUALITY
Manti LaSal Letter
DEFICIENCY RESPONSE
APRIL 14, 1992

Item 12. Quitchupah Lease vegetation data. The applicant believes the vegetation data included in Chapter 4 covers all lease areas for the SUFCo Mine.

Item 13. SHPO letter. The reference to the concurrence letter has been deleted.

Item 14. Management goals update. The management goals have been updated in the text of the M&RP for both the Fishlake and Manti LaSal forests.

Item 15. Perennial stream. The text of the M&RP has been revised to note that only those areas where surface disturbance will occur near a perennial stream will be marked; such as, the Quitchupah Portal and the leach field in Convulsion Canyon.

Item 16. Appendix 1-1. The Hawk's Nest Mine stipulations included in this appendix are part of an OSM letter.

Items 17-25. These items all deal with changes in appendices that are consultant reports. SUFCo does not believe it should make changes to consultant reports. The reports accurately reflected the conditions when they were made, however the conditions may have change in some cases (Item 21).

Item 26. 1990 Subsidence Report Maps. The maps were not included with the subsidence report because they are updated annually. The updated maps and report are given to the Division as part of the annual report.

Item 27. Appendix 7-2. The Hydrometrics report included as Appendix 7-2 predates the acquisition of the Quitchupah Lease by SUFCo. Hydrologic information on all of the leases operated by the SUFCo Mine is included as part of Chapter 7.

**WATER RIGHTS
DEFICIENCY LETTER
APRIL 14, 1992**

**SOUTHERN UTAH FUEL COMPANY
RESPONSE**

Item 1. Wildlife habitat enhancement. The text of the M&RP all ready indicates that any developments to water sources will be coordinated with the regulatory authorities.

Item 2. Supplemental irrigation. The applicant will file additional paper work with the State Engineers Office if supplemental irrigation is needed during final reclamation.

Item 3. Wildlife guzzler. The applicant did not construct and does not own the wildlife guzzler in the NE4NE4, Section 28, T21S, R5E, SLB&M.

Item 4. Sedimentation ponds. The applicant has received approval from the State Engineers Office on the two mine site sediment ponds in question.

Item 5. Coordination of mitigation measures. The applicant will coordinate any water flow related mitigation measures with the Division and the State Engineers Office.

C. INDEX OF UPDATES
D. PAGE 6-11 and 6-12

I. CHAPTER 1 VII. CHAPTER 7

- A. PAGE 1-9 A. PAGE 7-vi
- B. PAGE 1-11 B. PAGE 7-viii
- C. PAGE 7-6 through 7-7a

II. CHAPTER 2

- A. PAGE 2-2
- B. PAGE 2-9 through 2-14
- C. PAGE 2-17
- D. PAGE 2-19 and 2-20
- E. PLATE 2-1

III. CHAPTER 3

- A. PAGE 3-7a
- B. PAGE 3-20
- C. PAGE 3-27
- D. PAGE 3-29 through 3-31
- E. PAGE 3-34
- F. PAGE 3-36 through 3-41
- G. PAGE 3-44 through 3-46
- H. PLATE 3-1

IV. CHAPTER 4

- A. PAGE 4-8 through 4-10c
- B. PAGE 4-15

V. CHAPTER 5

- A. PAGE 5-2 through 5-8
- B. PAGE 5-13 through 5-14a
- C. PAGE 5-17 and 5-17a
- D. PAGE 5-20 through 5-21a
- E. PAGE 5-29 through 5-30a
- F. PAGE 5-32
- G. PAGE 5-37 through 5-39
- H. PAGE 5-42 and 5-43
- I. PAGE 5-45 through 5-49
- J. PAGE 5-52 through 5-54
- K. PAGE 5-60 and 5-60a
- L. PAGE 5-64 through 5-70a
- M. PLATE 5-2b
- N. PLATE 5-3
- O. PLATE 5-10

VI. CHAPTER 6

- A. PAGE 6-2
- B. PAGE 6-4 and 6-4a

- C. PAGE 6-7 and 6-8
- D. PAGE 6-11^D and 6-12^D - REDELEGATION CALCULATION (3 Pages)

VII. CHAPTER 7^{IV}. APPENDIX 7-2, VOL. 2

- A. PAGE 7-vi^A. PAGE 1, APPENDIX H-A
- B. PAGE 7-viii^B PLATE H-1
- C. PAGE 7-6^C through 7-7a^C PLATE H-11
- D. PAGE 7-13 through 7-15
- E. PAGE 7-26
- F. PAGE 7-28 through 7-33a
- G. PAGE 7-35 through 7-36
- H. PAGE 7-39 and 7-39a
- I. PAGE 7-41
- J. PAGE 7-42a and 7-43
- K. PAGE 7-68 through 7-70 (Table 7-9)
- L. PAGE 7-82 through 7-84a
- M. PLATE 7-1

VIII. CHAPTER 8 - NO UPDATES

IX. CHAPTER 9

- A. PAGE 9-1

X. ROCK WASTE, VOL. 3

- A. PAGE 3-1 and 3-1a
- B. PAGE 3-3 and 3-3a
- C. PAGE 3-11
- D. PAGE 4-3 and 4-4
- E. PAGE 4-13 through 4-15

XI. APPENDIX 2-2, VOL. 4

- A. PAGE 47
- B. PAGE 53 through 57
- C. PAGE 59
- D. PAGE 70 through 72
- E. PAGE 75 through 77
- F. PAGE 81 through 82
- G. PAGE 84 through 85
- H. PAGE 92 through 94

XII. APPENDIX 5-2, VOL. 6

- A. PAGE 5-2-10

XIII. APPENDIX 5-9, VOL. 6

- A. JULY 29th Letter
- B. JULY 13th Letter
- C. BOND ESTIMATE (8 Pages)

D. FINAL RECLAMATION CALCULATION (3 Pages)

XIV. APPENDIX 7-2, VOL. 9

- A. PAGE 1, APPENDIX H-A
- B. PLATE H-I
- C. PLATE H-II
- D. PLATE H-III

XV. APPENDIX 7-10, VOL. 10

- A. PAGE 3-1

XVI. APPENDIX 7-12, VOL. 10

- A. PAGES 1 through 33

XVII. APPENDIX 7-15, VOL. 10

- A. PAGES 7-15-1 through 7-15-5
- B. MEAN ANNUAL ISO-ERRODENT VALUES (3 Pages)
- C. FIGURE 5.11
- D. SOIL ERODIBILITY INDEX MAP
- E. PLATE 7-15-1

WKS:jad



Coastal
The Energy People

RECEIVED

DEC 31 1991

DIVISION OF
OIL GAS & MINING

December 30, 1991

Dr. Dianne Nielson, Director
Division of Oil Gas & Mining
335 West North Temple
3 Triad Center, Suite 350
Salt Lake City, UT 84180-1203

Dear Dr. Nielson:

Re: Five-Year Permit Renewal Review, Southern Utah Fuel Company's
Convulsion Canyon Mine

Submitted herewith are fourteen (14) copies of the Southern Utah Fuel Company Mining and Reclamation Plan renewal application. This response meets the schedule outlined by the Division. The material presented in this Mining and Reclamation Plan renewal represents document updates and pertains to mining activities during the next five years.

Should a review of this submittal identify the need for additional information or for clarification of any items, please notify us immediately.

We appreciate the assistance and cooperation of your staff in the preparation of this renewal application.

Sincerely yours,


Vernal J. Mortensen
Senior Vice President

VJM/ak/1815

We, the undersigned, hereby certify that the material and information contained in this Application are complete and are correct to the best of our knowledge and belief.

Coastal States Energy Company

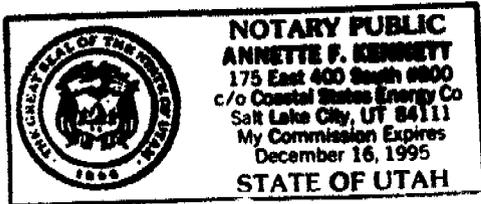
By: *Kenneth Mortensen*
Senior Vice President

Southern Utah Fuel Company

By: *Ken Day*
Vice President and General Manager

State of Utah
County of Salt Lake

Subscribed and sworn to and before me this 7th day
of January, 1992



Annette F. Kennett
Notary Public for the State of Utah

Residing at 2503 Jean Dr























