

MINING PLAN DECISION DOCUMENT

CO-OP Mining Company

Bear Canyon Mine

Federal Leases and U-020668 and U-38727

Emery County, Utah



U.S. Department of the Interior
Office of Surface Mining Reclamation and Enforcement

Prepared
January 2002

CONTENTS

Bear Canyon Mine Federal Leases U-020668 and U-38727 Mining Plan Decision Document

1. Memoranda
 - a. Memorandum from the Acting Director, Office of Surface Mining, to the Acting Assistant Secretary, Land and Minerals Management
 - b. Memorandum from the Regional Director, Western Regional Coordinating Center, to the Acting Director, Office of Surface Mining
2. Location Maps
3. Chronology
4. National Environmental Policy Act Compliance Documents
5. Letters of Concurrence and Consultation:
 - a. Bureau of Land Management
 - b. U.S. Fish and Wildlife Service
 - c. State Historic Preservation Office
 - d. U.S. Forest Service
6. Mining Plan Approval Document
7. State Findings and Decision

Utah Division of Oil, Gas, and Mining (DOGM) Permit for
Federal Leases U-020668 and U-38727, Bear Canyon Mine,
Co-Op Mining Company
8. Notifications



IN REPLY REFER TO:

United States Department of the Interior

OFFICE OF SURFACE MINING

Reclamation and Enforcement

1999 Broadway, Suite 3320

Denver, Colorado 80202-5733

UT-0053

JAN 15 2002

Memorandum

To: Acting Director
Office of Surface Mining

From: Regional Director *SD*
Western Regional Coordinating Center

Subject: Recommendation for Approval Without Special Conditions
of the Mining Plan Modification for Federal Leases U-
020668 and U-38727 at Co-Op Mining Company's Bear
Canyon Mine located in Emery County, Utah

I. Recommendation

I recommend approval without special conditions of a mining plan modification for Federal leases U-020668 and U-38727 at the Bear Canyon Mine. This is a mining plan modification for an underground coal mine being permitted under the Federal lands program, the approved Utah State program, and the cooperative agreement. This mining plan approval supplements all previous mining plan approvals for the Bear Canyon Mine.

My recommendation to approve the mining plan modification is based on:

- (1) Co-Op Mining Company's complete permit application package (PAP),
- (2) compliance with the National Environmental Policy Act of 1969,
- (3) documentation assuring compliance with applicable requirements of other Federal laws, regulations, and executive orders,
- (4) comments and recommendations or concurrence of other Federal agencies, and the public,
- (5) the findings and recommendations of the Bureau of Land Management regarding the resource recovery and protection plan, the Federal lease requirements, and the Mineral Leasing Act, and
- (6) the findings and recommendations of the Utah Division of Oil, Gas, and Mining (DOG M) regarding the PAP and the Utah State program.

If you concur with this recommendation, please sign the attached memorandum to the Acting Assistant Secretary, Land and Minerals Management.

II. Background

The Bear Canyon underground coal mine is located in Emery County, Utah. The mine has been in operation since 1938. The life of the currently approved mining operations within the approved permit area is estimated to be 3 years. The mining operations use room-and-pillar mining methods. The average annual production rate is about 1.0 million tons from the Blind Canyon and the Tank coal seams, but the maximum production rate could reach the approved 1.5 million tons per year.

The mining plan for Federal lease U-024316 at the Bear Canyon Mine was initially approved on March 18, 1998. Since that approval no subsequent mining plan modifications were approved.

The State's permit area covers 1377.75 acres.

About 29.1 surface acres are disturbed within the State's permit area.

A total of 320 acres of Federal coal exist in the currently approved mining plan area.

No Federal coal exists in the currently approved mining plan area because it has been mined out.

A total of 320 acres of Federal surface land exist in the currently approved mining plan area.

The postmining land use within the currently approved mining plan area is mining, grazing, and critical environmental habitat.

III. The Proposed Action

This mining plan action consists of a mining plan modification for Federal leases U-020668 and U-38727. Specifically, the mining plan action proposed by Co-Op consists of mining 1367 acres in Federal Leases U-020668 and U-38727 using room and pillar with continuous miner methods.

The following is the legal description for Federal coal lease U-020668:

Township 16 South, Range 7 East, SLM Utah.
Section 25, SE1/4NE1/4, NE1/4SE1/4

Township 16 South, Range 8 East, SLM, Utah.
Section 30, Lots 1-4, W1/2NE1/4, NW1/4SE1/4
Section 31, NE1/4NW1/4, NW1/4NE1/4

The legal description Federal Coal Lease U-38727 is as follows:

Township 16 South, Range 7 East SLM, Utah.
Section 24, SE1/4NE1/4, E1/2SE1/4
Section 25, N1/2NE1/4, SW1/4NE1/4, SW1/4NW1/4, NW1/4SW1/4, W1/2SE1/4, SE1/4SE1/4.

Township 16 South, Range 8 East, SLM, Utah.
Section 19, Lots 2, 3, and 4, SE1/4NW1/4, E1/2SW1/4, SW1/4SE1/4.

The life of the mining operations is expected to continue for 10 years under Utah Permit No. C/015/025 and this proposed mining plan modification.

The proposed average annual production rate would increase by .5 million tons and the maximum production rate would reach to 1.5 million tons per year.

The approved State permit area would increase by 1958 acres from its present 1378 acres to a new total of 3336 acres.

Surface disturbance within the approved State permit area will increase by 7.3 acres to a total of 36.4 acres.

Approval of this mining plan modification will increase the number of acres of Federal coal in the approved mining plan area by 1367 acres to a new total of 1687 as shown on the map included with this decision document.

Approval of the proposed mining plan modification would add about 5.9 million tons of recoverable coal to the approved mining plan area.

About 1290 additional acres of Federal surface lands will be included in the mining plan area as a result of this action.

The post mining land use within the permit and mining plan area will not change.

The DOGM has attached 3 new permit stipulations to this permitting action and has carried-over 17 other stipulations

that continue in force. These stipulations are described in the State Decision Document section of this decision document.

Co-Op Mining Company's proposal does not require any special conditions to comply with Federal laws.

IV. Review Process

The DOGM reviewed the PAP under the Utah State program, the Federal lands program (30 CFR Chapter VII, Subchapter D), and the Utah cooperative agreement (30 CFR § 944.30). Pursuant to the Utah State program and the cooperative agreement, DOGM approved the permit revision on July 3, 2001.

The Office of Surface Mining Reclamation and Enforcement (OSM) has consulted with other Federal agencies for compliance with the requirements of applicable Federal laws. Their comments and/or concurrences are included in the decision document.

The Bureau of Land Management (BLM) reviewed the resource recovery and protection plan for compliance with the Mineral Leasing Act of 1920, as amended, and 43 CFR Part 3480. The BLM recommended approval of the mining plan modification in a memorandum dated December 20, 2001.

In accordance with the September 24, 1996, Biological Opinion and Conference Report from the U.S. Fish and Wildlife Service (USFWS) to OSM, the Division of Oil, Gas, and Mining has sought comments from the USFWS on threatened and endangered species and has incorporated the necessary reporting requirements into the permit application package and the State's findings. The USFWS and the Division of Oil, Gas, and Mining did not develop or recommend any species-specific protective measures.

The State Historic Preservation Officer concurred with the proposed mining plan modification in a letter dated December 20, 1999.

The U.S. Forest Service and the Bureau of Land Management concurred with the proposed mining plan modification with respect to Federal surface lands within the proposed mining plan area in a letters dated May 21, 2001, and December 20, 2001.

The proposed area of mining plan approval is not unsuitable for mining according to section 522(b) of SMCRA.

The mining plan modification area is located on Federal lands west of the 100th meridian within the boundaries of the Manti-LaSal National Forest. However, the Secretary of Agriculture

finds that these lands do not have significant forest cover and that this surface coal mining operation complies with the Multiple-Use Sustained Yield Act of 1960 (16 U.S.C. §§ 528-531), the Federal Coal Leasing Amendments Act of 1976 (Pub. L. 94-377, 30 U.S.C. 201 et seq.), the National Forest Management Act of 1976 (90 Stat. 2949), and the provisions of SMCRA. Based on OSM's analysis and on the concurrence of the USDA Forest Service in its letter dated May 21, 2001, the Bear Canyon Mine will not be incompatible with significant recreational, timber, economic, or other values of the Manti-LaSal National Forest.

I have determined that approval of this mining plan modification will not have a significant impact on the quality of the human environment. The environmental analysis prepared by USFS for the Environmental Assessment for the Readjustment of Federal Coal Lease U-020668 and Environmental assessment for the Readjustment of Federal Coal Lease U-38727 and other environmental documents noted in the Finding of No Significant Impact (FONSI), describe the impacts that may result from approval of this mining plan modification and its alternatives. The FONSI and supporting environmental analyses are included in this decision document.

OSM's review of the proposed action did not identify any issues that required resolution via the addition of special conditions to the mining plan approval.

Publication of four consecutive weekly notices in the Emery County Progress and the Salt Lake Tribune newspaper notified the public of the availability of the administratively complete PAP for review. The last publication date was December 28, 1999.

The DOGM determined that a bond for \$1,814,000 is adequate for the Utah Permit No. C/015/025 associated with this mining plan modification. The bond is payable to the State and the United States.

A chronology of events related to the processing of the PAP and this mining plan decision is included with the decision document. The information in the PAP, and other information identified in the decision document, has been reviewed by DOGM staff in coordination with the OSM Federal Lands State Coordinator.

OSM's administrative record of this mining plan modification consists of the following:

- the PAP submitted by and updated through July 3, 2001,

-DOGM's Permit for Federal Leases U-020668 and U-38727, Bear Canyon Mine, Co-Op Mining Company provided to OSM under the cooperative agreement,

-the Environmental Assessment entitled Environmental Assessment for the Readjustment of Federal Coal Lease U-020668 and Environmental assessment for the Readjustment of Federal Coal Lease U-30727,

-the Supplemental Environmental Assessment prepared by OSM and the FONSI of the proposed action and alternatives prepared by OSM,

-other documents prepared by DOGM, and

-correspondence developed during the review of the PAP.

Attachments



United States Department of the Interior

OFFICE OF SURFACE MINING RECLAMATION AND ENFORCEMENT

Washington, D.C. 20240

JAN 31 2002

MEMORANDUM

To: Acting Assistant Secretary
Land and Minerals Management

From: *Glenda Owens*
Glenda Owens, Acting Director
Office of Surface Mining

Subject: Recommendation for Approval of the Mining Plan Modification for
Federal Leases U-020668 and U-38727 at Co-Op Mining Company's Bear
Canyon Mine located in Emery County, Utah

I recommend approval without special conditions of this mining plan modification. This mining plan approval supplements all previous mining plan approvals for the Bear Canyon Mine. My recommendation is based on:

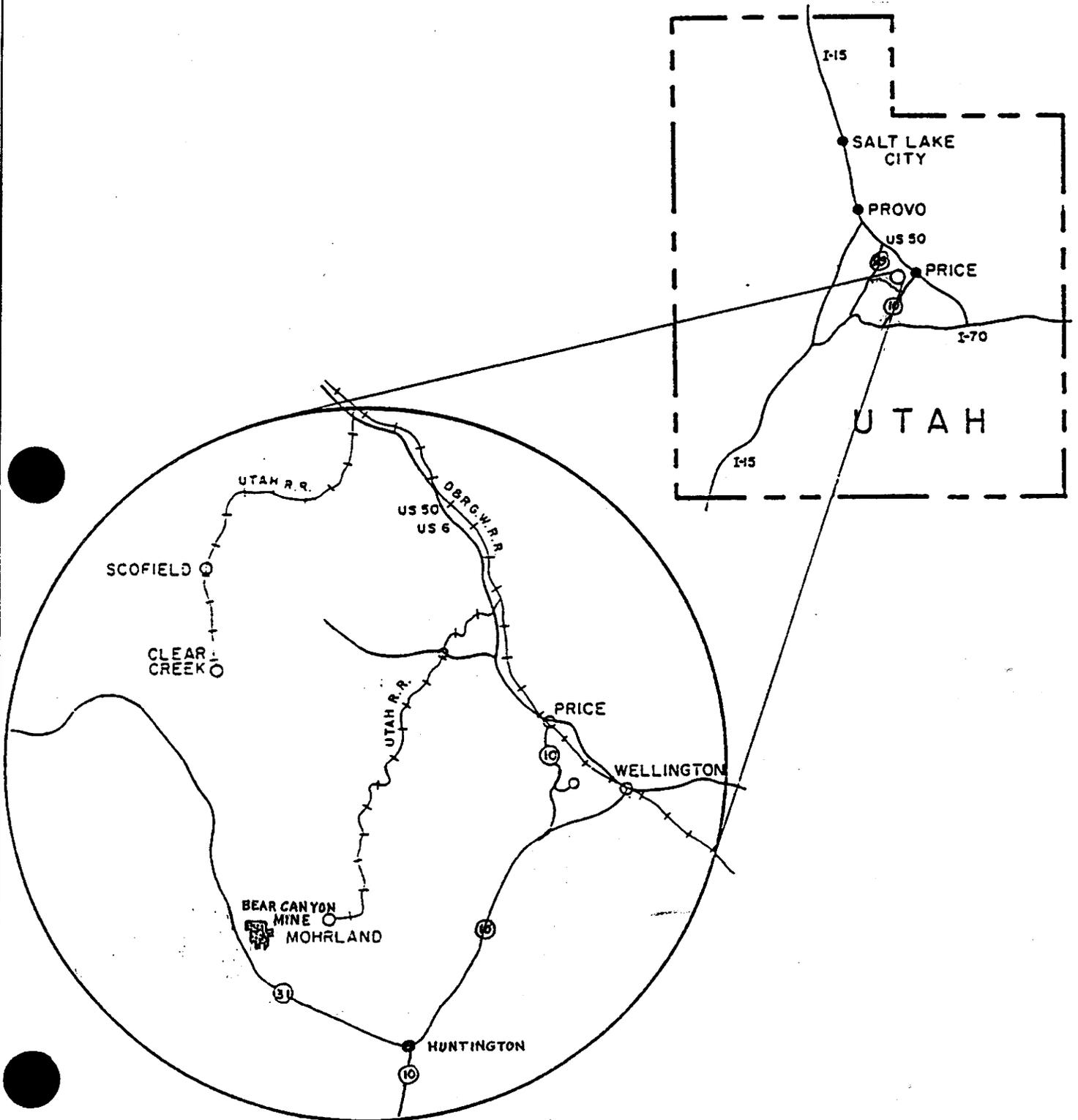
- (1) Co-Op Mining Company's complete permit application package (PAP),
- (2) compliance with the National Environmental Policy Act of 1969,
- (3) documentation assuring compliance with applicable requirements of other Federal laws, regulations, and executive orders,
- (4) comments and recommendations or concurrence of other Federal agencies, and the public,
- (5) the findings and recommendations of the Bureau of Land Management regarding the resource recovery and protection plan, the Federal lease requirements, and the Mineral Leasing Act, and
- (6) the findings and recommendations of the Utah Division of Oil, Gas, and Mining regarding the PAP and the Utah State program.

The Secretary may approve a Mining Plan for Federal leases under 30 U.S.C. 207(c) and 1273(c). In accordance with 30 CFR Chapter VII, Subchapter D, I find that the proposed mining plan modification will be in compliance with all applicable laws and regulations. The decision document for the proposed mining plan action is attached.

Attachment

LOCATION MAP

Bear Canyon Mine



CHRONOLOGY

Bear Canyon Mine
Federal Leases U-020668 and U-38727
Mining Plan Decision Document

<u>DATE</u>	<u>EVENT</u>
December 18, 1998	Co-Op Mining Company submitted the permit application package (PAP) under the approved Utah State Program to the Utah Division of Oil, Gas, and Mining (DOG M) for a permit revision for the Bear Canyon Mine.
November 3, 1999	DOG M determined that the PAP was administratively complete for public review and comment.
December 8, 1999	The Office of Surface Mining Reclamation and Enforcement (OSM) received the PAP.
December 20, 1999	The State Historic Preservation Office provided its comments on the mining plan.
December 28, 1999	Published in the Emery County Progress and the Salt Lake Tribune the fourth consecutive weekly notice that its complete PAP was filed with DOGM.
September 19, 2000	The U.S. Fish and Wildlife Service provided its final consultation comments on the mining plan.
May 21, 2001	The Federal land management agency (U.S. Forest Service) provided its final concurrence with the approval of the mining plan.
July 3, 2001	DOG M approved the PAP.

DATE

EVENT

December 20, 2001

The Bureau of Land Management provided its findings and recommendations on the approval of the mining plan and gave its concurrence as the Federal land management agency.

January 15, 2002

OSM's Western Regional Coordinating Center recommended to the Director, OSM, that the mining plan action be approved.

U.S. DEPARTMENT OF THE INTERIOR
OFFICE OF SURFACE MINING RECLAMATION AND ENFORCEMENT
FINDING OF NO SIGNIFICANT IMPACT
FOR
Bear Canyon Mine
Federal Coal Leases U-020668 and U-38727
Mining Plan Decision Document

A. Introduction

Co-Op Mining Company submitted a permit application package (PAP) for a permit revision for the Bear Canyon Mine to the Division of Oil, Gas, and Mining (DOGM). The PAP proposed extending underground mining operations into 1366.71 acres of Federal leases U-020668 and U-38727. Under the Mineral Leasing Act of 1920, the Assistant Secretary, Land and Minerals Management, must approve, approve with conditions, or disapprove the mining plan modification for Federal leases U-020668 and U-38727. Pursuant to 30 CFR Part 746, the Office of Surface Mining (OSM) is recommending approval of the mining plan action without special conditions.

B. Statement of Environmental Significance of the Proposed Action

The undersigned person has determined that the above-named proposed action would not have a significant impact on the quality of the human environment under section 102(2)(C) of the National Environmental Policy Act of 1969 (NEPA), 42 U.S.C. 4332(2)(C), and therefore, an Environmental Impact Statement is not required.

C. Reasons

This finding of no significant impact is based on the attached Office of Surface Mining Reclamation and Enforcement (OSM) supplemental environmental assessment and the environmental analysis prepared by USFS for the Environmental Assessment for the Readjustment of Federal Coal Lease U-020668 and Environmental assessment for the Readjustment of Federal Coal Lease U-38727, dated August 31, 1987, which identify and discuss the environmental impacts of the proposed action and which provide sufficient evidence and analysis for this finding of no significant impact.

Ranvir Singh *Dec. 28, 2001*
Chief, Northwest Branch Date

Attachment

**U.S. DEPARTMENT OF THE INTERIOR
OFFICE OF SURFACE MINING RECLAMATION AND ENFORCEMENT**

**SUPPLEMENTAL ENVIRONMENTAL ASSESSMENT
For
The Bear Canyon Mine, Federal Leases U-020668 and U-38727
Mining Plan Decision Document**

1. Description of the Proposed Action.

The proposed action is a decision by the Assistant Secretary to approve, approve with conditions, or disapprove a Mineral Leasing Act (MLA) mining plan. The CO-OP Mining Company submitted a permit application package (PAP) for a permit revision for the Bear Canyon Mine to the Utah Division of Oil, Gas, and Mining (DOGM). The PAP proposes extending underground mining operations into 1366.71 acres of Federal leases U-020668 and U-38727. The Bear Canyon underground coal mine is located in Emery County, Utah. The mine has been in operation since 1938. About 29.1 surface acres within the State's permit area have been affected by surface disturbance to date. The mining operations utilize room and pillar with continuous miner methods and are conducted at an average production rate of about 1 million tons per year. Mining is currently planned to continue for 9 years.

Pursuant to 30 CFR Part 746, the Office of Surface Mining Reclamation and Enforcement (OSM) is recommending that the Assistant Secretary approve the mining plan without special conditions.

2. Need for the Proposed Action.

Under the Mineral Leasing Act of 1920, the Secretary, acting through the Assistant Secretary, Land and Minerals Management must approve, approve with conditions, or disapprove the mining plan action for Federal leases U-020668 and U-38727.

3. Alternatives Considered.

The alternatives considered were:

Approve, Approve with conditions, or Disapprove. The No Action alternative was not considered a viable alternative because of the requirements of existing law.

4. Affected Environment.

This environmental assessment supplements the environmental assessment prepared by the U.S.

Forest Service (USFS) for the readjustment of Federal coal Leases U-020668 and U-38727 dated August 31, 1987. The affected environment is described in these documents (attached). The legal description for Federal coal lease U-020668 is:

Township 16 South, Range 7 East, SLM Utah.
Section 25, SE1/4NE1/4, NE1/4SE1/4

Township 16 South, Range 8 East, SLM, Utah.
Section 30, Lots 1-4, W1/2NE1/4, NW1/4SE1/4
Section 31, NE1/4NW1/4, NW1/4NE1/4

The total acreage for Federal Coal Lease U-020668 is 626.32.

Federal Coal Lease U-38727 is legally described as follows:

Township 16 South, Range 7 East SLM, Utah.
Section 24, SE1/4NE1/4, E1/2SE1/4
Section 25, N1/2NE1/4, SW1/4NE1/4, SW1/4NW1/4, NW1/4SW1/4, W1/2SE1/4,
SE1/4SE1/4.

Township 16 South, Range 8 East, SLM, Utah.
Section 19, Lots 2, 3, and 4, SE1/4NW1/4, E1/2SW1/4, SW1/4SE1/4.

The total acreage for Federal Coal Lease U-38727 is 740.39.

5. Environmental Impacts of the Proposed Action and Alternatives.

The USFS environmental assessments identify and discuss the environmental impacts of leasing and mining the land and coal resources of Federal leases U-020668 and U-38727. OSM also reviewed the updated SMCRA findings (included) prepared by the DOGM for the proposed revision of the Bear Canyon Mine plan. OSM has determined that the combined documentation adequately describes the proposed environmental impacts of mining.

In addition, DOGM and OSM consulted with other Federal agencies for compliance with the requirements of applicable Federal laws. Those agencies include the BLM, USFS which prepared the environmental assessment, and the Fish and Wildlife Service which provided consultation and comments under Section 7 of the Endangered Species Act. Finally, the Utah Historic Preservation Office (SHPO) assessment and recommendations for protection of cultural resources was independently reviewed and concurred on by OSM.

6. Summary.

Baseline studies for natural resources within and surrounding the lease tracts were completed by BLM for leasing, and by the CO-OP for the PAP. Information from these studies was reviewed

and used to complete this supplemental environmental assessment. No adverse impacts to air, soils, land use /vegetation, water, wildlife or cultural resources were identified in the environmental assessment to lands in Township 16 South, Range 8 East, SLM, Utah Section 31, NE1/4NW1/4, NW1/4NE1/4 or to Township 16 South, Range 7 East SLM, Utah. Section 25, SW1/4NW1/4, NW1/4SW1/4. All effects of surface mining will be mitigated during the mining operation or upon reclamation of the land at the conclusion of mining.

Because mining of Federal coal reserves would not materially change the planned operations, there would be no major cumulative or indirect impacts under the alternative to approve the mining plan.

7. Agencies Contacted/consulted by OSM and DOGM.

1. BLM
2. USFS
3. U.S. Fish and Wildlife Service
4. SHPO

DECISION NOTICE
AND
FINDING OF NO SIGNIFICANT IMPACT
FOR THE READJUSTMENT OF
FEDERAL COAL LEASE U-38727

PRICE RANGER DISTRICT
MANTI-LASAL NATIONAL FOREST
EMERY COUNTY, UTAH

NOV 20 1986
DIVISION OF
OIL, GAS AND MINING

On March 19, 1986, the Forest Service received notification from the Bureau of Land Management that Federal Coal Lease U-38727 would be subject to readjustment of terms and conditions on May 1, 1988. This notification required conducting an environmental analysis of the proposed action pursuant to the National Environmental Policy Act of 1969. A Forest Service Interdisciplinary (ID) Team met on September 3, 1986 to evaluate the proposal.

Leasing and development will be under the authority of the following authorizing actions: The Mineral Leasing Act of February 25, 1920, as amended; the Federal Land Policy and Management Act (FLPMA) of 1976; the Surface Mining Control and Reclamation Act (SMCRA) of 1977; the Multiple Minerals Development Act of August 4, 1977; the National Environmental Policy Act (NEPA) of 1969; the Federal Coal Leasing Amendments Act of 1976, as amended; regulations: Title 43 CFR Group 3400, Group 2800; and Title 30 CFR Group 700; and the Manti-LaSal National Forest Land and Resource Management Plan (Forest Plan) and Final Environmental Impact Statement (FEIS), 1986.

An Environmental Assessment (EA) was prepared under the direction of the Manti-LaSal National Forest Supervisor. Based on the analysis presented in this EA, it is our decision to consent to approval of the proposed readjustment for that portion of the lease within the Forest, subject to the addition of stipulations in Appendix A of the EA. Alternative "B", as described in the EA, is a viable alternative under existing legislation and Forest Service policy, management decisions, and direction. The No Action Alternative was evaluated and determined not to be viable as it would allow continuation of the lease under terms inconsistent with the Forest Plan and FEIS.

This is not a major Federal action that would significantly affect the quality of the human environment; therefore, an Environmental Impact Statement is not needed. This determination was made considering the following factors:

1. No new surface disturbing operations or facilities are proposed at this time. If surface disturbing operations or facilities are proposed in the future, a site-specific environmental assessment will be prepared at that time. Additional stipulations may be specified as needed to protect the environment.
2. The identified impacts, including cumulative effects, can be effectively mitigated to an acceptable level.
3. No known prime or unique farmlands, wetlands, timber lands, or rangelands; floodplains; alluvial valley floors; paleontological or cultural resources; nor threatened, endangered, or sensitive floral or faunal species will be impacted by readjustment of this issue.

4. Readjustment of this lease is consistent with the directions and decisions of the Forest Plan and FEIS, dated November 5, 1986.

Based on this assessment and evaluation, Federal Coal Lease U-38727 should be readjusted by the Bureau of Land Management and shall include the stipulations listed in Appendix A of the EA. The decision is subject to administrative review (appeal) pursuant to 36 CFR 211.18, Secretary of Agriculture Appeal Regulation. A written notice of appeal must be filed with this office within 45 days of the date of this decision.

J. C. Buderer
for Regional Forester

8/31/87
Date

ENVIRONMENTAL ASSESSMENT
FOR THE READJUSTMENT OF
FEDERAL COAL LEASE U-38727

PRICE RANGER DISTRICT
MANTI-LASAL NATIONAL FOREST
EMERY COUNTY, UTAH

Responsible Official: J.S. Tixier
Regional Forester
Intermountain Region (R-4)
USDA - Forest Service
Federal Building
324 25th Street
Ogden, Utah 84401

For Further Information Contact: George Morris
Forest Supervisor
Manti-LaSal National Forest
599 West Price River Drive
Price, Utah 84501

or: Ira W. Hatch
District Ranger
Price Ranger District
599 West Price River Drive
Price, Utah 84501

Prepared by: Walter E. Nowak, Geologist

ENVIRONMENTAL ASSESSMENT
FOR THE READJUSTMENT OF
FEDERAL COAL LEASE U-38727

I. INTRODUCTION

A. Purpose and Need for Action

The Bureau of Land Management (BLM) notified the Forest Service on March 19, 1986 that Federal Coal Lease U-38727, currently leased to Nevada Electric Investment Company, would be subject to readjustment of terms on May 1, 1988. As the surface managing agency for most of this lease area, the Manti-LaSal National Forest is responsible for conducting an Environmental Assessment (EA) of the proposed action pursuant to the National Environmental Policy Act (NEPA) of 1969. Also, the 1984 Interagency Agreement between the BLM and the Forest Service for Mineral Leasing provides for joint scoping and preparation of a single EA and two-part decision document, if appropriate. On May 6, 1987, the Manti-LaSal National Forest formally solicited input for the subject lease from the Moab District BLM office. It was agreed that the Forest Service would prepare the EA for National Forest System lands involved in the lease and submit the Forest Service Decision Notice to BLM documenting the Forest Service consent decision. This EA will then address the proposed readjustment and identify management requirements for resource protection only for the 660.39 acres of Federal Coal Lease U-38727 that fall within the boundaries of the Manti-LaSal National Forest.

B. Authorizing Actions

Leasing and development will be under the authority of the following authorizing actions: The Mineral Leasing Act of February 25, 1920, as amended; the Federal Land Policy and Management Act (FLPMA) of 1976; the Surface Mining Control and Reclamation Act (SMCRA) of 1977; the Multiple Minerals Development Act of August 4, 1969; the Federal Coal Leasing Amendments Act of 1976, as amended; regulations: Title 43 CFR Group 3400, Group 2800; and Title 30 CFR Group 700; and the Manti-LaSal National Forest Land and Resource Management Plan (Forest Plan) and Final Environmental Impact Statement (FEIS), 1986.

C. Land Description

Federal Coal Lease U-38727 is located in Emery County, Utah, mostly within the Manti-LaSal National Forest, Price Ranger District. It lies near Huntington Canyon on the southern flank of Wild Horse Ridge, along the east-central rim of the Wasatch Plateau coal field (see Map 1). The lease is legally described as follows:

Township 16 South, Range 7 East, SLM, Utah.

Section 24, SE 1/4 NE 1/4, E 1/2 SE 1/4
Section 25, N 1/2 NE 1/4, SW 1/4 NE 1/4, SW 1/4 NW 1/4,
NW 1/4 SW 1/4, W 1/2 SE 1/4, SE 1/4 SE 1/4.

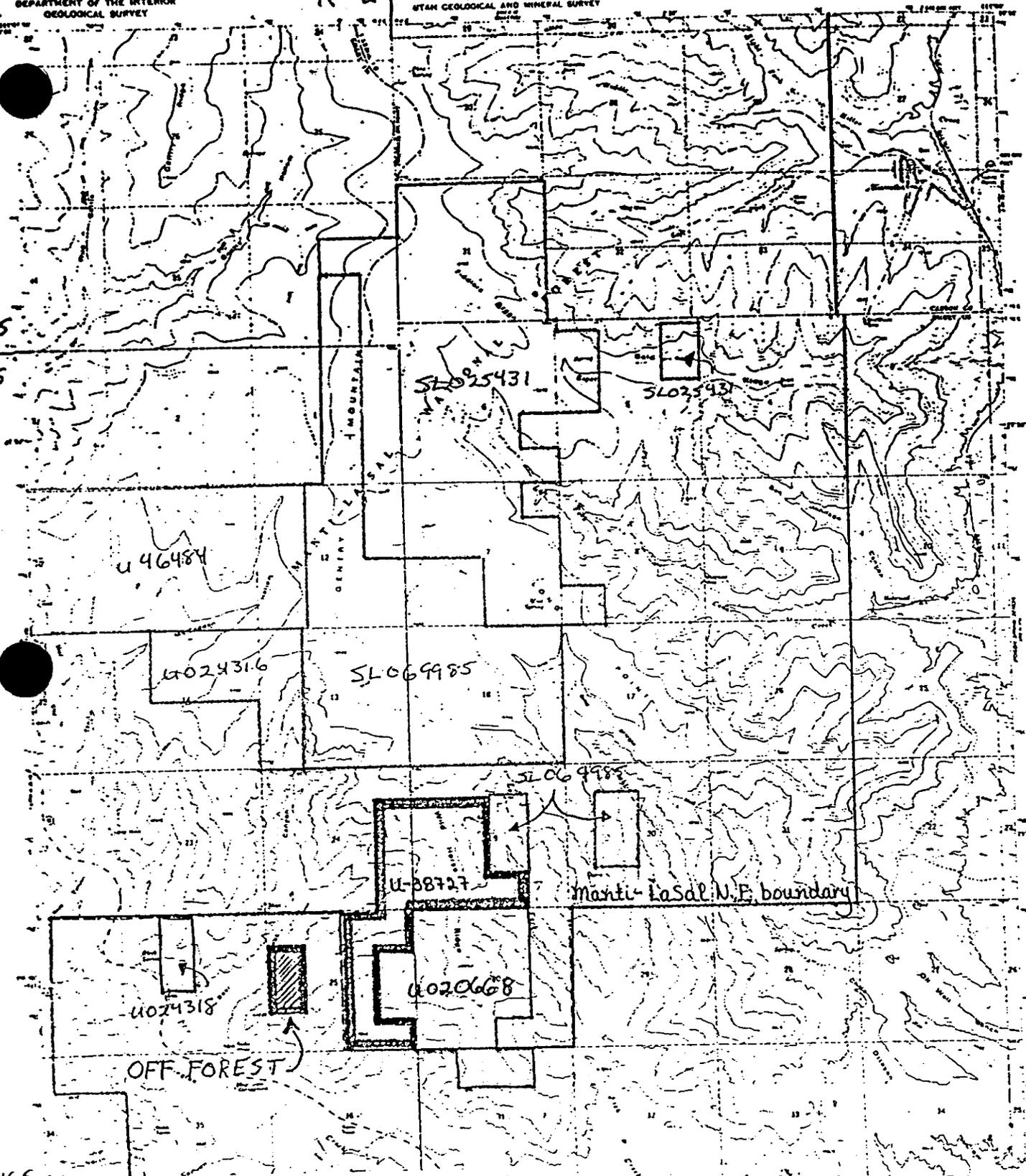
R 8 E

55
65



165
175

COAL LEASE
U-38727



LAND CLASSIFICATION
Cultivated Land
Forest
Pasture
Range
Barren
Water

MAP 1

HIAWATHA, UTAH
15 MINUTE SERIES
1974

X

Township 16 South, Range 8 East, SLM, Utah

Section 19, Lots 2, 3, and 4, SE 1/4 NW 1/4, E 1/2 SW 1/4,
SW 1/4 SE 1/4.

The SW 1/4 NW 1/4 and the NW 1/4 SW 1/4 contain 80 acres off Forest, and are privately owned with the coal being U.S. owned and managed by the BLM. The remainder of the lease lands contain 660.39 acres on Forest. The total lease acreage is 740.39 acres.

D. Background

The coal lands currently within lease U-38727 were originally contained in lease U-024318. Lease U-024318 was issued May 1, 1958 to Huntington Corporation who later assigned it, in its entirety, to Peabody Coal Company on June 3, 1971. On December 1, 1977, the BLM approved a partial assignment of part of the lease lands creating a new lease which the BLM assigned serial number U-38727. Thus, Peabody Coal Company retained 80 acres (off-Forest) with the original lease number and Nevada Electric Investment Company acquired 740.39 acres under the subject lease. On August 1, 1983, the lease was assigned by Nevada Electric to Beaver Creek Coal Company who considered development of the property. Beaver Creek conducted a helicopter assisted drilling program and filed the Wild Horse Ridge Mine Plan in 1983. Beaver Creek later decided not to pursue further development, withdrew their mine permit application, and assigned the lease back to Nevada Electric effective October 16, 1986.

On March 16, 1979, the Forest Service completed an environmental assessment/technical examination for readjustment of the subject lease (under the encompassing original lease U-024318). On May 22, 1980, the BLM attempted to readjust the lease terms, but Nevada Electric filed an objection on July 18, 1980. On June 9, 1983, the BLM formally waived its rights to readjust the lease.

E. Mine Development

Two off Forest mining scenarios have been developed for the lease and they are described below. The coal could also be extracted with on-lease shaft facilities, but this might prove to not be economically feasible.

In 1978, United States Fuel Company and Nevada Electric jointly submitted an "informal mining plan" to the U.S. Geological Survey. The plan called for the lease to be mined through the existing Mohrland Mine facilities in Cedar Creek Canyon. The Mohrland Mine is located on private land within the Manti-LaSal National Forest. This informal plan was never pursued by either U.S. Fuel or Nevada Electric.

On April 1, 1983, Beaver Creek Coal Company filed a permit application package with the Utah Division of Oil, Gas and Mining (DOGM) and the Office of Surface Mining (OSM) for their proposed Wild Horse Ridge Mine. The proposal included the subject lease and called for surface facilities off-lease on private land in Bear Canyon to

the west. An exploration road was constructed to the proposed mine site and the coal was faced up for testing. The only other work conducted to exploit the coal resources on the subject lease was the aforementioned drilling program. To date, no further development or exploration activities have been proposed.

F. Issues and Concerns

General public comments were solicited through local newspapers on October 10, 1986. Specific comments on the proposed action were solicited directly from the Emery County Planning and Zoning Commission, the Utah Division of Wildlife Resources and the Southern Utah Association of Governments. No comments or responses have been received to date; therefore, no public issues have been identified.

The Forest Service Interdisciplinary (ID) Team identified the following management concerns:

1. Surface disturbing activities and facilities could adversely affect area resources.
2. Underground mining and subsidence could adversely affect surface and ground water, soils, vegetation, and wildlife.

G. Negative Declaration

The ID Team determined that this action, after mitigation, would cause no impacts on the following: prime or unique rangelands, wetlands, timberlands, or farmlands; floodplains; known cultural or paleontological resources; alluvial valley floors; known Threatened, Endangered, or Sensitive plant or animal species.

II. DESCRIPTION OF ALTERNATIVES

A. No Action Alternative

Consideration of the "No Action" alternative is required by Section 1502.14 (d) of the NEPA, and by the Council of Environmental Quality guidelines as specified in the Federal Register on November 29, 1979. Under this alternative, the terms of the lease would not be changed.

Department of Interior Regulation 43 CFR 3451.1 (a) (1) Federal Coal Management Regulations require that all leases issued prior to August 4, 1976, be subject to readjustment at the end of the current 20-year period and at the end of each 10-year period (under which this lease qualifies), thereafter. The present lease terms do not minimize the impacts to the surface resources to an acceptable level pursuant to the Forest Plan, and new management requirements are needed.

B. Readjustment of Terms Alternative

Department of Interior Regulations 43 CFR 3400.3-1 pertaining to Coal Management make provision for the Surface Management Agency, the surface of which is under the jurisdiction of any Federal agency other than the Department of Interior, to consent to leasing and to

prescribe conditions to insure the use and protection of the lands. This lease contains lands the surface of which are managed by the United States Department of Agriculture, Forest Service, Manti-LaSal National Forest.

The stipulations contained in Appendix A pertain to the Lessee's responsibility for mining operations on the lease area on adjacent areas as may be specifically designated on National Forest System (NFS) lands.

III. AFFECTED ENVIRONMENT

The affected environment of the subject areas has been generally described in numerous environmental documents and resource reports prepared for coal leasing and development in this and surrounding areas. Two of these documents are listed for reference in Section VI, Selected Tiering and Reference Documents. There are several resources on the lease for which concern was identified. These resources are essentially unique to the proposal and are under consideration in this document.

A. Topography

The lease area is located on the southern end of Gentry Mountain and situated on the southern end of Wild Horse Ridge overlooking Huntington Canyon. This narrow ridge is carved by Bear Creek, Fish Creek, and two smaller canyons. This area characteristically has steep cliffs and deeply incised drainages. Slopes on canyon walls range from 60 percent to vertical. A "stair-step" appearance is given by the resistant sandstone outcrops mantled by sandstone talus.

B. Geology

The lease area is located on the Wasatch Plateau, a transitional zone between the Basin and Range physiographic province to the west and the Colorado Plateau physiographic province to the east. The Wasatch Plateau has geological characteristics of both provinces.

The rock strata found on the lease are (in order from older to younger): the Star Point Sandstone, Blackhawk Formation, Castlegate Sandstone, Price River Formation, and North Horn Formation. These are essentially flat lying sedimentary rocks; sandstone, limestone, and shale which display interbedding and crossbedding structures, and contain lenticular sandstone bodies. The strata dip about five to eight degrees to the southwest.

Mass movement (rock falls, slumps, soil creep, etc.) is a major consideration on the lease. Along Wild Horse Ridge (especially on the eastern face), slumps are as large as one acre. Further south along the ridge they are small to unnoticeable. All of the slumps and slides occur within the North Horn and Price River Formations. In many cases, springs and seeps are found in close proximity to these movements.

The commercial coal beds on the lease are in the Blackhawk Formation. They occur in the canyon walls between 7,500 and 8,000 feet above sea level. The Blackhawk has an average thickness of about 900 feet on the lease. Its composition varies from sandstones to shales. It contains sandstone lenses, with common fluctuation in bed thicknesses.

Two coal seams of economic importance occur on the lease. The lower seam is the Hiawatha, lying directly above the contact of the Blackhawk and the Star Point sandstone. According to Doelling (1967), it ranges in thickness from six to eight feet. The upper seam is the Blind Canyon which lies about 90 to 100 feet above the Hiawatha. This seam varies in thickness from six to ten feet.

The lease is found to be in a high seismic risk zone. This increases the possibility of mine damage and safety hazards through roof falls, landslides, and rockfalls.

C. Ground water

Ground water surfaces as springs and seeps at elevations ranging from 7,300 to 9,200 feet. The majority of the springs and seeps occur within the Blackhawk Formation between 7,600 and 8,400 feet. Many of the springs are closely associated with lithologic contacts, where there is a change in permeability.

The Price River Formation is found between the Castlegate Sandstone and North Horn Formation. While some of the contact areas do not display any flow of water, there is a notable change in soil moisture content along the upper and lower contacts of the formation which is observed by the growth of riparian vegetation.

Within the North Horn Formation there are four sizeable springs. These occur in intermittent streambeds and may be related to the flow of ground water intersecting the profile of the flow of surface water.

Ground water storage and flow is the direct result of the interrelated geologic and topographic features. The faults and associated sympathetic joints may play a part in the channelization of ground water flow. Canyons and ridges follow the trend of these faults and a few springs are found along them. More frequently, seep areas that are intermittent occur along these faults.

D. Soils

Soils on the lease area have developed from colluvial and residual parent material. Slopes have a general southerly aspect.

Soils are generally less than 20 inches deep. Textures for surface and subsurface soils are very gravelly and cobbly loams and clay loams. Coarse fragments range from 35 to 60 percent. The color of the surface soil is dark brown.

With existing use, the erosion from these soils is estimated to be four tons per acre per year (Land Type 107). Using sediment yield and loss of soil productivity as criteria, this rate is considered low. Disturbance of the soils by activities that completely remove the natural protective surface cover and disrupt the natural physical condition of the soil, is estimated to increase the erosion to between four to seven tons per acre. This rate is considered high. Accelerated erosion will continue at a decreasing rate over time as a protective soil cover becomes established. Since these soils have a low fertility level (due to high coarse fragments, low available water, shallow soils and low organic matter), naturally revegetating to the present vegetative state will take many years. Special revegetative measures (topsoiling, mulching, seeding, fertilizing, etc.) will decrease the time for establishment. Revegetation under these practices will be expensive and still take many years. Rock fall occurs in this unit in areas where the slope is greater than 80 percent; the source being the natural disintegration of the sandstone cliffs. Soil creep occurs mainly on slopes greater than 55 percent. These are generally fine textured soils underlain by decomposed shales. Slump failures were observed near the upper slopes of the area.

E. Climate

The climate of the lease area is generally cool and dry. Precipitation and temperature vary with elevation. Storage rain gages at similar elevations in nearby Joe's Valley average 14.6 inches at valley stations to 19 inches on ridges. Most of the precipitation, approximately two-thirds, comes in the form of snow during the months of October through April. The maximum snow accumulation occurs about the first of March each year. Snow depths average about 27 inches. Snow accumulation varies considerably with local topography. The eastern sides of ridges and the north-facing slopes accumulate the most snow. South-facing slopes are snow-free for much of the winter.

The thermal characteristics vary with elevation. Mean annual temperatures vary from 43.5 degrees Fahrenheit in the bottom of Bear Canyon to 32 degrees Fahrenheit on Wild Horse Ridge. The annual frost-free periods for these same sites are 100 days and 40 days respectively. Mean maximum and minimum temperatures for January are 28 degrees Fahrenheit and 18 degrees Fahrenheit respectively. July mean maximum and minimum temperatures are 84 degrees Fahrenheit and 52 degrees Fahrenheit respectively.

F. Hydrology

The hydrologic properties of the lease area are highly variable. The source and magnitude of surface runoff vary with land condition, elevation, geology and soils. Using aerial photography to denote this variation, two areas were delineated by hydrologic responses and grouped. The Incipient Runoff Area comprises the more gently sloping top of the elongate Wild Horse Ridge. The High Runoff-Flood Source Area comprises the remainder of the lease area. The hydrologic response groups are summarized as follows:

Incipient Runoff Group - This group produces small amounts of surface runoff nearly every year. High intensity storms produce overland flow. Snowmelt also produces runoff. Drainage patterns are weakly incised on side slopes, but may have deep cross sections where rills empty into stream channels. Valley bottoms have good potential for mitigating short-term impacts, but can produce very large amounts of sediment if disturbed for a sustained period of several seasons. Sediment delivery from this group is generally high if not buffered.

High Runoff-Flood Source Group - This group has a high runoff potential and presents the greatest problems due to steep slopes and sparse vegetation. Soil cover is minimal. Summer runoff may generate high flow rates. In 1976, the left fork of Bear Canyon was the source area for a mud rock flow which caused considerable damage to a bridge down canyon. Much of the area covered by this group has the potential to create this type of flow, and severely increase sediment production and transport with high intensity runoff.

The lease area is within the drainages of Fish Creek and Bear Creek both of which are tributary to Huntington Creek. Huntington Creek is part of the municipal water supply for the community of Huntington. Huntington Creek is the industrial water supply for the Huntington Power Plant. Increased sediment in the water of Huntington Creek will increase the operating costs for both water supplies. There is no available water quality data for Fish Creek. Samples of Bear Creek from 1982 to 1984 show suspended solids range from 342 to 20,000 parts per million. The sediment source is the unstable slopes of the canyon.

Any development that would aggravate the instability and/or increase the sediment loads should be avoided.

G. Wildlife and Fish

The lease falls within the Utah Division of Wildlife Resources deer herd unit #34 and elk herd unit #12. Most of the big game use was found to be in the mahogany, aspen, and sagebrush cover types. The use in these cover types averaged 10, 12, and 17 deer days per acre, respectively. The elk use was concentrated primarily in the mahogany type, amounting to an average 18 elk days per acre. Deer use this area for summer and some winter range, pulling back into the timber for cover.

The diversity of vegetative types on the leases supports a diverse wildlife population. Besides deer and elk, other game and fur-bearing species may include: black bear, cougar, bobcat, red fox, grey fox, badger, coyote, snowshoe hare, and mink. Avifauna of the area may include several species of hawks, owls, Golden Eagle, jays, and sparrows. Because of the diversity of habitat components, there are probably many small mammals and songbirds found on the lease sites which are too numerous to list in detail in this report.

There are no fisheries within the lease but Bear Creek flows into Huntington Creek, which is an important fishery. Most of the more valuable fishery sections of Huntington Creek are upstream from the lease areas.

The lease area was investigated for Threatened or Endangered animal species. There are no Threatened or Endangered wildlife species known to inhabit the lease area.

The Endangered American Bald Eagle is known to winter throughout this region.

H. Vegetation

Coniferous tree species such as the Douglas fir, Englemann spruce, and both alpine and white fir occur on the north and east slopes in the canyons. Some Quaking aspen is found growing on the wetter benches and in the canyon bottoms. Bristlecone pine and some limber pine can be found growing on the higher elevation, open rocky, windy, exposed ridgetops.

Utah juniper and pinyon pine dominate the vegetation on the south and west slopes. Within the area, sagebrush, rabbit brush, mountain mahogany, serviceberry, snowberry, and wood rose are the shrubby plant species that are found within the area. Grass that is found on the steep south slopes is mostly hard grass and red fescue. Wheat grass, bromes, and needle grass are common on the slope and in the canyon bottoms.

There are many species of forbs common to this lease area. The canyon sweetvetch (*Hedysarum occidentale* var. *cannone*), a sensitive plant species, is also known to occur in the canyon bottoms just outside the lease area in lower Bear Creek. This plant could be within the lease area.

IV. ENVIRONMENTAL CONSEQUENCES

A. Effects of Implementation

There would be no effects to the environment unless coal is produced from the lease and/or surface disturbing operations are conducted.

If the lease is mined, effects would result from deformation of the overburden and subsidence of the land surface. Additional effects would result from any surface disturbing activities such as coal exploration, construction of surface facilities for mining and the other activity associated with surface operations.

The environmental consequences for both alternatives will be essentially the same but may differ in magnitude. Under the terms and conditions contained in the existing lease (No Action Alternative), the environmental consequences may not be as thoroughly mitigated and potential operators may not receive advance notice of requirements for developments of the lease.

If the lease is readjusted, the stipulations contained in Appendix A would be included in the lease and the anticipated effects would be mitigated to the maximum degree practical.

B. Short-Term and Residual Impacts

Surface disturbing operations would result in degradation of surface water quality, increased soil erosion, removal of vegetation and the associated disturbance to wildlife from human activities and presence.

If the lease is mined, subsidence would occur at the surface. The amount and extent of subsidence would depend on the mining method, configuration of the workings, number of seams mined and the geologic factors which control the strength of the overburden. Stresses and deformations produced in mine workings, other coal seams and the overburden may effect mine safety, extraction efficiency, ground water flow and the surface environment.

Subsidence begins almost immediately upon mining and may continue for many years after the working area is abandoned. The rate, extent and amount of subsidence will vary with the geologic conditions and mining operations.

It is expected that mining and subsidence will have an effect upon the natural ground water flow which may, in turn, result in effects to surface water, soils, vegetation, wildlife habitat and land uses.

C. Short-Term Use Vs. Long-Term Productivity

Construction of facilities and operations would involve long-term uses and disturbance. The duration would be dependent on the life of the mining operation and the additional time required for revegetation of the disturbed areas following reclamation.

Underground mining and subsidence could involve long-term alteration of the ground water flow and associated effects to surface resources. The long-term productivity could be altered as drainages, soils and vegetation gradually adjust to any modified ground water conditions. The productivity could decrease or increase depending on the amount of available water.

D. Irreversible and Irretrievable Commitment of Resources

The resources that would be consumed in coal extraction would not be retrievable, and not available to be used elsewhere once expended. After the coal is mined, its' use by future generations would be irreversibly lost, and the coal left in the ground would not be retrieved.

Subsidence may result in the irretrievable commitment of some of the discussed resources.

E. Cumulative Effects

There are no cumulative effects associated with the readjustment of this lease. Cumulative effects resulting from mining coal could include the effects from subsidence, the effects associated with surface disturbing operations such as coal exploration and construction of mining facilities, and the human activity from continued operations as exists on mines in adjacent areas.

V. PERSONNEL AND PUBLIC DEVELOPMENT

A. Forest Service Interdisciplinary Team

Brent Barney, Civil Engineer
 Bill Boley, Forest Engineer
 Jo Ellis, Geologist
 Lee Foster, Forest Planner
 Ira Hatch, District Ranger
 Jim Jensen, Landscape Architect
 Dennis Kelly, Hydrologist
 Dan Larsen, Soil Scientist
 Leland Matheson, Range Conservationist
 Walter Nowak, Geologist - Team Leader
 Carter Reed, Geologist
 Gary Say, Forester
 Bob Thompson, T&E Specialist

B. Other Organizational and Public Involvement

See section I. F. of this EA.

VI. SELECTED TIERING AND REFERENCE DOCUMENTS

- A. Environmental Assessment/Technical Examination for the Readjustment of Federal Coal Lease U-024318, 3/16/79.
- B. Manti-LaSal National Forest Environmental Impact Statement and Land and Resource Management Plan, 11/86.

APPENDIX A

SPECIAL STIPULATIONS

Federal Regulations 43 CFR 3400 pertaining to Coal Management make provisions for the Surface Management Agency, the surface of which is under the jurisdiction of any Federal agency other than the Department of Interior, to consent to leasing and to prescribe conditions to insure the use and protection of the lands. All or part of this lease contain lands the surface of which are managed by the United States Department of Agriculture, Forest Service - Manti-LaSal National Forest.

The following stipulations pertain to the Lessee responsibility for mining operations on the lease area and on adjacent areas as may be specifically designated on National Forest System lands.

Forest Service Stipulation #1.

Before undertaking activities that may disturb the surface of previously undisturbed leased lands, the Lessee may be required to conduct a cultural resource inventory and a paleontological appraisal of the areas to be disturbed. These studies shall be conducted by qualified professional cultural resource specialists or qualified paleontologists, as appropriate, and a report prepared itemizing the findings. A plan will then be submitted making recommendations for the protection of, or measures to be taken to mitigate impacts for identified cultural or paleontological resources.

If cultural resources or paleontological remains (fossils) of significant scientific interest are discovered during operations under this lease, the Lessee prior to disturbance shall immediately bring them to the attention of the appropriate authority. Paleontological remains of significant scientific interest do not include leaves, ferns or dinosaur tracks commonly encountered during underground mining operations.

The cost of conducting the inventory, preparing reports, and carrying out mitigating measures shall be borne by the Lessee.

Forest Service Stipulation #2.

If there is reason to believe that threatened or endangered (T&E) species of plants or animals, or migratory bird species of high Federal interest occur in the area, the Lessee shall be required to conduct an intensive field inventory of the area to be disturbed and/or impacted. The inventory shall be conducted by a qualified specialist and a report of findings will be prepared. A plan will be prepared making recommendations for the protection of these species or action necessary to mitigate the disturbance.

The cost of conducting the inventory, preparing reports and carrying out mitigating measures shall be borne by the Lessee.

Forest Service Stipulation #3.

Lessee shall be required to perform a study to secure adequate baseline data to quantify the existing surface resources on and adjacent to the lease area. Existing data may be used if such data is adequate for the intended purposes. The study shall be adequate to locate, quantify, and demonstrate the inter-relationship of the geology, topography, surface hydrology, vegetation and wildlife. Baseline data will be established so that future programs of observation can be incorporated at regular intervals for comparison.

Forest Service Stipulation #4.

Powerlines used in conjunction with the mining of coal from this lease shall be constructed so as to provide adequate protection for raptors and other large birds. When feasible, powerlines will be located at least 100 yards from public roads.

Forest Service Stipulation #5.

The limited area available for mine facilities at the coal outcrop, steep topography, adverse winter weather, and physical limitations on the size and design of the access road, are factors which will determine the ultimate size of the surface area utilized for the mine. A site specific environmental analysis will be prepared for each new mine site development and for major improvements to existing developments to examine alternatives and mitigate conflicts.

Forest Service Stipulation #6.

The Lessee shall be required to establish a monitoring system to locate, measure and quantify the progressive and final effects of underground mining activities on the topographic surface, underground and surface hydrology and vegetation. The monitoring system shall utilize techniques which will provide a continuing record of change over time and an analytical method for location and measurement of a number of points over the lease area. The monitoring shall incorporate and be an extension of the baseline data.

Forest Service Stipulation #7.

The Lessee shall provide for the suppression and control of fugitive dust on haul roads and at coal handling and storage facilities. On Forest Development Roads (FDR), Lessees may perform their share of road maintenance by a commensurate share agreement if a significant degree of traffic is generated that is not related to their activities.

Forest Service Stipulation #8.

cept at specifically approved locations, underground mining operations shall be conducted in such a manner so as to prevent surface subsidence that would: (1) cause the creation of hazardous conditions such as potential escarpment failure and landslides, (2) cause damage to existing surface structures, and (3) damage or alter the flow of perennial streams. The Lessee shall provide specific measures for the protection of escarpments, and determine corrective measures to assure that hazardous conditions are not created.

Forest Service Stipulation #9.

In order to avoid surface disturbance on steep canyon slopes and to preclude the need for surface access, all surface breakouts for ventilation tunnels shall be constructed from inside the mine, except at specific approved locations.

Forest Service Stipulation #10.

If removal of timber is required for clearing of construction sites, etc., such timber shall be removed in accordance with the regulations of the surface management agency.

Forest Service Stipulation #11.

the coal contained within, and authorized for mining under this lease shall be extracted only by underground mining methods.

Forest Service Stipulation #12.

Existing Forest Service owned or permitted surface improvements will need to be protected, restored, or replaced to provide for the continuance of current land uses.

Forest Service Stipulation #13.

In order to protect big game wintering areas, elk calving and deer fawning areas, sagegrouse strutting areas, and other critical wildlife habitat and/or activities, specific surface uses outside the mine development area may be curtailed during specified periods of the year.

Forest Service Stipulation #14.

Lessee, at the conclusion of the mining operation, or at other times as surface disturbance related to mining may occur, will replace all damaged, disturbed or displaced corner monuments (section corners, 1/4 corners, etc.) or their accessories and appendages (witness trees, bearing trees, etc.) or restore them to their original condition and location, or at other locations that meet the requirements of the rectangular surveying system. This work shall be conducted at the expense of the Lessee, by a professional land surveyor registered in the State of Utah, and to the standards and guidelines found in the Manual of Surveying Instructions, United States Department of the Interior.

Forest Service Stipulation #15.

The Lessees, at their expense, will be responsible to replace any surface water identified for protection, that may be lost or adversely affected by mining operations, with water from an alternate source in sufficient quantity and quality to maintain existing riparian habitat, fishery habitat, livestock and wildlife use, or other land uses.

STIPULATION FOR LANDS OF THE NATIONAL FOREST SYSTEM
UNDER JURISDICTION OF
THE DEPARTMENT OF AGRICULTURE

The licensee/permittee/lessee must comply with all the rules and regulations of the Secretary of Agriculture set forth at Title 36, Chapter II, of the Code of Federal Regulations governing the use and management of the National Forest System (NFS) when not inconsistent with the rights granted by the Secretary of the Interior in the license/prospecting permit/lease. The Secretary of Agriculture's rules and regulations must be complied with for (1) all use and occupancy of the NFS prior to approval of a permit/operation plan by the Secretary of Interior, (2) uses of all existing improvements, such as Forest development roads, within and outside the area licensed, permitted or leased by the Secretary of Interior, and (3) use and occupancy of the NFS not authorized by a permit/operating plan approved by the Secretary of the Interior.

All matters related to this stipulation are to be addressed

to Forest Supervisor
Manti-LaSal National Forest
599 West Price River Drive
Price, Utah 84501

Telephone No.: 801-637-2817

who is the authorized representative of the Secretary of Agriculture.

Signature of Licensee/Permittee/Lessee

Wild Horse Ridge

Mc: Daron

DECISION NOTICE
AND
FINDING OF NO SIGNIFICANT IMPACT
FOR THE READJUSTMENT OF
FEDERAL COAL LEASE U-020668

RECEIVED
MAY 22 1986
DIVISION OF
OIL, GAS AND MINING

USDA FOREST SERVICE
INTERMOUNTAIN REGION (R-4)
MANTI-LASAL NATIONAL FOREST
PRICE RANGER DISTRICT

USDI BUREAU OF LAND MANAGEMENT
STATE OF UTAH
MOAB DISTRICT
SAN RAFAEL RESOURCE AREA

On March 19, 1986, the Forest Service received notification from the Bureau of Land Management that Federal Coal Lease U-020668 would be subject to readjustment of terms and conditions on May 1, 1988. This notification required conducting an environmental analysis of the proposed action pursuant to the National Environmental Policy Act of 1969. A Forest Service Interdisciplinary (ID) Team met on September 3, 1986 to evaluate the proposal. As the surface management agency for the majority of the lease, the Forest Service prepared the Environmental Assessment (EA) in consultation with the Bureau of Land Management.

Leasing and development will be under the authority of the following authorizing actions: The Mineral Leasing Act of February 25, 1920, as amended; the Federal Land Policy and Management Act (FLPMA) of 1976; the Surface Mining Control and Reclamation Act (SMCRA) of 1977; the Multiple Minerals Development Act of August 4, 1977; the National Environmental Policy Act (NEPA) of 1969; the Federal Coal Leasing Amendments Act of 1976, as amended; regulations: Title 43 CFR Group 3400, Group 2800; and Title 30 CFR Group 700; and the Manti-LaSal National Forest Land and Resource Management Plan and Final Environmental Impact Statement, 1986.

Based on the EA, the responsible officials of the Forest Service and Bureau of Land Management have decided that readjustment of the lease, subject to the stipulations contained in Appendix A of the EA, is a viable alternative under existing laws, regulations, policies, management decisions, and direction. The No Action Alternative was evaluated and determined not to be viable as it would allow continuation of the lease under terms inconsistent with the Manti-LaSal National Forest Land and Resource Management Plan and Final Environmental Impact Statement, 1986.

Based on the analysis presented in this EA, the Forest Service consents to approval of the proposed readjustment for that portion of the lease within the Forest, subject to the stipulations in Appendix A of the EA.

This is not a major Federal action that would significantly affect the quality of the human environment; therefore, an Environmental Impact Statement is not needed. This determination was made considering the following factors:

1. No new surface disturbing operations or facilities are proposed at this time. If surface disturbing operations or facilities are proposed in the future, a site-specific environmental assessment will be prepared at that time. Additional stipulations may be specified as needed to protect the environment.

- 2. The identified impacts, including cumulative effects, can be effectively mitigated to an acceptable level.
- 3. No known prime or unique farmlands, wetlands, timber lands, or rangelands; floodplains; alluvial valley floors; paleontological or cultural resources; nor threatened, endangered, or sensitive floral or faunal species will be impacted by readjustment of this lease.
- 4. Readjustment of this lease is consistent with the directions and decisions of the Manti-LaSal National Forest Land and Resource Management Plan and Final Environmental Impact Statement, 1986.

The Forest Service decision regarding National Forest System lands is subject to administrative review (appeal) pursuant to 36 CFR 211.18, Secretary of Agriculture Appeal Regulation. A written notice of appeal must be filed with the Intermountain Regional Office in Ogden, Utah, within 45 days of the date of this decision.

J. S. Tixier

J.S. Tixier, Regional Forester
Intermountain Region

8/31/87

Date

James W. Dryden

James W. Dryden, Area Manager
San Rafael Resource Area

8/18/87

Date

ENVIRONMENTAL ASSESSMENT
FOR THE READJUSTMENT OF
FEDERAL COAL LEASE U-020668

PRICE RANGER DISTRICT
MANTI-LASAL NATIONAL FOREST
EMERY COUNTY, UTAH

Responsible Official: J.S. Tixier
Regional Forester
Intermountain Region (R-4)
USDA - Forest Service
Federal Building
324 25th Street
Ogden, Utah 84401

For Further Information Contact: George Morris
Forest Supervisor
Manti-LaSal National Forest
599 West Price River Drive
Price, Utah 84501

or: Ira W. Hatch
District Ranger
Price Ranger District
599 West Price River Drive
Price, Utah 84501

Prepared by: Walter E. Nowak, Geologist

RECOMMENDED APPROVAL

Ira W. Hatch
District Ranger

7/31/87
Date

APPROVED

Forest Supervisor

Date

ENVIRONMENTAL ASSESSMENT
FOR THE READJUSTMENT OF
FEDERAL COAL LEASE U-020668

I. INTRODUCTION

A. Purpose and Need for Action

The Bureau of Land Management (BLM) notified the Forest Service on March 19, 1986 that Federal Coal Lease U-020668, currently leased to Nevada Electric Investment Co., would be subject to readjustment of terms on May 1, 1988. As the surface managing agency for most of this lease area, the Manti-LaSal National Forest is responsible for conducting an Environmental Assessment (EA) of the proposed action pursuant to the National Environmental Policy Act (NEPA) of 1969. Also, the 1984 Interagency Agreement between the BLM and the Forest Service for Mineral Leasing provides for joint scoping and preparation of a single EA and two-part decision document, if appropriate. On May 6, 1987, the Manti-LaSal National Forest formally solicited input for the subject lease from the Moab District BLM office. To date, no formal BLM response has been received; although the Forest was notified to proceed with the on-Forest portion of the lease and the BLM would prepare the appropriate NEPA documentation on their own. This EA will then address the proposed readjustment and identify management requirements for resource protection only for the 546.32 acres of Federal Coal Lease U-020668 that fall within the boundaries of the Manti-LaSal National Forest.

B. Authorizing Actions

Leasing and development will be under the authority of the following authorizing actions: The Mineral Leasing Act of February 25, 1920, as amended; the Federal Land Policy and Management Act (FLPMA) of 1976; the Surface Mining Control and Reclamation Act (SMCRA) of 1977; the Multiple Minerals Development Act of August 4, 1969; the Federal Coal Leasing Amendments Act of 1976, as amended; regulations: Title 43 CFR Group 3400, Group 2800; and Title 30 CFR Group 700; and the Manti-LaSal National Forest Land and Resource Management Plan (Forest Plan) and Final Environmental Impact Statement (FEIS), 1986.

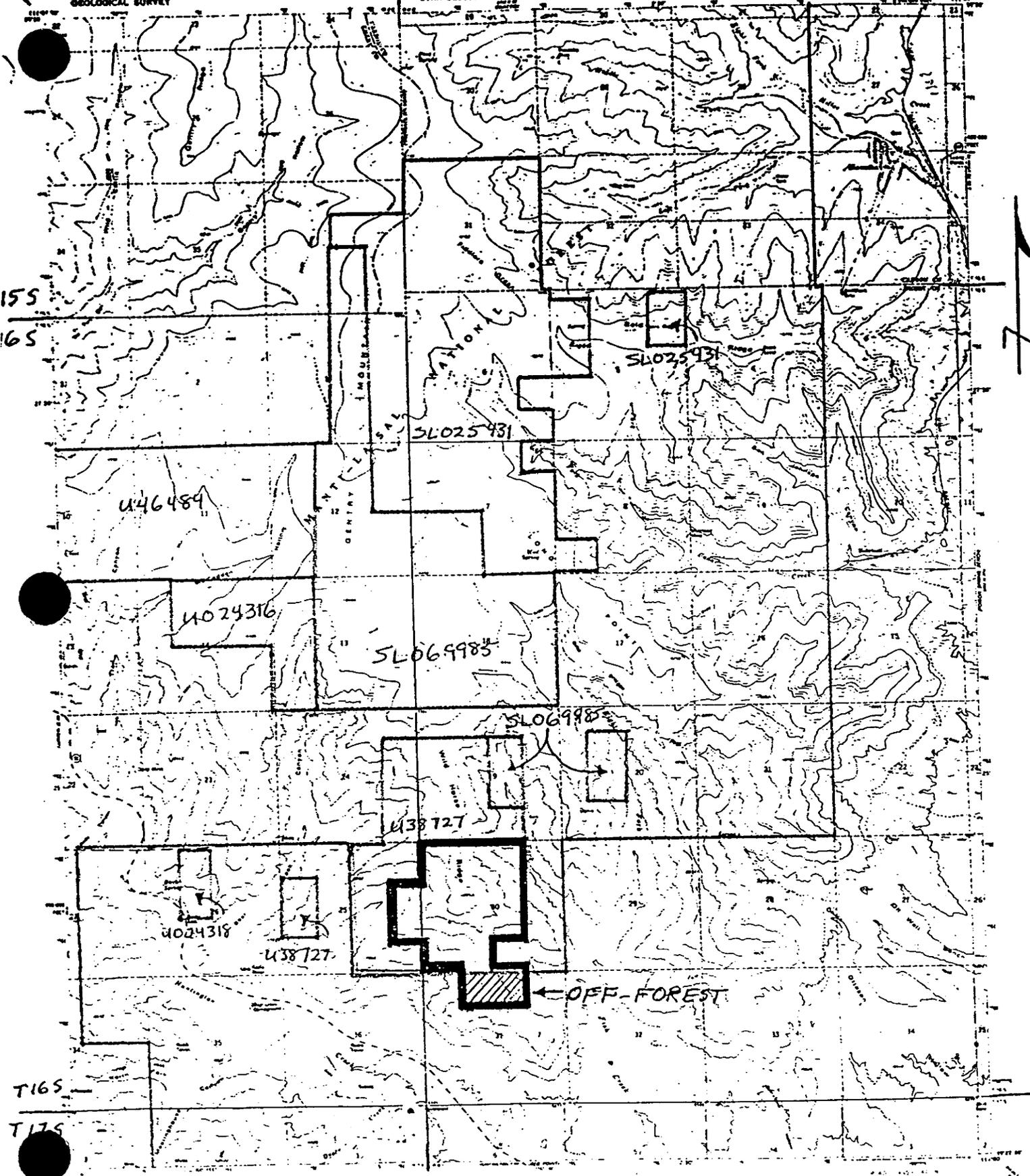
C. Land Description

Federal Coal Lease U-020668 is located in Emery County, Utah, mostly within the Manti-LaSal National Forest, Price Ranger District. It lies near Huntington Canyon on the southern flank of Wild Horse Ridge, along the east-central rim of the Wasatch Plateau coal field (see Map 1). The lease is legally described as follows:

Township 16 South, Range 7 East, SLM, Utah.
Section 25, SE 1/4 NE 1/4, NE 1/4 SE 1/4

Township 16 South, Range 8 East, SLM, Utah.
Section 30, W 1/2, W 1/2 NE 1/4, NW 1/4 SE 1/4
Section 31, NE 1/4 NW 1/4, NW 1/4 NE 1/4

K7E R8E



U 020668

The lands in Section 31 are off Forest and contain 80 acres managed by the BLM. The remainder of the lease lands contain 546.32 acres on Forest. The total lease acreage is 626.32.

D. Background

Lease U-020668 was issued on May 1, 1958 to Huntington Corporation of Nevada (later called Rilda Corporation and Huntington Corporation of Menlo Park, California). In 1971, Huntington Corporation transferred ownership of the lease to Peabody Coal Company. In 1977, Peabody Coal Company transferred the lease to Nevada Electric Investment Company. On August 1, 1983, the lease was assigned by Nevada Electric to Beaver Creek Coal Company who considered development of the property. Beaver Creek conducted a helicopter assisted drilling program and filed the Wild Horse Ridge Mine Plan in 1983. Beaver Creek later decided not to pursue further development, withdrew their mine permit application, and assigned the lease back to Nevada Electric effective October 16, 1986.

On March 16, 1979, the Forest Service completed an environmental assessment/technical examination for readjustment of the subject lease. On May 22, 1980, the BLM attempted to readjust the lease terms, but Nevada Electric filed an objection on July 18, 1980. On June 9, 1983, the BLM formally waived its rights to readjust the lease.

E. Mine Development

Two mining scenarios (both off Forest) have been developed for the lease and they are described below. The coal could also be extracted with on-lease shaft facilities, but this might prove to not be economically feasible.

In 1978, United States Fuel Company and Nevada Electric jointly submitted an "informal mining plan" to the U.S. Geological Survey. The plan called for the lease to be mined through the existing Mohrland Mine facilities in Cedar Creek Canyon. The Mohrland Mine is located on private land within the Manti-LaSal National Forest. This informal plan was never pursued by either U.S. Fuel or Nevada Electric.

On April 1, 1983, Beaver Creek Coal Company filed a permit application package with the Utah Division of Oil, Gas and Mining (DOG M) and the Office of Surface Mining (OSM) for their proposed Wild Horse Ridge Mine. The proposal included the subject lease and called for surface facilities off-lease on private land in ^{Beaver} Beaver Canyon to the west. An exploration road was constructed to the proposed mine site and the coal was faced up for testing. The only other work conducted to exploit the coal resources on the subject lease was the aforementioned drilling program. To date, no further development or exploration activities have been proposed.

F. Issues and Concerns

General public comments were solicited through local newspapers on October 10, 1986. Specific comments on the proposed action were solicited directly from the Emery County Planning and Zoning Commission, the Utah Division of Wildlife Resources and the Southern Utah Association of Governments. No comments or responses have been received to date; therefore, no public issues have been identified.

The Forest Service Interdisciplinary (ID) Team identified the following management concerns:

1. Surface disturbing activities and facilities could adversely affect area resources.
2. Underground mining and subsidence could adversely affect surface and ground water, soils, vegetation, and wildlife.

G. Negative Declaration

The ID Team determined that this action, after mitigation, would cause no impacts on the following: prime or unique rangelands, wetlands, timberlands, or farmlands; floodplains; known cultural or paleontological resources; alluvial valley floors; known Threatened, Endangered, or Sensitive plant or animal species.

II. DESCRIPTION OF ALTERNATIVES

A. No Action Alternative

Consideration of the "No Action" alternative is required by Section 1502.14 (d) of the NEPA, and by the Council of Environmental Quality guidelines as specified in the Federal Register on November 29, 1979. Under this alternative, the terms of the lease would not be changed.

Department of Interior Regulation 43 CFR 3451.1 (a) (1) Federal Coal Management Regulations require that all leases issued prior to August 4, 1976, be subject to readjustment at the end of the current 20-year period and at the end of each 10-year period (under which this lease qualifies), thereafter. The present lease terms do not minimize the impacts to the surface resources to an acceptable level pursuant to the Forest Plan, and new management requirements are needed.

B. Readjustment of Terms Alternative

Department of Interior Regulations 43 CFR 3400.3-1 pertaining to Coal Management make provision for the Surface Management Agency, the surface of which is under the jurisdiction of any Federal agency other than the Department of Interior, to consent to leasing and to prescribe conditions to insure the use and protection of the lands. This lease contains lands the surface of which are managed by the United States Department of Agriculture, Forest Service, Manti-LaSal National Forest.

The stipulations contained in Appendix A pertain to the Lessee responsibility for mining operations on the lease area on adjacent areas as may be specifically designated on National Forest System (NFS) lands.

III. AFFECTED ENVIRONMENT

The affected environment of the subject areas has been generally described in numerous environmental documents and resource reports prepared for coal leasing and development in this and surrounding areas. Two of these documents are listed for reference in Section VI, Selected Tiering and Reference Documents. There are several resources on the lease for which concern was identified. These resources are essentially unique to the proposal and are under consideration in this document.

A. Topography

The lease area is located on the southern end of Gentry Mountain and situated on the southern end of Wild Horse Ridge overlooking Huntington Canyon. This narrow ridge is carved by Bear Creek, Fish Creek, and two smaller canyons. This area characteristically has steep cliffs and deeply incised drainages. Slopes on canyon walls range from 60 percent to vertical. A "stair-step" appearance is given by the resistant sandstone outcrops mantled by sandstone talus.

B. Geology

The lease area is located on the Wasatch Plateau, a transitional zone between the Basin and Range physiographic province to the west and the Colorado Plateau physiographic province to the east. The Wasatch Plateau has geological characteristics of both provinces.

The rock strata found on the lease are (in order from older to younger): the Star Point Sandstone, Blackhawk Formation, Castlegate Sandstone, Price River Formation, and North Horn Formation. These are essentially flat lying sedimentary rocks; sandstone, limestone, and shale which display interbedding and crossbedding structures, and contain lenticular sandstone bodies. The strata dip about five to eight degrees to the southwest.

Mass movement (rock falls, slumps, soil creep, etc.) is a major consideration on the lease. Along Wild Horse Ridge (especially on the eastern face), slumps are as large as one acre. Further south along the ridge they are small to unnoticeable. All of the slumps and slides occur within the North Horn and Price River Formations. In many cases, springs and seeps are found in close proximity to these movements.

The commercial coal beds on the lease are in the Blackhawk Formation. They occur in the canyon walls between 7,500 and 8,000 feet above sea level. The Blackhawk has an average thickness of about 900 feet on the lease. Its composition varies from sandstones to shales. It contains sandstone lenses, with common fluctuation in bed thicknesses.

Two coal seams of economic importance occur on the lease. The lower seam is the Hiawatha, lying directly above the contact of the Blackhawk and the Star Point sandstone. According to Doelling (1967), it ranges in thickness from six to eight feet. The upper seam is the Blind Canyon which lies about 90 to 100 feet above the Hiawatha. This seam varies in thickness from six to ten feet.

The lease is found to be in a high seismic risk zone. This increases the possibility of mine damage and safety hazards through roof falls, landslides, and rockfalls.

C. Ground water

Ground water surfaces as springs and seeps at elevations ranging from 7,300 to 9,200 feet. The majority of the springs and seeps occur within the Blackhawk Formation between 7,600 and 8,400 feet. Many of the springs are closely associated with lithologic contacts, where there is a change in permeability.

The Price River Formation is found between the Castlegate Sandstone and North Horn Formation. While some of the contact areas do not display any flow of water, there is a notable change in soil moisture content along the upper and lower contacts of the formation which is observed by the growth of riparian vegetation.

Within the North Horn Formation there are four sizeable springs. These occur in intermittent streambeds and may be related to the flow of ground water intersecting the profile of the flow of surface water.

Ground water storage and flow is the direct result of the interrelated geologic and topographic features. The faults and associated sympathetic joints may play a part in the channelization of ground water flow. Canyons and ridges follow the trend of these faults and a few springs are found along them. More frequently, seep areas that are intermittent occur along these faults.

D. Soils

Soils on the lease area have developed from colluvial and residual parent material. Slopes have a general southerly aspect.

Soils are generally less than 20 inches deep. Textures for surface and subsurface soils are very gravelly and cobbly loams and clay loams. Coarse fragments range from 35 to 60 percent. The color of the surface soil is dark brown.

With existing use, the erosion from these soils is estimated to be four tons per acre per year (Land Type 107). Using sediment yield and loss of soil productivity as criteria, this rate is considered low. Disturbance of the soils by activities that completely remove the natural protective surface cover and disrupt the natural physical condition of the soil, is estimated to increase the erosion to between four to seven tons per acre. This rate is considered high. Accelerated erosion will continue at a decreasing rate over time as

protective soil cover becomes established. Since these soils have a low fertility level (due to high coarse fragments, low available water, shallow soils and low organic matter), naturally revegetating to the present vegetative state will take many years. Special revegetative measures (topsoiling, mulching, seeding, fertilizing, etc.) will decrease the time for establishment. Revegetation under these practices will be expensive and still take many years. Rock fall occurs in this unit in areas where the slope is greater than 80 percent; the source being the natural disintegration of the sandstone cliffs. Soil creep occurs mainly on slopes greater than 55 percent. These are generally fine textured soils underlain by decomposed shales. Slump failures were observed near the upper slopes of the area.

E. Climate

The climate of the lease area is generally cool and dry. Precipitation and temperature vary with elevation. Storage rain gages at similar elevations in nearby Joe's Valley average 14.6 inches at valley stations to 19 inches on ridges. Most of the precipitation, approximately two-thirds, comes in the form of snow during the months of October through April. The maximum snow accumulation occurs about the first of March each year. Snow depths average about 27 inches. Snow accumulation varies considerably with local topography. The eastern sides of ridges and the north-facing slopes accumulate the most snow. South-facing slopes are snow-free for much of the winter.

The thermal characteristics vary with elevation. Mean annual temperatures vary from 43.5 degrees Fahrenheit in the bottom of Bear Canyon to 32 degrees Fahrenheit on Wild Horse Ridge. The annual frost-free periods for these same sites are 100 days and 40 days respectively. Mean maximum and minimum temperatures for January are 28 degrees Fahrenheit and 18 degrees Fahrenheit respectively. July mean maximum and minimum temperatures are 84 degrees Fahrenheit and 52 degrees Fahrenheit respectively.

F. Hydrology

The hydrologic properties of the lease area are highly variable. The source and magnitude of surface runoff vary with land condition, elevation, geology and soils. Using aerial photography to denote this variation, two areas were delineated by hydrologic responses and grouped. The Incipient Runoff Area comprises the more gently sloping top of the elongate Wild Horse Ridge. The High Runoff-Flood Source Area comprises the remainder of the lease area. The hydrologic response groups are summarized as follows:

Incipient Runoff Group - This group produces small amounts of surface runoff nearly every year. High intensity storms produce overland flow. Snowmelt also produces runoff. Drainage patterns are weakly incised on side slopes, but may have deep cross sections where rills empty into stream channels. Valley bottoms

have good potential for mitigating short-term impacts, but can produce very large amounts of sediment if disturbed for a sustained period of several seasons. Sediment delivery from this group is generally high if not buffered.

High Runoff-Flood Source Group - This group has a high runoff potential and presents the greatest problems due to steep slopes and sparse vegetation. Soil cover is minimal. Summer runoff may generate high flow rates. In 1976, the left fork of Bear Canyon was the source area for a mud rock flow which caused considerable damage to a bridge down canyon. Much of the area covered by this group has the potential to create this type of flow, and severely increase sediment production and transport with high intensity runoff.

Portions of the lease area drain through Fish Creek into Huntington Creek. The rest of the lease drains through two small ephemeral channels into Hunting Creek. Huntington Creek provides a portion of the municipal water supply for the community of Huntington. Huntington Creek is the industrial water supply for the Huntington Power Plant. The major water use is for irrigation. Increased sediment in the water of Huntington Creek will increase the operating costs for all water supplies. There is no available water quality data for Fish Creek.

Water quality in Huntington Creek is a concern. Any activity that would add sediment or other materials into the stream should be avoided.

G. Wildlife and Fish

The lease falls within the Utah Division of Wildlife Resources deer herd unit #34 and elk herd unit #12. Most of the big game use was found to be in the mahogany, aspen, and sagebrush cover types. The use in these cover types averaged 10, 12, and 17 deer days per acre, respectively. The elk use was concentrated primarily in the mahogany type, amounting to an average 18 elk days per acre. Deer use this area for summer and some winter range, pulling back into the timber for cover.

The diversity of vegetative types on the leases supports a diverse wildlife population. Besides deer and elk, other game and fur-bearing species may include: black bear, cougar, bobcat, red fox, grey fox, badger, coyote, snowshoe hare, and mink. Avifauna of the area may include several species of hawks, owls, Golden Eagle, jays, and sparrows. Because of the diversity of habitat components, there are probably many small mammals and songbirds found on the lease sites which are too numerous to list in detail in this report.

There are no fisheries within the lease but Fish Creek flows into Huntington Creek, which is an important fishery. Most of the more valuable fishery sections of Huntington Creek are upstream from the lease areas.

The lease area was investigated for Threatened or Endangered animal species. There are no Threatened or Endangered wildlife species known to inhabit the lease area.

The Endangered American Bald Eagle is known to winter throughout this region.

H. Vegetation

Coniferous tree species such as the Douglas fir, Englemann spruce, and both alpine and white fir occur on the north and east slopes in the canyons. Some Quaking aspen is found growing on the wetter benches and in the canyon bottoms. Bristlecone pine and some limber pine can be found growing on the higher elevation, open rocky, windy, exposed ridgetops.

Utah juniper and pinyon pine dominate the vegetation on the south and west slopes. Within the area, sagebrush, rabbit brush, mountain mahogany, serviceberry, snowberry, and wood rose are the shrubby plant species that are found within the area. Grass that is found on the steep south slopes is mostly hard grass and red fescue. Wheat grass, bromes, and needle grass are common on the slope and in the canyon bottoms.

There are many species of forbs common to this lease area. The canyon sweetvetch (*Hedysarum occidentale* var. *cannone*), a sensitive plant species, is also known to occur in the canyon bottoms just outside the lease area in lower Bear Creek. This plant could be within the lease area.

IV. ENVIRONMENTAL CONSEQUENCES

A. Effects of Implementation

There would be no effects to the environment unless coal is produced from the lease and/or surface disturbing operations are conducted.

If the lease is mined, effects would result from deformation of the overburden and subsidence of the land surface. Additional effects would result from any surface disturbing activities such as coal exploration, construction of surface facilities for mining and the other activity associated with surface operations.

The environmental consequences for both alternatives will be essentially the same but may differ in magnitude. Under the terms and conditions contained in the existing lease (No Action Alternative), the environmental consequences may not be as thoroughly mitigated and potential operators may not receive advance notice of requirements for developments of the lease.

If the lease is readjusted, the stipulations contained in Appendix A would be included in the lease and the anticipated effects would be mitigated to the maximum degree practical.

B. Short-Term and Residual Impacts

Surface disturbing operations would result in degradation of surface water quality, increased soil erosion, removal of vegetation and the associated disturbance to wildlife from human activities and presence.

If the lease is mined, subsidence would occur at the surface. The amount and extent of subsidence would depend on the mining method, configuration of the workings, number of seams mined and the geologic factors which control the strength of the overburden. Stresses and deformations produced in mine workings, other coal seams and the overburden may effect mine safety, extraction efficiency, ground water flow and the surface environment.

Subsidence begins almost immediately upon mining and may continue for many years after the working area is abandoned. The rate, extent and amount of subsidence will vary with the geologic conditions and mining operations.

It is expected that mining and subsidence will have an effect upon the natural ground water flow which may, in turn, result in effects to surface water, soils, vegetation, wildlife habitat and land uses.

C. Short-Term Use Vs. Long-Term Productivity

Construction of facilities and operations would involve long-term uses and disturbance. The duration would be dependent on the life of the mining operation and the additional time required for revegetation of the disturbed areas following reclamation.

Underground mining and subsidence could involve long-term alteration of the ground water flow and associated effects to surface resources. The long-term productivity could be altered as drainages, soils and vegetation gradually adjust to any modified ground water conditions. The productivity could decrease or increase depending on the amount of available water.

D. Irreversible and Irretrievable Commitment of Resources

The resources that would be consumed in coal extraction would not be retrievable, and not available to be used elsewhere once expended. After the coal is mined, its' use by future generations would be irreversibly lost, and the coal left in the ground would not be retrieved.

Subsidence may result in the irreversible commitment of some of the discussed resources.

E. Cumulative Effects

There are no cumulative effects associated with the readjustment of this lease. Cumulative effects resulting from mining coal could include the effects from subsidence, the effects associated with

surface disturbing operations such as coal exploration and construction of mining facilities, and the human activity from continued operations as exists on mines in adjacent areas.

V. PERSONNEL AND PUBLIC DEVELOPMENT

A. Forest Service Interdisciplinary Team

Brent Barney, Civil Engineer
Bill Boley, Forest Engineer
Jo Ellis, Geologist
Lee Foster, Forest Planner
Ira Hatch, District Ranger
Jim Jensen, Landscape Architect
Dennis Kelly, Hydrologist
Dan Larsen, Soil Scientist
Leland Matheson, Range Conservationist
Walter Nowak, Geologist - Team Leader
Carter Reed, Geologist
Gary Say, Forester
Bob Thompson, T&E Specialist

B. Other Organizational and Public Involvement

See section I. F. of this EA.

VI. SELECTED TIERING AND REFERENCE DOCUMENTS

- A. Environmental Assessment/Technical Examination for the Readjustment of Federal Coal Lease U-020668, 3/16/79.
- B. Manti-LaSal National Forest Environmental Impact Statement and Land and Resource Management Plan, 11/86.

APPENDIX A

STIPULATION FOR LANDS OF THE NATIONAL FOREST SYSTEM
UNDER JURISDICTION OF
THE DEPARTMENT OF AGRICULTURE

The licensee/permittee/lessee must comply with all the rules and regulations of the Secretary of Agriculture set forth at Title 36, Chapter II, of the Code of Federal Regulations governing the use and management of the National Forest System (NFS) when not inconsistent with the rights granted by the Secretary of the Interior in the license/prospecting permit/lease. The Secretary of Agriculture's rules and regulations must be complied with for (1) all use and occupancy of the NFS prior to approval of a permit/operation plan by the Secretary of Interior, (2) uses of all existing improvements, such as Forest development roads, within and outside the area licensed, permitted or leased by the Secretary of Interior, and (3) use and occupancy of the NFS not authorized by a permit/operating plan approved by the Secretary of the Interior.

All matters related to this stipulation are to be addressed

to Forest Supervisor
Santi-LaSal National Forest
9 West Price River Drive
Price, Utah 84501

Telephone No.: 801-637-2817

who is the authorized representative of the Secretary of Agriculture.

Signature of Licensee/Permittee/Lessee

SPECIAL STIPULATIONS

Federal Regulations 43 CFR 3400 pertaining to Coal Management make provisions for the Surface Management Agency, the surface of which is under the jurisdiction of any Federal agency other than the Department of Interior, to consent to leasing and to prescribe conditions to insure the use and protection of the lands. All or part of this lease contain lands the surface of which are managed by the United States Department of Agriculture, Forest Service - Manti-LaSal National Forest.

The following stipulations pertain to the Lessee responsibility for mining operations on the lease area and on adjacent areas as may be specifically designated on National Forest System lands.

Forest Service Stipulation #1.

Before undertaking activities that may disturb the surface of previously undisturbed leased lands, the Lessee may be required to conduct a cultural resource inventory and a paleontological appraisal of the areas to be disturbed. These studies shall be conducted by qualified professional cultural resource specialists or qualified paleontologists, as appropriate, and a report prepared itemizing the findings. A plan will then be submitted making recommendations for the protection of, or measures to be taken to mitigate effects for identified cultural or paleontological resources.

If cultural resources or paleontological remains (fossils) of significant scientific interest are discovered during operations under this lease, the Lessee prior to disturbance shall immediately bring them to the attention of the appropriate authority. Paleontological remains of significant scientific interest do not include leaves, ferns or dinosaur tracks commonly encountered during underground mining operations.

The cost of conducting the inventory, preparing reports, and carrying out mitigating measures shall be borne by the Lessee.

Forest Service Stipulation #2.

If there is reason to believe that threatened or endangered (T&E) species of plants or animals, or migratory bird species of high Federal interest occur in the area, the Lessee shall be required to conduct an intensive field inventory of the area to be disturbed and/or impacted. The inventory shall be conducted by a qualified specialist and a report of findings will be prepared. A plan will be prepared making recommendations for the protection of these species or action necessary to mitigate the disturbance.

The cost of conducting the inventory, preparing reports and carrying out mitigating measures shall be borne by the Lessee.

Forest Service Stipulation #3.

Lessee shall be required to perform a study to secure adequate baseline data to quantify the existing surface resources on and adjacent to the lease area. Existing data may be used if such data is adequate for the intended purposes. The study shall be adequate to locate, quantify, and demonstrate the inter-relationship of the geology, topography, surface hydrology, vegetation and wildlife. Baseline data will be established so that future programs of observation can be incorporated at regular intervals for comparison.

Forest Service Stipulation #4.

Powerlines used in conjunction with the mining of coal from this lease shall be constructed so as to provide adequate protection for raptors and other large birds. When feasible, powerlines will be located at least 100 yards from public roads.

Forest Service Stipulation #5.

The limited area available for mine facilities at the coal outcrop, steep topography, adverse winter weather, and physical limitations on the size and design of the access road, are factors which will determine the ultimate size of the surface area utilized for the mine. A site specific environmental analysis will be prepared for each new mine site development and for major improvements to existing developments to examine alternatives and mitigate conflicts.

Forest Service Stipulation #6.

The Lessee shall be required to establish a monitoring system to locate, measure and quantify the progressive and final effects of underground mining activities on the topographic surface, underground and surface hydrology and vegetation. The monitoring system shall utilize techniques which will provide a continuing record of change over time and an analytical method for location and measurement of a number of points over the lease area. The monitoring shall incorporate and be an extension of the baseline data.

Forest Service Stipulation #7.

The Lessee shall provide for the suppression and control of fugitive dust on haul roads and at coal handling and storage facilities. On Forest Development Roads (FDR), Lessees may perform their share of road maintenance by a commensurate share agreement if a significant degree of traffic is generated that is not related to their activities.

Forest Service Stipulation #8.

Except at specifically approved locations, underground mining operations shall be conducted in such a manner so as to prevent surface subsidence that would: (1) cause the creation of hazardous conditions such as potential escarpment failure and landslides, (2) cause damage to existing surface structures, and (3) damage or alter the flow of perennial streams. The Lessee shall provide specific measures for the protection of escarpments, and determine corrective measures to assure that hazardous conditions are not created.

Forest Service Stipulation #9.

In order to avoid surface disturbance on steep canyon slopes and to preclude the need for surface access, all surface breakouts for ventilation tunnels shall be constructed from inside the mine, except at specific approved locations.

Forest Service Stipulation #10.

If removal of timber is required for clearing of construction sites, etc., such timber shall be removed in accordance with the regulations of the surface management agency.

Forest Service Stipulation #11.

Coal contained within, and authorized for mining under this lease shall be extracted only by underground mining methods.

Forest Service Stipulation #12.

Existing Forest Service owned or permitted surface improvements will need to be protected, restored, or replaced to provide for the continuance of current land uses.

Forest Service Stipulation #13.

In order to protect big game wintering areas, elk calving and deer fawning areas, sagegrouse strutting areas, and other critical wildlife habitat and/or activities, specific surface uses outside the mine development area may be curtailed during specified periods of the year.

Forest Service Stipulation #14.

Lessee, at the conclusion of the mining operation, or at other times as surface disturbance related to mining may occur, will replace all damaged, disturbed or displaced corner monuments (section corners, 1/4 corners, etc.) their accessories and appendages (witness trees, bearing trees, etc.) or restore them to their original condition and location, or at other locations that meet the requirements of the rectangular surveying system. This work shall be conducted at the expense of the Lessee, by a professional land surveyor registered in the State of Utah, and to the standards and guidelines found in the Manual of Surveying Instructions, United States Department of the Interior.

Forest Service Stipulation #15.

The Lessees, at their expense, will be responsible to replace any surface water identified for protection, that may be lost or adversely affected by mining operations, with water from an alternate source in sufficient quantity and quality to maintain existing riparian habitat, fishery habitat, livestock and wildlife use, or other land uses.



United States Department of the Interior

BUREAU OF LAND MANAGEMENT

Price Field Office
125 South 600 West
Price, Utah 84501

3482
U-020668
U-38727
(UT-070)

DEC 20 2001

01-12-26-15

Memorandum

To: Senior Project Manager Utah, Western Regional Coordinating Center,
Office of Surface Mining, 1999 Broadway, Suite 3320, Denver, Colorado 80202-5733

From: Field Manager

Subject: Resource Recovery and Protection Plan (R2P2), Wild Horse Ridge Mine,
Co-Op Mining Company

The Bureau of Land Management has received and reviewed the subject R2P2 as part of the permit application package for the new Wild Horse Ridge modification to the Bear Canyon Mine. This permit modification is to add Federal coal leases U-020668 and U-38727 and associated private lands and coal to the Bear Canyon Mine permit. This memorandum documents the Bureau's finding for the R2P2 and post-mining land uses as required by the laws governing the Federal coal lease and the public lands.

Co-Op has submitted mining and reclamation plans to access the coal under Wild Horse Ridge, across the canyon from the current Bear Canyon Mine. Though new portals will be constructed, coal loading and support structures will remain the same with only new coal haulage and portal facilities constructed. The coal under these two leases are most logically accessed via new portals. The R2P2 has been reviewed by this office and we find it complete and technically adequate. Though most of the lands involved with this permit addition are managed by the Forest Service, some lands are public lands managed by our agency. These lands are compatible with the current land use plan and we have no post-mining land use concerns with this project.

Therefore, the BLM concurs with the submitted Wild Horse Ridge Mine Plan addition with regard to post-mining land use on public lands and the protection of non-mineral resources. Also, the submitted R2P2 is in compliance with the Mineral Leasing Act of 1920, as amended, the lease terms and conditions, the regulations at 43 CFR 3480, and will achieve maximum economic recovery of the Federal coal. We recommend that the Secretary approve the R2P2 as part of the permit application. If you have any questions, please contact Stephen Falk of my staff at (435) 636-3600.

Sincerely,

Thomas E. Rasmussen
Assistant Field Manager

cc: UT-921, Utah State Office
Utah Division of Oil, Gas and Mining
1594 West North Temple, Suite 1210
Salt Lake City, Utah 84114-5801
Co-Op Mining Company
P. O. Box 1245
Huntington, Utah 84528



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)

September 19, 2000

Mr. Darron Haddock, Permit Supervisor
Utah Division Oil, Gas, and Mining
1594 West North Temple, Suite 1210
P.O. Box 145801
Salt Lake City, Utah 84114-5801

00-09-22-05

RE: Section 7 Consultation on the Wild Horse Ridge Mine application, Co-Op Mining Company, Bear Canyon Mine, ACT/015/025-SR98(1)

Dear Mr. Haddock:

The U.S. Fish and Wildlife Service (Service) has reviewed your letter of September 11, 2000. We concur with your "not likely to adversely affect" determination for threatened and endangered species.

Potential impacts to proposed or listed species from mining activities have been previously addressed in the Service's September 24, 1996 Biological Opinion and Conference Report on Surface Coal Mining and Reclamation Operations under the Surface Coal Mining and Reclamation Act of 1977. As part of the terms and conditions of this BO, the regulatory authority must implement and require compliance with any species-specific protective measures developed by the Service field office and the regulatory authority. No species-specific protective measures are considered necessary for the subject project.

Should project plans change, or if additional information on the distribution of listed or proposed species becomes available, this determination may be reconsidered. Only a Federal agency can enter into formal Endangered Species Act section 7 consultation with the Service. A Federal agency may designate a non-Federal representative to conduct informal consultation or prepare a biological assessment by giving written notice to the Service of such a designation. The ultimate responsibility for compliance with ESA section 7, however, remains with the Federal agency.

As you are aware, the peregrine falcon was removed from the federal list of endangered and threatened species per Final Rule of August 25, 1999 (64 FR 46542). Protection is still provided for this species under authority of the Migratory Bird Treaty Act (16 U.S.C. 703-712) which makes it unlawful to take, kill, or possess migratory birds, their parts, nests, or eggs. When taking of migratory birds is determined by the applicant to be the only alternative, application for

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federal and state permits must be made through the appropriate authorities. For take of raptors, their nests, or eggs, Migratory Bird Permits must be obtained through the Service's Migratory Bird Permit Office in Denver at (303) 236-8145.

We recommend use of the *Utah Field Office Guidelines for Raptor Protection from Human and Land Use Disturbances* which were developed in part to provide consistent application of raptor protection measures statewide and provide full compliance with environmental laws regarding raptor protection. Raptor surveys and mitigation measures are provided in the Raptor Guidelines as recommendations to ensure that proposed projects will avoid adverse impacts to raptors, including the peregrine falcon.

We understand that you are developing a raptor habitat enhancement project for the Bear Canyon Mine in coordination with the Utah Division Wildlife Resources. We commend your ongoing efforts to ensure protection for raptor species during coal mine development.

We appreciate your interest in conserving endangered species and migratory birds. If further assistance is needed or you have any questions, please contact Laura Romin, Wildlife Biologist, at (801) 524-5001 extension 142.

Sincerely,

Lucy A. Jordan



Reed E. Harris
Utah Field Supervisor

cc: Sandy Vana-Miller, Office of Surface Mining, 1999 Broadway, Suite 3320, Denver, CO 80202



United States
Department of
Agriculture

Forest
Service

Manti-La Sal
National Forest

Supervisor's Office
599 West Price River Drive
Price, UT 84501
Phone # (435) 637-2817
Fax# (435) 637-4940

File Code: 2820-4

Date: May 21, 2001

State of Utah
Department of Natural Resources
Division of Oil, Gas and Mining
Attn: Paul Baker
1594 West North Temple, Suite 1210
P.O. Box 145801
Salt Lake City, UT 84114-5801

Re: Addition of Wild Horse Ridge Leases to Bear Canyon Mine, Co-op Mining Company,
Bear Canyon Mine, ACT/015/025-SR98-1, Folder #2, Emery County, Utah

Dear Paul:

The Manti-La Sal National Forest has completed our review of the latest information submitted for the Wild Horse Ridge Amendment to the Bear Canyon Mine MRP. All of our comments submitted on March 15, 2001, have been adequately addressed. We now consent to the amendment. This consent does not include any mining which would cause escarpment failure.

We request that spring 16-7-24-3, which is located just outside the Forest boundary, be added to the list for monitoring. Page 129 of the "Probable Hydrologic Consequences" by Mayo and Associates contains a statement that this spring may be disrupted by mining.

Please contact Dale Harber at (435) 636-3548 if you have any questions.

Sincerely,

ELAINE J. ZIEROTH
Forest Supervisor



State of Utah

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



Michael O. Leavitt
Governor
Max J. Evans
Director

300 Rio Grande
Salt Lake City, Utah 84101-1182
(801) 533-3500 FAX: 533-3503 TDD: 533-3502
ushs@history.state.ut.us http://history.utah.org

February 14, 2001

Paul Baker
Division of Oil, Gas and Mining
1594 West North Temple, Suite 1210
P.O. Box 145801
Salt Lake City UT 84114-5801

*Copy [redacted] to Paul
Healey
2/10/02*

RE: Wild Horse Ridge Permit Revision, Co-Op Mining Company, Bear Canyon Mine,
ACT/015/025-SR99(1), Folder #2, Emery County, Utah

In Reply Please Refer to Case No. 95-0996

Dear Mr. Baker:

The Utah State Historic Preservation Office received the above referenced information. The report states that no cultural resources were located in the project area. We, therefore, concur with the report's recommendation of No Historic Properties Affected.

This information is provided on request to assist with Section 106 responsibilities pursuant to §36CFR800. If you have questions, please contact me at (801) 533-3555. My email address is: jdykman@history.state.ut.us

As ever,

James L. Dykmann
Compliance Archaeologist

JLD:95-0996 DOGM



State of Utah

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



cc: Paul
Daron

Michael O. Leavitt
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December 20, 1999

Daron R. Haddock
Permit Supervisor
Division of Oil, Gas and Mining
1594 West North Temple, Suite 1210
P.O. Box 145801
Salt Lake City UT 84114-5801

RE: Wild Horse Ridge Permit Revision, Co-Op Mining Company, Bear Canyon Mine,
ACT/015/025-SR99(1), Folder #2, Emery County, Utah

In Reply Please Refer to Case No. 95-0996

Dear Mr. Haddock:

The Utah State Historic Preservation Office received the above referenced information on December 7, 1999. After consideration of the treatment plan for Bear Creek Rock Shelter, 42EM 1572, the Utah Preservation Office concurs with the determination of No Historic Properties Affected based on avoidance of the archaeological site.

This information is provided on request to assist with Section 106 responsibilities as specified in §36CFR800. If you have questions, please contact me at (801) 533-3555. My email address is: jdykman@history.state.ut.us

As ever,

James L. Dykman
Compliance Archaeologist

JLD:95-0996 OSM/NPA

UNITED STATES

DEPARTMENT OF THE INTERIOR

This mining plan approval document is issued by the United States of America to:

Co-Op Mining Company
P.O. Box 1245
Huntington, Utah 84528

for a mining plan modification for Federal leases U-020668 and U-38727 at the Bear Canyon Mine. This mining plan approval supplements all previous mining plan approvals for the Bear Canyon Mine. The approval is subject to the following conditions. Co-Op Mining Company is hereinafter referred to as the operator.

1. Statutes and Regulations. This mining plan approval is issued pursuant to Federal leases U-020668 and U-38727; the Mineral Leasing Act of 1920, as amended (30 U.S.C. 181 et seq.); and in the case of acquired lands, the Mineral Leasing Act for Acquired Lands of 1947, as amended (30 U.S.C. 351 et seq.). This mining plan approval is subject to all applicable regulations of the Secretary of the Interior which are now or hereafter in force; and all such regulations are made a part hereof. The operator shall comply with the provisions of the Water Pollution Control Act (33 U.S.C. 1251 et seq.), the Clean Air Act (42 U.S.C. 7401 et seq.), and other applicable Federal laws.
2. This document approves the mining plan modification for Federal leases U-020668 and U-38727 at the Bear Canyon Mine and authorizes coal development or mining operations on the Federal leases within the area of mining plan approval. This mining plan approval document authorizes coal mining operations in:

Federal coal lease U-020668:

Township 16 South, Range 7 East, SLM Utah
Section 25, SE1/4NE1/4, NE1/4SE1/4;

Township 16 South, Range 8 East, SLM, Utah
Section 30, Lots 1-4, W1/2NE1/4, NW1/4SE1/4
Section 31, NE1/4NW1/4, NW1/4NE1/4;

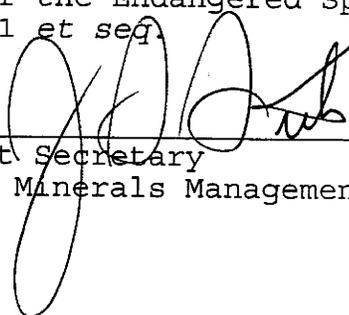
Federal Coal Lease U-38727:

Township 16 South, Range 7 East SLM, Utah
Section 24, SE1/4NE1/4, E1/2SE1/4
Section 25, N1/2NE1/4, SW1/4NE1/4, SW1/4NW1/4, NW1/4SW1/4,
W1/2SE1/4, SE1/4SE1/4;

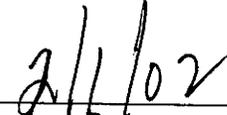
Township 16 South, Range 8 East, SLM, Utah
Section 19, Lots 2, 3, and 4, SE1/4NW1/4, E1/2SW1/4,
SW1/4SE1/4;

comprising about 1367 acres, as shown on the map appended hereto as Attachment A.

3. The operator shall conduct coal development and mining operations only as described in the complete permit application package, and approved by the Utah Division of Oil, Gas, and Mining, except as otherwise directed in the conditions of this mining plan approval.
4. The operator shall comply with the terms and conditions of the leases, this mining plan approval, and the requirements of the Utah Permit No. C/015/025 issued under the Utah State program, approved pursuant to the Surface Mining Control and Reclamation Act of 1977 (30 U.S.C. 1201 et seq.).
5. This mining plan approval shall be binding on any person conducting coal development or mining operations under the approved mining plan and shall remain in effect until superseded, canceled, or withdrawn.
6. If during mining operations unidentified prehistoric or historic resources are discovered, the operator shall ensure that the resources are not disturbed and shall notify Utah Division of Oil, Gas, and Mining and the Office of Surface Mining Reclamation and Enforcement (OSM). The operator shall take such actions as are required by Utah Division of Oil, Gas, and Mining in coordination with OSM.
7. The Secretary retains jurisdiction to modify or cancel this approval, as required, on the basis of further consultation with the U.S. Fish and Wildlife Service pursuant to section 7 of the Endangered Species Act, as amended, 16 U.S.C. §§ 1531 et seq.



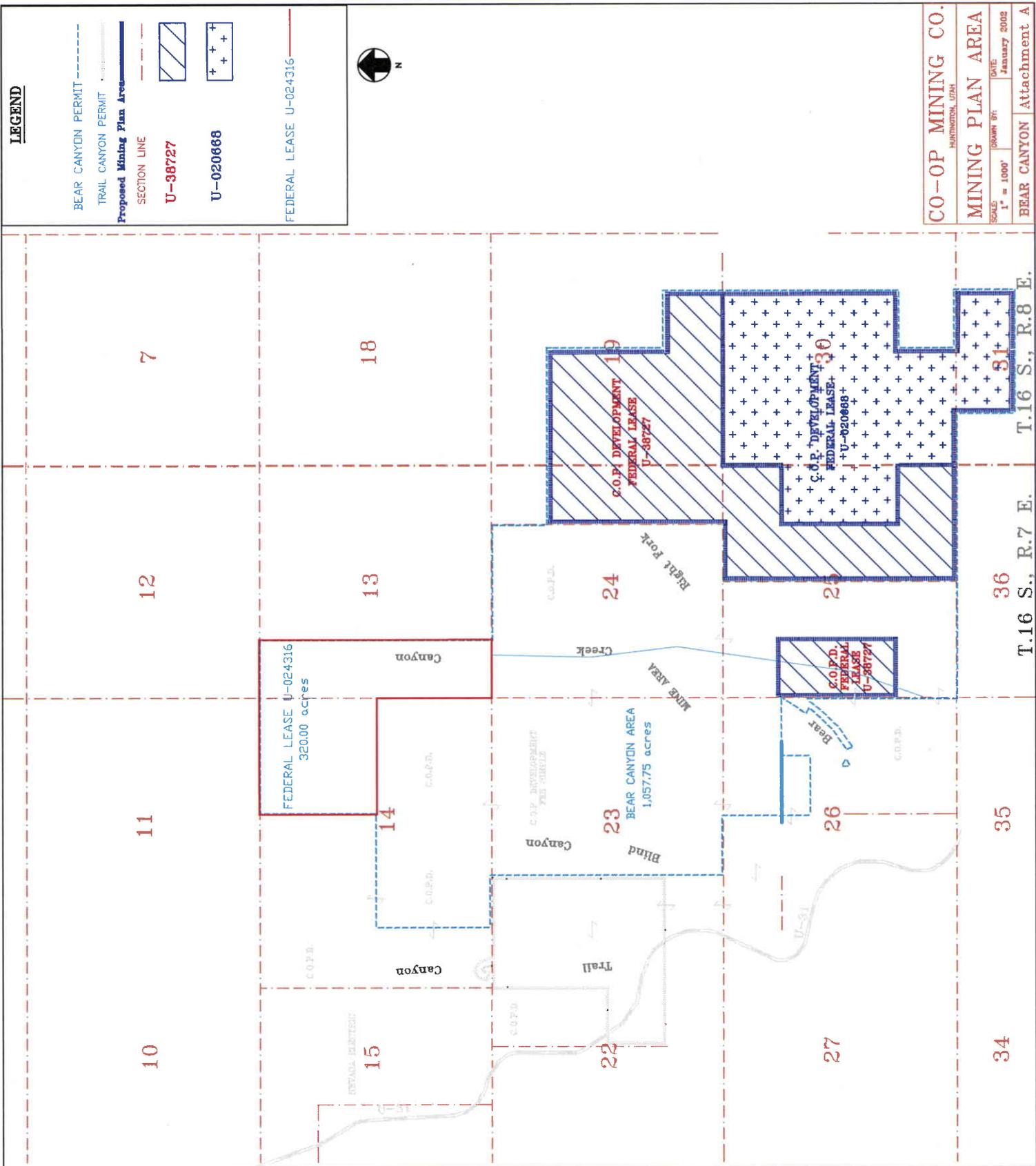
Assistant Secretary
Land and Minerals Management



Date

LEGEND

- BEAR CANYON PERMIT 
- TRAIL CANYON PERMIT 
- Proposed Mining Plan Area 
- SECTION LINE 
- U-38727 
- U-020688 
- FEDERAL LEASE U-024316 



CO-OP MINING CO.
HUNTINGTON, UTAH

MINING PLAN AREA

SCALE: 1" = 1000'

DRAWN BY: _____ DATE: January 2008

BEAR CANYON Attachment A

FINDINGS

Co-Op Mining Company
Bear Canyon Mine
Wild Horse Ridge Revision
Includes Federal Leases U-020668 and U-38727
C/015/025
Emery County, Utah

July 3, 2001

1. With the stipulation that underground coal mining and reclamation activities in federal leases U-020668 and U-38727 may not commence until a mining plan approval is authorized by the Secretary of the Interior, the revised plan and the permit application is accurate and complete and all requirements of the Surface Mining Control and Reclamation Act and the approved Utah State Program (the "Act") have been complied with. Refer to June 21, 2001, Technical Analysis (R645-300-133.100)
2. The proposal includes the addition of 7.3 acres of new disturbance in the Right Fork of Bear Canyon. Co-Op has demonstrated that reclamation as required by the State Program can be accomplished according to information given in the permit application. See Technical Analysis dated June 21, 2001 (R645-300-133.710).
3. An assessment of the probable cumulative impacts of all anticipated coal mining and reclamation activities in the general area on the hydrologic balance has been conducted by the Division and no significant impacts were identified. The Mining and Reclamation Plan (MRP) proposed under the revised application has been designed to prevent damage to the hydrologic balance in the permit area and in associated off-site areas. See CHIA updated for mining in the Wild Horse Ridge area dated June 21, 2001. (R645-300-133.400 and UCA 40-10-11 (2)(c)).
4. The proposed lands to be included within the permit area are:
 - a. Not included within an area designated unsuitable for underground coal mining operation (R645-300-133.220);
 - b. Not within an area under study for designated land unsuitable for underground coal mining operations (R645-300-133.210);
 - c. Not on any lands subject to the prohibitions or limitation of 30 CFR 761.11 {a} (national parks, etc), 761.11{f} (public buildings, etc.) and 761.11 {g} (cemeteries);

- d. Not within 100 feet of a public road (R645-300-133.220); and
 - e. Not within 300 feet of any occupied dwelling (R645-300-133.220).
5. The operation would not affect the continued existence of any threatened or endangered species or result in the destruction or adverse modification of their critical habitats as determined under the Endangered Species Act of 1973 (16 USC 1531 et seq.) See concurrence letter from United States Fish and Wildlife, dated September 19, 2000. (R645-300-133.500)
 6. The Division's issuance of a permit is in compliance with the National Historic Preservation Act and implementing regulations (36 CFR 800). See letters from State Historic Preservation Office, dated September 20, 1999 and February 14, 2001. (R645-300-133.600)
 7. The applicant has the legal right to enter and conduct mining activities in the Wild Horse Ridge Area by virtue of fee and federal coal leases held by C.O.P. coal Development Company and leased to co-Op Mining Company. Mining may not commence in federal leased Lease U-038727 and U-0020668 until federal mining plan approval is authorized by the Secretary of the Interior. (See Appendix 2-B of PAP) (R645-300-133.300)
 8. A 510 (c) report has been run on the Applicant Violator System (AVS), which shows that: prior violations of applicable laws and regulations have been corrected; neither Co-Op Mining Company nor any affiliated company, are delinquent in payment of fees for the Abandoned Mine Reclamation Fund; and the applicant does not control and has not controlled mining operations with demonstrated pattern of willful violations of the Act of such nature, duration, and with such resulting irreparable damage to the damage to the environment as to indicate an intent not to comply with the provisions of the Act (A 510 (c) report was verified on July 2, 2001, see memo to file dated July 2, 2001.) (R645-300-133.730)
 9. Underground mining operations to be performed under the permit will not be inconsistent with other operations anticipated to be performed in areas adjacent to the proposed permit area.
 10. The applicant has provided adequate reclamation bondⁿ by posting a surety bond for the Bear Canyon Mine payable to the Division and the Office of Surface Mining in the amount of \$1, 814,000. (R645-300-134)
 11. No lands designated as prime farmlands or alluvial valley floors occur on the permit area. (R645-302-313.100 and R645-302-321.100)
 12. The proposed postmining land-use of the permit area is the same as the pre-

mining land use and has been approved by the Division and the surface land management agency, the United States Forest Service. (Consent letter dated May 21, 2001.)

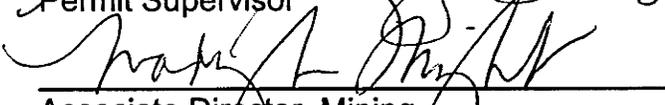
13. The Division has made all specific approvals required by the Act, the Cooperative Agreement, and the Federal Lands Program.
14. All procedures for public participation required by the Act, and the approved Utah State Program are in compliance. A public hearing was held on February 22, 2000 and all orders resulting from the hearing have been resolved. See Technical Analysis dated June 21, 2001 and Affidavits of Publication, dated December 28, 1999. (R645-300-120)
15. No existing structures will be used in conjunction with mining of the Wild Horse Ridge extension, other than those constructed in compliance with the performance standards of R645-301 and R645-302 (R645-300-133.720)



Permit Supervisor



Permit Supervisor



Associate Director, Mining



Director

FEDERAL

PERMIT
C/015/025

July 3, 2001
(Revised)

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING
1594 West North Temple, Suite 1210
Salt Lake City, Utah 84114-5801
(801) 538-5340

This permit, C/015/025, is issued for the state of Utah by the Utah Division of Oil, Gas and Mining (Division) to:

Co-Op Mining Company
P. O. Box 1245
Huntington, Utah 84528
(435) 687-2450

for the Bear Canyon Mine. A performance bond is filed with the Division in the amount of \$1,825,000 payable to the State of Utah, Division of Oil, Gas and Mining and the United States Department of Interior, Office of Surface Mining Reclamation and Enforcement. The Division must receive a copy of this permit signed and dated by the permittee.

Sec. 1 STATUTES AND REGULATIONS - This permit is issued pursuant to the Utah Coal Mining and Reclamation Act of 1979, Utah Code Annotated (UCA) 40-10-1 et seq, hereafter referred to as the Act.

Sec. 2 PERMIT AREA - The permittee is authorized to conduct coal mining and reclamation operations on the following described lands within the permit area at the Bear Canyon Mine, situated in the state of Utah, Emery County, and located:

Township 16 South, Range 7 East, SLBM

Section 13: W1/2W1/2;
Section 14: S1/2, NE1/4;
Section 23: E1/2, E1/2W1/2;
Section 24: W1/2, W1/2E1/2, E1/2SE1/4, SE1/4NE1/4;
Section 25: All;
Section 26: NE1/4 NE1/4, NW1/4 NE1/4, N1/2 SW1/4 NE1/4 and the access/haul road and topsoil storage area as shown on Plate 2-1 of the Mining and Reclamation Plan

Township 16 South, Range 8 East, SLBM

Section 19: S1/2NW1/4, SW1/4, SW1/4SE1/4;
Section 30: W1/2, W1/2NE1/4, NW1/4SE1/4;
Section 31: NE1/4NW1/4, NW1/4NE1/4

This legal description is for the permit area of the Bear Canyon Mine. The permittee is authorized to conduct coal mining and reclamation operations connected with mining on the foregoing described property subject to the conditions of the leases, the approved mining plan, including all conditions and all other applicable conditions, laws and regulations.

Sec. 3 COMPLIANCE - The permittee will comply with the terms and conditions of the permit, all applicable performance standards and requirements of the State Program.

Sec. 4 PERMIT TERM - This permit expires on November 2, 2005.

Sec. 5 ASSIGNMENT OF PERMIT RIGHTS - The permit rights may not be transferred, assigned or sold without the approval of the Director, DOGM. Transfer, assignment or sale of permit rights must be done in accordance with applicable regulations, including but not limited to 30 CFR 740.13{e} and R645-303.

Sec. 6 RIGHT OF ENTRY - The permittee shall allow the authorized representative of the DOGM, including but not limited to inspectors, and representatives of the OSMRE, without advance notice or a search warrant, upon presentation of appropriate credentials, and without delay to:

- (a) Have the rights of entry provided for in 30 CFR 840.12, R645-400-110, 30 CFR 842.13 and R645-400-220;
- (b) Be accompanied by private persons for the purpose of conducting an inspection in accordance with R645-400-210 and 30 CFR 842, when the inspection is in response to an alleged violation reported to the Division by the private person.

Sec. 7 SCOPE OF OPERATIONS - The permittee shall conduct underground coal mining activities only on those lands specifically designated as within the permit area on the maps submitted in the approved plan and approved for the term of the permit and which are subject to the performance bond.

Sec. 8 ENVIRONMENTAL IMPACTS - The permittee shall minimize any adverse impact to the environment or public health and safety through but not limited to:

- (a) Any accelerated monitoring to determine the nature and extent of noncompliance and the results of the noncompliance;
- (b) Immediate implementation of measures necessary to comply; and

- (c) Warning, as soon as possible after learning of such noncompliance, any person whose health and safety is in imminent danger due to the noncompliance.

Sec. 9 DISPOSAL OF POLLUTANTS - The permittee shall dispose of solids, sludge, filter backwash or pollutants in the course of treatment or control of waters or emissions to the air in the manner required by the approved Utah State Program and the Federal Lands Program which prevents violation of any applicable state or federal law.

Sec. 10 CONDUCT OF OPERATIONS - The permittee shall conduct its operations:

- (a) In accordance with the terms of the permit to prevent significant, imminent environmental harm to the health and safety of the public; and
- (b) Utilizing methods specified as conditions of the permit by DOGM in approving alternative methods of compliance with the performance standards of the Act, the approved Utah State Program and the Federal Lands Program.

Sec. 11 EXISTING STRUCTURES - As applicable, the permittee will comply with R645-301 and R645-302 for compliance, modification, or abandonment of existing structures.

Sec. 12 RECLAMATION FEE PAYMENTS - The operator shall pay all reclamation fees required by 30 CFR Part 870 for coal produced under the permit, for sale, transfer or use.

Sec. 13 AUTHORIZED AGENT - The permittee shall provide the names, addresses and telephone numbers of persons responsible for operations under the permit to whom notices and orders are to be delivered.

Sec. 14 COMPLIANCE WITH OTHER LAWS - The permittee shall comply with the provisions of the Water Pollution Control Act (33 USC 1151 et seq), and the Clean Air Act (42 USC 7401 et seq), UCA 26-11-1 et seq, and UCA 26-13-1 et seq.

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 DOGM. DOGM, after coordination with OSMRE, shall inform the permittee of necessary actions required. The permittee shall implement the mitigation measures required by DOGM within the time frame specified by DOGM.

Sec. 17 APPEALS - The permittee shall have the right to appeal as provided for under R645-300.

Sec. 18 SPECIAL CONDITIONS - There are special conditions associated with this permitting action, as described in 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 DOGM and the permittee at any time to adjust to changed conditions or to correct an oversight. DOGM 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: Jewel P. Bradford

Date: 7/3/01

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: _____

ATTACHMENT A
Special Conditions

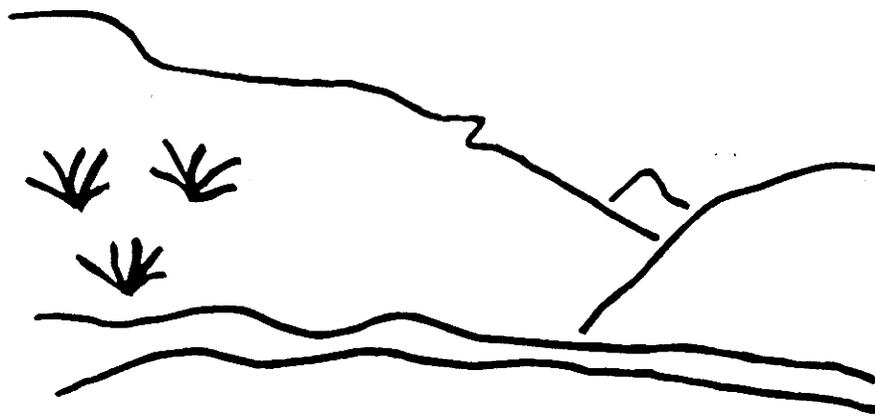
1. Underground coal mining and reclamation activities in federal coal leases U-038727 and U-0020668 may not commence until a mining plan approval is authorized by the Secretary of the Interior.

2. Co-Op Mining Company will submit water quality data for the Bear Canyon Mine beginning with data for the first quarter of 2001 in an electronic format through the Electronic Data Input web site,
<http://hlunix.hl.state.ut.us/cgi-bin/appx-ogm.cgi>.

3. "Drainage or pumping of in-mine water to the old mine working north of the Big Bear and Birch Spring will be controlled and monitored as stipulated by the Division with revision of that procedure only as directed by the Division and with the prior approval of the Division." (Division Order, Informal Hearing, Cause No. ACT/015/025, Dated May 20, 1991, as Modified on April 18, 1997.)

DIVISION TECHNICAL ANALYSIS

State of Utah



Utah Oil Gas and Mining

Coal Regulatory Program

Bear Canyon Mine
Wild Horse Ridge Revision
C/015/025-SR98(1)-5
Technical Analysis
June 21, 2001

TABLE OF CONTENTS

INTRODUCTION.....	1
GENERAL CONTENTS.....	5
IDENTIFICATION OF INTERESTS	5
VIOLATION INFORMATION.....	5
RIGHT OF ENTRY	6
LEGAL DESCRIPTION AND STATUS OF UNSUITABILITY CLAIMS.....	6
PERMIT TERM.....	7
PUBLIC NOTICE AND COMMENT.....	7
FILING FEE	8
ENVIRONMENTAL RESOURCE INFORMATION	9
GENERAL.....	9
PERMIT AREA.....	9
HISTORIC AND ARCHEOLOGICAL RESOURCE INFORMATION	10
CLIMATOLOGICAL RESOURCE INFORMATION.....	11
VEGETATION RESOURCE INFORMATION.....	11
FISH AND WILDLIFE RESOURCE INFORMATION	12
Wildlife Information	12
Threatened and Endangered Species	13
SOILS RESOURCE INFORMATION.....	14
Prime Farmland Investigation.....	14
Soil Survey Information.....	14
Soil Characterization.....	16
Substitute Topsoil	19
LAND-USE RESOURCE INFORMATION.....	19
ALLUVIAL VALLEY FLOORS.....	20
Alluvial valley floor determination.....	20
PRIME FARMLAND.....	20
GEOLOGIC RESOURCE INFORMATION	21
HYDROLOGIC RESOURCE INFORMATION	23
Sampling and Analysis	23
Baseline Information.....	23
Ground-water Information.....	23
Surface Water Information	27
Baseline Cumulative Impact area Information	27
Modeling.....	28
Alternative Water Source Information.....	28
Probable Hydrologic Consequences Determination.....	28
MAPS, PLANS, AND CROSS SECTIONS OF RESOURCE INFORMATION	29
Affected Area Boundary Maps.....	29
Archeological Site Maps.....	29
Cultural Resource Maps.....	29
Existing Structures and Facilities Maps.....	29
Existing Surface Configuration Maps.....	29

TABLE OF CONTENTS

Return of coal processing waste to abandoned underground workings.....	50
Excess spoil.....	51
HYDROLOGIC INFORMATION	51
Ground-water monitoring	51
Surface-water monitoring	52
Acid and toxic-forming materials	52
Transfer of wells	52
Discharges into an underground mine	52
Gravity discharges	53
Water quality standards and effluent limitations	53
Diversions	53
Stream buffer zones	53
Sediment control measures	54
Siltation structures	55
Sedimentation ponds.....	55
Other treatment facilities.....	56
Exemptions for siltation structures	56
Discharge structures.....	56
Impoundments.....	56
Casing and sealing of wells.....	57
SUPPORT FACILITIES AND UTILITY INSTALLATIONS	58
SIGNS AND MARKERS	58
USE OF EXPLOSIVES	58
MAPS, PLANS, AND CROSS SECTIONS OF MINING OPERATIONS	60
Affected area maps	60
Mining facilities maps.....	60
Mine workings maps.....	60
RECLAMATION PLAN	61
GENERAL REQUIREMENTS	61
POSTMINING LAND USES	62
PROTECTION OF FISH, WILDLIFE, AND RELATED ENVIRONMENTAL VALUES ...	62
APPROXIMATE ORIGINAL CONTOUR RESTORATION	62
BACKFILLING AND GRADING	65
MINE OPENINGS	66
TOPSOIL AND SUBSOIL	66
Soil Redistribution	66
Soil Nutrients and Amendments	67
Soil Stabilization.....	68
ROAD SYSTEMS AND OTHER TRANSPORTATION FACILITIES	68
Reclamation	68
Retention	69
HYDROLOGIC INFORMATION	69
Ground-water monitoring	69
Surface-water monitoring	70

INTRODUCTION

TECHNICAL ANALYSIS

INTRODUCTION

The proposed Wild Horse Ridge significant revision amendment to the Bear Canyon Mine MRP, was received by the Division on December 18, 1998. This significant revision is for the addition of Federal Leases U-020668 and U-38727 and fee coal. The proposed leases are east of the Bear Canyon Fault, and the proposal includes new surface facilities in the Right Fork of Bear Canyon. The Division determined the amendment to be Administratively Complete on November 3, 1999. The first technical review completed on January 24, 2000, found the amendment deficient. The package was resubmitted on May 8, 2000, and the Division sent its technical analysis July 28, 2000. The applicant responded with on January 24, 2001, with additional information received in March 2001. The Division sent its technical analysis of this submittal on April 17, 2001, and the Division received the current submittal from Co-Op on April 27, 2001.

The Division has received concurrence letters from the State Historic Preservation Office, the Fish and Wildlife Service, and the Forest Service, which manages much of the surface within the proposed addition to the permit area. The Bureau of Land Management has not concurred because there is not yet an approved resource recovery and protection plan. Before Co Op Mining Company begins mining federal coal; they will need concurrence from the Bureau of Land Management. They will also need federal mine plan approval.

SUMMARY OF PERMIT CONDITIONS

As determined in this technical analysis, approval of the plan is subject to the following permit condition. The applicant is subject to compliance with this permit condition and must commit to comply with the requirements of this condition in the approved permit. Accordingly, the permittee must comply with the requirements of the following permit condition, as specified:

The Resource Recovery and Protection Plan is still being reviewed by the BLM and the determination of maximum economic recovery is still pending; therefore, underground coal mining and reclamation activities in federal coal leases U-038727 and U-0020668 may not commence until a mining plan approval is authorized by the Secretary of the Interior.

GENERAL CONTENTS

GENERAL CONTENTS

IDENTIFICATION OF INTERESTS

Regulatory Reference: 30 CFR 773.22; 30 CFR 778.13; R645-301-112

Analysis:

Chapter 1 of the mining and reclamation plan is an introduction describing where information is located in the plan, and proposed changes are minor and general in nature.

Ownership and control information is in Chapter 2. The applicant is Co-Op Mining Company, and the mining and reclamation plan includes Co-Op's address, telephone number, resident agent, and employer identification number. The application also shows the officers and directors of CW Mining Company, a corporation which is doing business as Co-Op Mining Company. Thus, these people are, in effect, the officers and directors of Co-Op Mining Company. CW Mining Company will pay the abandoned mine reclamation fee.

Table 2-1 shows property ownership in and contiguous to the current and proposed addition to the permit area. This information and the legal description in Section 2.2.2 correspond with the information on Plates 2-1 and 2-2 and appear to be correct.

The current plan includes MSHA numbers for the Bear Canyon No. 1 and No. 2 Mines, and the application shows an MSHA number for the proposed facilities the Bear Canyon No. 3 Mine. The MSHA number for the Bear Canyon No. 4 Mine will be included during phase II of Wild Horse Ridge permitting (not yet proposed).

Findings:

Information provided in the proposal is adequate to meet the requirements of this section of the regulations.

VIOLATION INFORMATION

Regulatory Reference: 30 CFR 773.15(b); 30 CFR 773.23; 30 CFR 778.14; R645-300-132; R645-301-113

Analysis:

Appendix 2-A of the current mining and reclamation plan has a list of notices of violation and other enforcement actions taken by the Division, the Office of Surface Mining, and the Division of Air Quality. The applicant has received no violation notices in the past three years.

GENERAL CONTENTS

According to the current mining and reclamation plan, no portion of the area to be permitted is within an area designated as unsuitable for mining, and it has several paragraphs, some of which were revised for this submittal, describing why it should not be considered unsuitable. The Division is unaware of any study or petition for designation as unsuitable.

Findings:

Information provided in the proposal is adequate to meet the requirements of this section of the regulations.

PERMIT TERM

Regulatory References: 30 CFR 778.17; R645-301-116.

Analysis:

The term of the permit will not change with the addition of the Wild Horse Ridge leases. The permit term is five years with right of successive renewal. The life of the mine will be extended several years as a result of this action.

The Division has on file a copy of the applicant's insurance policy, and it meets regulatory requirements.

No facilities would be used in common with any other permitted operation.

Findings:

Information provided in the proposal is adequate to meet the requirements of this section of the regulations.

PUBLIC NOTICE AND COMMENT

Regulatory References: 30 CFR 778.21; 30 CFR 773.13; R645-300-120; R645-301-117.200.

Analysis:

The application includes a copy of the proof of publication. The advertisements ran from December 7 through December 28, 1999, in *The Salt Lake Tribune*, the *Deseret New*, and the *Emery County Progress*. The public comment period expired on January 27, 2000, and the Division received a request for an informal conference on January 27, 2000. The request was from J. Craig Smith and Scott M. Ellsworth of Nielsen and Senior representing the Huntington-

ENVIRONMENTAL RESOURCE INFORMATION

ENVIRONMENTAL RESOURCE INFORMATION

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

GENERAL

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

Analysis:

Analyses of the existing, premining environmental resources within the permit and adjacent area that may be affected or impacted by the proposed underground mining activities are discussed under other headings in this technical analysis.

Findings:

A determination of adequacy for this section will be determined to meet the regulatory requirements when all other information in this technical analysis is determined adequate. The Division has determined that each section of the application is complete and accurate.

PERMIT AREA

Regulatory Requirements: 30 CFR 783.12; R645-301-521.

Analysis:

The permit area is described in Section 2.2.2 of the PAP and shown on Plate 2-1, Permit Area Map. The permit area has the following boundaries:

Township 16 South, Range 7 East, SLBM

- Section 13: W1/4
- Section 14: S1/2, NE1/4
- Section 23: E1/2, E1/2 W1/2
- Section 24: W1/2, SE1/4, W1/2 NE1/4, SE1/4 NE1/4
- Section 25: ALL
- Section 26: NE1/4 NE1/4, NW1/4 NE1/4, N1/2 SW1/4 NE1/4

Township 16 South, Range 8 East, SLBM

- Section 19: S1/2 NW1/4, SW1/4, SW1/4 SE1/4
- Section 30: W1/2, W1/2 NE1/4, NW1/4 SE1/4
- Section 31: NE1/4 NW1/4, NW1/4 NE1/4

ENVIRONMENTAL RESOURCE INFORMATION

It is not clear from the report done by Kenneth Juell whether his report includes all available information about cultural resources in the area. In response to this concern, the applicant has included a commitment to conduct a literature search for all records of cultural resources in the area before doing any retreat mining. According to the applicant's representative, retreat mining should not occur for about four years.

Findings:

Information in the application is adequate to meet the requirements of this section of the regulations.

CLIMATOLOGICAL RESOURCE INFORMATION

Regulatory Reference: 30 CFR 783.18; R645-301-724.

Analysis:

The Mayo and Associates PHC, August 1999 incorporates current climatic information into the plan. Average annual precipitation varied between 10 and 15 inches from lower elevation gauging stations within the permit and adjacent area. Average annual precipitation at the higher elevation stations was 29 to 33 inches. The Palmer Hydrologic Drought Index for Utah Division 4 and Division 5 climatic regions are presented and discussed.

Findings:

The application meets the minimum requirements for this section.

VEGETATION RESOURCE INFORMATION

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

Analysis:

Appendix 9-G is a report on the vegetation of the area that would be disturbed. It includes quantitative measurements of vegetative cover and woody plant density in the proposed disturbed area and a reference area. It also contains measurements of vegetation productivity.

The proposed disturbed area has a variety of vegetation communities because there is a variety of aspects and soils over the length of the proposed conveyor and road. Except for the facilities area, disturbances would be fairly narrow and small in each community, so the

ENVIRONMENTAL RESOURCE INFORMATION

The right fork of Bear Creek consistently has water in a few places, but it is not a fishery.

The Division has consulted with the Division of Wildlife Resources concerning the adequacy of wildlife information in the application and in the current mining and reclamation plan. The applicant has updated the raptor nesting information as a result of the survey conducted earlier this spring.

Threatened and Endangered Species

Most threatened or endangered species that could occur in Emery County occur at lower elevations than the mine and have no habitat in the proposed disturbed area. These are Barneby reed-mustard, Jones cycladenia, last chance Townsendia, Maguire daisy, Despain footcactus, Wright fishhook cactus, and the Winkler cactus. There have been no confirmed sightings of black-footed ferrets in Emery County in several years.

Bald eagles are common in the area during the winter and could occasionally fly through or roost in the proposed addition to the permit area. Mining would have negligible effects on these birds.

The proposed disturbed area does not contain habitat for the southwestern willow flycatcher, but it is not known whether suitable habitat exists in other parts of the proposed permit area addition. The proposed disturbed area has some willows and riparian vegetation, but it was not enough that it was encountered in vegetation cover samples or that it would provide habitat for southwestern willow flycatchers. Woody plant density measurements included coyote willow at a density of 25 per acre.

Canyon sweetvetch (*Hedysarum occidentale* Var. *canone*) is listed by Region 4 of the Forest Service as a sensitive species. This species has been found in the proposed disturbed area, and locations are documented in the vegetation report in Appendix 9-G. Link trail columbine (*Aquilegia flavescens* Var. *rubicunda*), another Forest Service Region 4 sensitive species, has also been found in the area.

Findings:

Information provided in the application is adequate to meet the requirements of this section of the regulations.

ENVIRONMENTAL RESOURCE INFORMATION

- A Pathead-Cabba Complex, 30 to 70 % slopes
- B Winetti, High Elevation, 5 to 30 % slopes.
- C Winetti, High Elevation-Rock Outcrop, 10 to 30 % slopes
- D Doney, Deep, 10 to 30 % slopes
- E Datino-Guben Complex, 30 to 80 % slopes
- F Guben-Pathead Complex, 30 to 80 % slopes
- G Doney-Cabba-Podo Complex, 30 to 80 % slopes

All mapping and soil survey work were performed according to the standards of the National Cooperative Soil Survey. Based on the site-specific soil descriptions, and laboratory data, each of the soils was classified according to current NRCS soil taxonomy, and correlated with the NRCS Order II soil survey. Documentation of field data is presented in Map B-Soil Data Collection Map; Appendix C-Field Soil Profile Descriptions and Transect Data; Appendix D-Soil Profile and Landscape Photographs. Appendix F contains information comparing soil mapping units between the 1999 Order I soil survey to the NRCS Order II soil survey. Adjustment summarizations were given for each specific change in identifying and renaming soils within the Wild Horse Ridge area.

The 1990 and 1999 Order I soil survey for the Bear Canyon Mine and Wild Horse Ridge cover approximately 32 acres in Bear Canyon and in the Wild Horse Ridge mine expansion area. Approximately 480 acres are mapped on two soil maps (Plate 8-1 and Plate 8-1A) which are scaled at 1-inch equals 200-feet, with 5-foot contour intervals. A total of 10 different soil mapping units are identified. Plate 8-1 shows three soil mapping units as DZE, PDR, and TR, with "D" identified as disturbed area soils. These three mapping units are for the existing Bear Canyon Mine disturbance area. Plate 8-1A identifies the 7 soil mapping units as contained in the 1999 Order I soil survey for the Wild Horse Ridge mine expansion project as follows:

Appendix 8-F Soil Map Unit	MRP Soil Map Unit	Soil Name
A	PC	Pathead-Cabba Complex
B	WIN	Winetti, High Elevation
C	WR	Winetti, High Elevation-Rock Outcrop
D	DON	Doney, Deep
E	DG	Datino-Guben Complex
F	GP	Guben-Pathead Complex
G	DCP	Doney-Cabba-Podo Complex

Appendix 8-F identifies the approximate range and average soil salvage depth for each soil map unit, based on evaluations of all field and laboratory data, plant rooting depth and soil

ENVIRONMENTAL RESOURCE INFORMATION

In 1996, four soil pits (WHRS-1 thru WHRS-4) were analyzed in the Wild Horse Ridge planned disturbance area. Test results are included with the Order I soil Survey in Appendix F. Pit locations are shown on Plate 8-1A.

Map Unit	Map Symbol	Land Form	% Slope	Parent Material	Soil Depth	Texture	Rock Fragment Class	General Vegetation
A	PC	foothills	30-70	colluvium and shale	shallow to deep	sl, l, cl	stony to very cobbly	Pinion-Juniper
B	WIN	narrow canyon bottoms	5-30	alluvium and colluvium	deep	sl, l, ls	gravelly to bouldery	Cottonwood Douglas-fir Dogwood Wildrose
C	WR	narrow canyon bottoms	5-30	alluvium, colluvium and sandstone	shallow to deep	sl, l, ls	gravelly to bouldery	Cottonwood Douglas-fir Dogwood Wildrose
D	DON	toe slope, slight bench	10-30	colluvium, slope wash	deep	sl, l, ls	non-stony to stony	Ponderosa Pine Juniper Douglas-fir
E	DG	steep canyon slope, north aspect	30-80	colluvium and shale	moderate deep to deep	sl, l, cl	very stony to non-stony	Douglas-fir Pinion Mt. Mahogany Serviceberry
F	GP	canyon side slope	30-80	colluvium, sandstone and shale	shallow to moderate deep	sl, l, cl	very stony to bouldery	Douglas-fir Pinion Mt. Mahogany
G	DCP	steep canyon slope, south aspect	30-80	sandstone, shale and colluvium	shallow to moderate deep	sl, l, cl	very stony to non-stony	Pinion-Juniper Grass

Seven soil samples were selected from representative soil layers during soil inventory and were characterized according to the State of Utah Division of Oil, Gas and Mining (DOGM) guidelines for topsoil and overburden¹. Sampled parameters include: pH; electrical conductivity; saturation percent; SAR includes Ca, Mg, and Na; texture includes % very fine sand, sand, silt and clay; TOC includes organic matter percent; CaCO₃; Boron (CaCl₂ extraction); Selenium (AB-DPTA extraction); AWC includes 1/3 and 15 bar analyses; and ESP.

¹Leatherwood, James and Dan Duce. 1988. Guidelines for Management of Topsoil and Overburden for Underground and Surface Coal Mining. State of Utah Department of Natural Resources, Division of Oil, Gas and Mining.

ENVIRONMENTAL RESOURCE INFORMATION

for a more stable reclaimed surface, aids in water harvesting and water holding capacity of interstitial soils, and creates wildlife habitat and niches on the surface where surface boulders and larger cobble sized rocks are placed.

Substitute Topsoil

The PAP does not propose any borrow as a source for substitute topsoil. However, in 1992, in-place overburden and disturbed soils within the facilities area, were evaluated for use as substitute topsoil material. Results are contained in Appendix 8-E.

Findings:

Information provided in the application is adequate to meet the requirements of this section of the regulations.

LAND-USE RESOURCE INFORMATION

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

Analysis:

According to information in the application and the current mining and reclamation plan, the current permit area and the proposed addition are zoned by Emery County as Mining and Grazing and Critical Environmental. The land is used for mining, cattle grazing, timber, recreation, and wildlife. Parts of the area are included in a Private [Posted] Hunting Unit, and the access road to the Wild Horse Ridge surface facilities also provides access to a hunting cabin. This road will be maintained during the mining operations.

The application discusses previous mining activity in the area. Various entities have operated mines in the area since 1885.

The application says there are no public parks, cemeteries, or units of the Wild and Scenic Rivers system or the National System of Trails.

Findings:

Information in the application is adequate to meet the requirements of this section of the regulations.

GEOLOGIC RESOURCE INFORMATION

Regulatory Reference: 30 CFR 784.22; R645-301-623, -301-724.

Analysis:

Changes to the text, mostly minor, have been made on pages 6-3, 6-6, 6-10, 6-11, 6-13, 6-16, 6-18, and 6-19 of Chapter 6. The proposed permit boundary as shown on revised Plates 6-1 through 6-12 includes federal leases U-020668 and U-38727 and fee coal owned by C.O.P. Development. Plate 6-1 is the Geology Map. Plates 6-2, 6-6, and 6-10 are overburden maps, Plates 6-3, 6-7, and 6-11 are isopach thickness maps, Plates 6-4, 6-8, 6-12 are structure contour maps, and Plates 6-5 and 6-9 are interseam isopach maps. Plates 6-2 through 6-12 are based on information from numerous borings and outcrop measurements: logs from many of these borings are in the MRP.

Plates 7-9 and 7-9A are stratigraphic cross-sections. Generalized logs for bore-holes T-1, T-2, T-3, T-5, SDH-1, SDH-2, and SDH-3 are shown on Plate 7-9 and those for WHR-1, WHR-2, WHR-3, WHR-5, WHR-8, F-76-1, F-77-5, F-76-6, 77-3A, and F-77-11-A are on Plate 7-9A. The logs are not arranged on Plate 7-9A in a sequence that would usually be expected of a geologic cross section. 7-J1 and 7-J2 are stratigraphic cross-sections based on logs from bore holes SDH-1, SDH-2, MW-116, and MW-117. Well completion diagrams for SDH-1, SDH-2, SDH-3, MW-116, and MW-117 are in Appendix 7-A, but the MRP does not contain original logs for any of these bore holes. The well completion diagram for MW-114 has been submitted for inclusion in Appendix 7-A. Except for F-76-4 and F-77-B (Plate 7-9A), Plate 6-2 shows the locations for all bore-holes on Plates 7-9, 7-9A, 7J-1, and 7J-2.

Appendix 7-A also contains logs for in-mine drill-holes 1- and 2-UP and 1-, 6-, 7-, 9-, 10-, 11-, 12-, 13-, and 14-DOWN and SBC-2, -3, and -4, but locations for these are not on a map. Locations for an "H" series of in-mine bore holes are shown on Plates 6-5 and 6-7, but there are no logs for these holes in the MRP.

Drill-hole DH-3 was abandoned in 1993 and replaced by DH-4. Bore-hole logs and well completion diagrams for DH-1, DH-2, DH-3, and DH-4 are in Appendix 7N-G (p. 6-13).

Logs for drill holes TS-6 through TS-10 and TS-14 are in Appendix 6-A, but logs are not available for TS-12 and TS-13: there is apparently no TS-11. Locations for TS-6 through TS-10 are shown on Plates 6-9, 6-10, and 6-11.

There is no hydrology information available for the "WHR" series of bore-holes (Section 7.1-4, p. 7-20).

HYDROLOGIC RESOURCE INFORMATION

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

Analysis:

Sampling and Analysis

Holding time and sample analysis problems occurred at sites 16-7-13-1, 16-18-14 and 16-8-20-1. See Tables 2b and 3 in this technical analysis. For surface water site WHR-1, fluoride was not distilled for baseline data on June and August 1993; however, fluoride is no longer considered a required baseline parameter. Holding time expired on sulfate on 10/93. For all samples dissolved metals, which were filtered at lab, were received within one day. Lab sheets for all sites where data was collected in July 1991 were missing from the amendment since they could not be found. However, the data had been recorded and was submitted.

Baseline Information

Appendix 7-M, Spring and Seep inventory Federal Lease Area, provides a discussion of the seeps, springs, and streams in and adjacent to the Wild Horse Ridge addition. Attachment 7M-A, Surface and Groundwater Water Quality Information provides the lab sheets for baseline monitoring. Table 7.1-8, Water Monitoring Matrix: Operational Phase of Mining lists the proposed monitoring plan for the mine, which now includes the new addition. The surface and ground water parameters monitored remain the same as in the original Mining and Reclamation Plan. The plan clearly states that the operational monitoring will continue through reclamation to bond release. Also, the monitoring points are divided into wells, springs, and streams. This is consistent with the PHC, which is formatted in this manner, and is standard practice for coal mines that the Division regulates.

Although included, adjacent area sampling associated with the McCadden Hollow area were not reviewed. This information was not considered to be directly related to the proposed Wild Horse permit area, but will be considered applicable to the Cumulative Impact Area (CIA) information.

Ground-water Information

Numerous sources for ground water related information is found throughout the plan. The baseline information relative to groundwater, seeps, and springs in the proposed Wild Horse Ridge permit are presented in Tables 1, 2 and, 2b in this technical analysis. Data for groundwater well information, identified in Table 1, were collected in 1996 and 1997.

ENVIRONMENTAL RESOURCE INFORMATION

Table 2: Baseline Spring Sampling Wild Horse Ridge Mayo Report

Site/Location	No. Data Samples sampling period	Geology	Flow rate (gpm) Min/Max
WHR-2 Fish Creek LF-East	7 7/31/91 - 8/30/94	Tf-TKnh	0.2/20
WHR-3 Head Fish Creek	8 7/30/91 - 10/31/94	Tf	0.5/70
WHR-4/SBC-13/SBC-16 Fish Creek LF-West	8 7/30/91 - 10/31/94	Tf-TKnh	0/65
WHR-5/SBC-15 Bear Canyon RF (above coal outcrop)	8 7/31/91 - 10/30/94	Tf-TKnh	0.0/17
WHR-6/SBC-14 Bear Canyon RF (near disturbed area)	8 10/26/93 - 6/24/97	Kbh	0.5/15
WHR-7 Fish Creek LF- West	1 7/30/91	Kbh	40
WHR-8 Wild Horse Ridge	1 7/31/91	Kbh	5
16-7-24-3 Bear Canyon Cliff Face	1 3/17/99	Kbh	no flow reported- chemical analysis obtained
16-7-24-4/SBC-17 Bear Canyon Fault	1 3/17/99	Kbh	no flow reported- chemical analysis obtained

Tf- Flagstaff Formation

TF-TKnh- at the contact between the Flagstaff and North Horn Formation

Kbh-Black Hawk Formation

ENVIRONMENTAL RESOURCE INFORMATION

springs issuing from the formation. This analysis provides a generalized description for the formation while individual R-values for springs within the formation may vary from the generalized description. Data used for the springs do not have a continuous record; therefore, high and low flow data is not represented for each year within the period of record (1991 to 1999). The climate, from 1991 to 1999, consisted of the end of a 4 year long dry spell, moving into short periods of moderately to severely wet climate disrupted by intermittent dry periods (Region 4 and 5 drought index). Some data used in the analysis may be influenced by historic mining activities. Although the Mayo Report states that Figure 6a and 6b represent the maximum and minimum discharge rates from each formation, the data record is not continuous enough to support this statement. However, the general high and low flow pattern for these formations is probably representative.

Surface Water Information

The Mayo Report identifies Trail Creek, Bear Creek, Fish Creek and Lower Cedar Creek as perennial. The upper Trail Creek, Mc Cadden Hollow, Blind Canyon, and Upper Cedar Creek are intermittent or ephemeral.

Baseflow to Lower Trail Creek was attributed to be sustained by flow from springs in the area, especially TS-1. Baseflow appears to be about 25 gpm for the period of record until mid 1995 where baseflow appears to increase. Baseflow to Bear Canyon Creek is estimated to be about 30 to 50 gpm and is attributed to be sustained from springs such as FBC-12, emerging from the North Horn Formation.

According to the PHC, Fish Creek is a perennial stream. During 1996 and 1997 low flow was 15 gpm in Fish Creek in both the Left and Right Forks. These drainages may become intermittent during periods of prolonged drought.

Baseline Cumulative Impact area Information

Adjacent area information is included within this permit application package for areas where future mining is likely to occur.

MAPS, PLANS, AND CROSS SECTIONS OF RESOURCE INFORMATION

Regulatory Reference: 30 CFR 783.24, 783.25; R645-301-323, -301-411, -301-521, -301-622, -301-722, -301-731.

Analysis:

Affected Area Boundary Maps

The applicant did not give the Division a map that identifies the affected area boundaries. The Division usually assumes that the permit and affected area boundaries are the same unless otherwise noted. Information in the application suggests that the permit area and affected area boundaries are the same. The applicant did give the Division a permit boundary map, Plate 2-1. The Division found Plate 2-1 to be adequate.

Archeological Site Maps

There are various reports in Chapter 5 that contain maps showing the areas that were surveyed for archaeological sites.

Cultural Resource Maps

Other than archaeological sites, there are no cultural resources in the area.

Existing Structures and Facilities Maps

The only existing structure in the Wild Horse Ridge area mentioned by the applicant is a hunting cabin and the access road. Both are shown on Plate 2-4G and Plate 3-7G. The hunting cabin is labeled on Plate 3-7G, and an outline of the building is shown.

Existing Surface Configuration Maps

Plate 3-7F and Plate 3-7G, show the existing surface topography. The hunting cabin is not labeled but an outline of the building is shown on Plate 3-7G.

Mine Workings Maps

The applicant gave the Division maps that show the mine workings in the Blind Canyon Seam, Plate 3-4A, and the Tank Seam, Plate 3-4C.

Findings:

Information provided in the application is adequate to meet the requirements of this section of the regulations.

OPERATION PLAN

MINING OPERATIONS AND FACILITIES

Regulatory Reference: 30 CFR 784.2, 784.11; R645-301-231, -301-526, -301-528.

Analysis:

General

In Section 3.4 the application says, "Co-Op started its mining operating through an existing mine in the Blind Canyon Seam and later extended into the Hiawatha seam below. Access to the Hiawatha Seam was made in the summer of 1986 through two new portals in the outcrop, and through a rock slope tunnel from the Blind Canyon seam. In 1995, Co-Op extended operations into the Tank Seam, located above the Blind Canyon seam. In 1999 (2001), Co-Op plans to extend operations into the Blind Canyon and Tank Seams East of the Bear Canyon Fault. The four main seams in the Bear Canyon property are, the Tank seam, the Bear Canyon seam, Blind Canyon seam and Hiawatha seam. The applicant does not plan to mine the upper Bear Canyon seam due to the proximity of the seam to the Blind Canyon Seam (0.30 feet interburden). Nor do they plan to mine the Hiawatha Seam in Wild Horse Ridge due to the thinning of the seam. The mine plan, sequence and projected development for the Bear Canyon, Hiawatha and Tank seams are shown on Plate 3-4A, 3-4B and 3-4C respectively."

Type and Method of Mining Operations

In Section 3.4.1.2 the applicant says, "The mining at the Bear Canyon complex is done by continuous miners. The miners discharge into shuttle cars (diesel or electric), which carry the coal to a feeder breaker. The feeder breaker discharges the coal onto the belt conveyor where it is taken out of the mine." The mining methods are consistent with the proposed surface facilities expansion. If market conditions warrant, annual production will reach 1,100,000 tons per year.

Facilities and Structures

A list of new structures associated with the Wild Horse Ridge is given in Appendix 3A. The new structures are shown on Table 3A-1, in Appendix 3A. The new structures include a conveyor belt, substation, shop building, water tank and fuel tank. See the Support Facilities and Utility Installations section of this technical analysis for more details.

OPERATION PLAN

Findings:

Information in the proposal is adequate to meet the requirements of this section of the regulations.

RELOCATION OR USE OF PUBLIC ROADS

Regulatory Reference: 30 CFR 784.18; R645-301-521, -301-526.

Analysis:

No public roads exist in the Wild Horse Ridge area. However, the Bear Canyon haul road and the No. 3 Mine Access road are also used by customers of Sportsman's Hunting to access a hunting cabin that exists in the right fork of Bear Canyon. Hunters will use the road primarily from May to November, typically 2-3 times per week.

A road can be defined as a public road if there is more than incidental use by the public. The term incidental use is not defined but is left to the discretion of the Division. The Division considers the use of a road 2-3 times per week for seven months by a hunting club's members incidental because (1) the general public does not access the area because of the steep canyon slopes that limit recreational activities that can be accessed by the road and (2) hunting club members will use the cabin less than 100 times per year.

Findings:

Information provided in the amendment is adequate to meet the regulatory requirements for this section.

AIR POLLUTION CONTROL PLAN

Regulatory Reference: 30 CFR 784.26, 817.95; R645-301-244.

Analysis:

The regulations require the applicant to show its coordination efforts with the Division of Air Quality, and the application contains a copy of the Air Quality Approval Order.

Findings:

Information in the application is adequate to meet the requirements of this section of the regulations.

OPERATION PLAN

or destroy eagle nests. Since renewable resources were found in the area, the applicant must develop a subsidence control plan.

Subsidence control Plan

- The applicant proposes to use room-and-pillar mining to extract all the coal in the Bear Canyon complex. The applicant expects to recover 75% of the coal in full extraction areas and 50% in first mining areas. The sequence and timing of mining is shown on the mine maps 3-4A, Blind Canyon Seam (lower), and 3-4C, Tank Seam (upper). No mining is scheduled for the Hiawatha Seam in the Wild Horse Ridge project. Subsidence should not occur in first mining only areas but should occur in areas where second mining (pillar recovery) occurs.
- The applicant shows the underground workings for the Blind Canyon Seam (lower) on Plate 3-4A and the Tank Seam (upper) on Plate 3-4C. Plate 3-3 shows the projected subsidence for the Wild Horse Ridge project. Plate 3-4A and Plate 3-4C show the projected subsidence for each seam.
- Plate 3-3, Subsidence Map, shows the subsidence protection areas that include escarpment areas. Plate 3-4C shows where pillars will be left as part of the subsidence protection zone.
- The applicant shows where second mining (pillar recovery) will occur on the mine maps. Areas marked panel or development will be first mined only. Areas that will be second mined are identified as pillar and development.
- The descriptions of the physical conditions that affect the likelihood or extent of subsidence are addressed in the geologic section of the technical analysis.
- The applicant described the monitoring program in Appendix 3C in Section 5 of the amendment. The applicant committed to installing 26 monitoring points in the Wild Horse Ridge area. The stations will be monitored yearly plus they will conduct an annual on the ground survey to look for subsidence effects. The subsidence monitoring program is similar to the existing program that has proved to be adequate.
- The applicant proposes to protect sensitive surface features from subsidence by first mining only. The protected areas are marked on the Plate 3-3. The pillars in the subsidence protection zones have safety factors of 1.5. The applicant quoted references indicating subsidence should not occur if the pillar safety factor is at least 1.5. The reference is a NIOSH publication which the applicant included in the application.
- The estimated amount of subsidence in the Blind Canyon Seam is 3.2 feet and

OPERATION PLAN

FISH AND WILDLIFE INFORMATION

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

Analysis:

Protection and Enhancement Plan

Subsidence is not likely to adversely affect critical big game habitat, but the disturbed areas would be lost during the life of the mine. The applicant is required to use the best technology currently available to protect and enhance wildlife habitat. On March 13, 2001, a Division representative spoke with Chris Colt, (habitat biologist for the Division of Wildlife Resources). They agreed that for this project only (the disturbance associated with the Wild Horse Ridge application), the mitigation at a ratio of three acres of enhanced habitat for each acre disturbed would not be required. The deer and elk in that area tend to winter and feed on the exposed ridge faces above the proposed disturbed area.

Because the surface disturbance would be in critical winter range, construction should not be started in the winter months from about November 1 until April 15. The applicant has committed to consult with the Division of Wildlife Resources prior to construction.

The application has been revised to contain more design information about the conveyor. Conveyors can inhibit big game movements, and although deer and elk are known to cross under conveyors, they usually need at least three feet of clearance. The most common deer and elk movements in the winter are along ridges, but there is some movement through canyon bottoms and up and down the sides of canyons. The conveyor has been designed to not overly restrict these movements providing a minimum of three feet of clearance.

Endangered and Threatened Species and Bald and Golden Eagles

On December 21, 1999, two Division representatives met with Chris Colt of the Division of Wildlife Resources and with the applicant's representative to discuss eagle nests in the area. It was decided nesting birds could be adversely affected if construction was begun during the nesting season and if any of the nearby nests was active. Therefore, construction should be started outside the nesting season, February 1-August 15, unless monitoring shows the nests are not active. If construction or mining has already begun when the nesting season starts, the birds would have the opportunity to judge whether they can accept the disturbance and nest or if they should go elsewhere.

The Fish and Wildlife Service recommended constructing two or three nearby alternate nests at least one-half mile from human disturbance areas. In a telephone conversation, a Wildlife Resources representative suggested a better alternative might be to do some habitat

TOPSOIL AND SUBSOIL

Regulatory Reference: 30 CFR Sec. 817.22; R645-301-230.

Analysis:

Chapter 8, Soil Resources, Section 8.8, Removal, Storage and Protection of Soils, and Section 8.9, Selected Overburden Materials or Substitutes, and Appendix 3O, Wild Horse Ridge are all pertinent to the discussion of the plan for topsoil salvage and protection during operations of the proposed Wild Horse Ridge area. Five tables in the plan for the Wild Horse Ridge area are also key to the discussion of soil salvage activity:

Table 8.9-3 Summary Table
Table 8.3-2, Soil Unit Acreage Within the Disturbed Area,
Table 8.9-1, Reclamation Area Summary, and
Table 8.11-1, Final Grading Test Sample Density.
Table 3O-1, Summary of Cut and Fill Volumes

The applicant considers the Summary Table 8.9-3 as being the most accurate table in the plan.² All other Tables must reconcile with this one. Table 8.3-2 divides recontour acres by soil type, with soils PC, WIN, WR, DON, DG, GP, DCP being located within the 3.6 acre Wild Horse Ridge disturbance. Table 8.9-1 divides recontoured areas by designated operational areas. Table 8.9-1 divides the recontoured areas by disturbed area. Tables which include disturbed acreage values all agree that the total disturbed acreage for Wild Horse Ridge is 3.6 acres.

This discussion of operational practices will cover the following topics:

- Topsoil and Subsoil Removal
- Topsoil Substitutes and Supplements
- Topsoil Storage

Topsoil and Subsoil Removal

Topsoil Salvage Volumes

Topsoil salvage areas are identified on the Soil Suitability Map C, Appendix 8-F, Order 1 Soil Survey. Cut and fill volumes are located in Table 3O-1 of Appendix 3-O, Wild Horse Ridge Blind Canyon Seam Pad and Conveyor Access Roads.

²Personal communication with Charles Reynolds during site visit 3/23/01.

OPERATION PLAN

In Table 8.9-1, reclamation areas for the Wild Horse Ridge are labeled TS-12, TS-13, TS-14, and TS-15. Table 8.9-1 itemizes the acreage to be reclaimed within each area and acreage to be graded within each of these areas. According to Table 8.9-1, areas TS-12 through TS-15 will add 7.3 acres of total area to the permit. All of the 7.3 acres will be reclaimed, however, only 3.6 acres will require recontouring during reclamation. The difference is due to:

1. The Wild Horse Ridge access road, 3.04 acres of which is pre-existing; and
2. The lower conveyor belt access road, 0.36 acres of which will not require grading during final reclamation; and
3. The upper conveyor belt access road, 0.3 acres of which will not require regrading during final reclamation.

Re-contour acres agree with projected soil salvage acres for Wild Horse Ridge. Table 8.9-1 shows re-contouring on 3.6 acres while Table 8.3-2 shows projected soil salvage over 3.6 acres.

The plan states that actual soil salvage depth and resulting volumes may vary according to actual conditions as they are encountered in the field during construction. State regulation R645-301-232.100 is specific in requiring that all topsoil be removed from the area to be disturbed. The plan states that Charles Reynolds or other supervisory personnel approved by the Division will be present during topsoil salvage to instruct equipment operators in the proper techniques of salvage and to ensure that required horizons are removed. Approved supervisory personnel will document topsoil salvage operations, including salvage history, soil salvage areas, soil salvage volumes, and soil placement in the stockpiles.

Subsoil Segregation and Soil Salvage Practices

In several of the soil mapping units the topsoil is less than six inches. State regulations state that if topsoil is less than six inches, the operator may remove the topsoil and the unconsolidated materials immediately below the topsoil and treat the mixture as topsoil. Therefore, the Order I soil survey, Appendix 8-F, shows that topsoil salvage will include the topsoil and the horizon immediately below the topsoil, based upon rooting depth and other criteria established in the Order 1 soil survey soil salvage will be between 10 and 40 inches.

A single elevated report of selenium was noted in Guben-Pathhead soil taken from a cutslope near the switchback of the existing Wild Horse Ridge Road. The site of the sample is shown on Map B in Appendix F as CW 10 (20 - 30 inches depth). The road to the No. Mine will be constructed from this in-place material: page 3-7 of the permit application says, "The road base material was analyzed . . . none of the soil investigations revealed any acid- or toxic-forming materials." This statement is not entirely correct as high EC (10.2 mmhos/cm) and elevated selenium (0.26 mg/kg) were reported from 20 - 30 inches in the GP soil. The area of discussion is only 0.08 acres. The top ten inches of this soil will be salvaged and placed in the

OPERATION PLAN

additional 2,354 CY of topsoil held in place for other areas during reclamation; therefore, this soil is actually considered soil borrow.

Topsoil Storage

The Section 8.9.6 states that the Wild Horse Ridge topsoil stockpile will be located in the lower section of the right fork of Bear Canyon in the area of soil map unit "DON" (Plate 8-1A). The topsoil stockpile is shown on Plate 2-4F in the lower convergence section between the primary No. 3 mine access roads and the primary conveyor access road No. 1.

The topsoil pile will be located adjacent to a catch basin, which will be created in the ephemeral drainage. The topsoil pile itself will be approximately ten feet in elevation and 20 feet distant from the ephemeral drainage. The topsoil stockpile will be surrounded with a containment berm and protected as discussed in Section 8.8.1.3. Prior to stockpiling salvaged topsoil, permeable fabric strips will be placed over the original soil surface to preserve the location of the contact zone between the native topsoil and the stockpile.

Topsoil stockpile information concerning soil compaction and stockpile size and dimension is provided as follows:

- During topsoil pile construction, soil compaction will be minimized by limiting the extent of equipment traffic and affected area. Where compaction does occur, the compacted material will be ripped and loosened prior to seeding.
- The Wild Horse Ridge topsoil stockpile is detailed on Plate 8-7 which shows the projected stockpile, size, placement, final configuration and cross sections. According to Plate 8-7, typical slopes range from approximately 6:1 for east facing, 2:1 for west facing, 3:1 for north facing, and 2:1 for south facing.
- Appendix 3O, Figure 3O-1 and associated cross sections show the lower conveyor access road and topsoil stockpile. Cross sections showing the topsoil stockpile final configuration and resulting slopes correlate with Plate 8-7.

Shower House Topsoil Stockpile

Prior to construction on the shower house pad, topsoil was salvaged and stockpiled. The final topsoil stockpile consisted of 1200 cubic yards. The Wild Horse Ridge amendment states that Co-Op proposes to relocate this topsoil stockpile to the Wild Horse Ridge topsoil stockpile. Following relocation, As-builts will be submitted updating the MRP.

Tank Seam Access Road Topsoil Stockpile

OPERATION PLAN

protection.

In addition, the applicant commits to monitor interim revegetation sites for five years or until vegetation standards are met. Reseeding would be done if necessary.

Findings:

Information provided in the proposal is adequate to meet the requirements of this section of the regulations.

ROAD SYSTEMS AND OTHER TRANSPORTATION FACILITIES

Regulatory Reference: 30 CFR Sec. 784.24, 817.150, 817.151; R645-301-521, -301-527, -301-534, -301-732.

Analysis:

Road classification system

The roads associated with the Wild Horse Ridge project are all classified as primary roads. Those roads are the existing Wild Horse Ridge road, the extension of the Wild Horse Ridge road to the portal area and the two new conveyor access roads. Note the extension of the Wild Horse Ridge road is referred to in the permit application package as the No. 3 Mine Portal Access Road and the extension of the road to the portal area is called the No. 3 Mine Portals and Pad Area.

The No. 3 Mine Portal Access Road is an existing road 4,850 feet long. The road has an average grade of 10.5% with the steepest grade being 18%. The road existed prior to mining and will be retained for the postmining land use.

The conveyor access roads will provide access to the areas where the conveyor system will be built, operated, and reclaimed. The lower road is approximately 600 feet long and has an average grade of 10%. The upper road is approximately 590 feet long and has an average grade of 19.5%. Those two roads will be reclaimed after mining is completed.

The Division has concerns about the steep grades. However, the Division does not have standards that require gentler grades. For road designs the Division relies heavily on the judgment of the engineer that designed and certified the roads.

The Division does not consider the No. 3 Mine Portals and the Pad Area a road. The Division considers that area as a pad area. Therefore, detailed road designs are not required.

Plans and drawings

OPERATION PLAN

cross section to determine reclaimability, which will be discussed in the reclamation section of this technical analysis.

- Appendix 3-O-6 contains the slope stability study conducted by Dames & Moore. The consultant outlined the soil and rock sampling, procedures and testing. The stability analysis was described. All slopes had a minimum safety factor of 1.6, and the minimum required safety factor is 1.3.
- Most of Primary No.3 Mine Access Road will be constructed on an existing dirt road. By upgrading the existing dirt road, the applicant will be minimizing erosion. Since the roads must be constructed in a narrow canyon, the applicant has limited options about where to place the road. The Division reviewed the road designs and concluded that the erosion will be minimized and that the roads are located on the most stable available surface.
- The applicant does not propose to construct fords in any perennial or intermittent streams.

Primary road certification

All primary road designs have been properly certified.

Other Transportation Facilities

The conveyor system goes from the coal bin near the portals to the tipple facilities then to the coal storage pad. The conveyor system will be enclosed to minimize fugitive coal dust emissions. The R645 rules have few design specifications for conveyor systems. The Division reviewed the conveyor plans and found that they meet the minimum engineering requirements. See Appendix 7K Page13 for information on dust control.

Findings:

Information provided in the application is adequate to meet the requirements of this section of the regulations.

OPERATION PLAN

The applicant has approval for disposing of coal mine waste underground. The plan is mainly for small amounts of roof material.

Excess spoil

The applicant does not plan on generating any excess spoil.

Findings:

Information provided in the application is adequate to meet the requirements of this section of the regulations.

HYDROLOGIC INFORMATION

Regulatory Reference: 30 CFR Sec. 773.17, 774.13, 784.14, 784.16, 784.29, 817.41, 817.42, 817.43, 817.45, 817.49, 817.56, 817.57; R645-300-140, -300-141, -300-142, -300-143, -300-144, -300-145, -300-146, -300-147, -300-147, -300-148, -301-512, -301-514, -301-521, -301-531, -301-532, -301-533, -301-536, -301-542, -301-720, -301-731, -301-732, -301-733, -301-742, -301-743, -301-750, -301-761, -301-764.

Analysis:

Ground-water monitoring

The plan references a recommended water monitoring plan, included in Appendix 7-J, section 10.0. The proposed monitoring plan is contained in section 7.1.7.

One flow measurement was obtained at springs WHR-7 and WHR-8. No information was provided for WHR-9. The plan indicates that these springs will not be monitored because WHR-4 is representative of these springs. Site WHR-7 was estimated to be approximately 400 ft above the Tank Seam while WHR-9 and WHR-8 are close to drill logs showing no coal.

The PHC, Appendix 7-J, includes a discussion in the subsidence section on multiple coal seam removal. Mining the Tank (upper) and Blind Canyon (lower) seams in other sections of permit area has seen cracking extend upward no more than 250 feet above the Blind Canyon Seam. The surface fractures extend down about 100 feet. Average overburden for the Tank Seam is 950 feet while for the Blind Canyon Seam, it's 1200 feet. Total subsidence for the two seams has been calculated to be 7.3 feet. Reference Table 3C-1. However, springs having significant discharge within the Wild Horse Ridge area are separated from the Tank Seam by 1000 feet. Thus, the PHC states, the potential for mining to impact these springs appears to be minimal. Given the surface fracturing, the possibility exists that surface recharge to the springs could be affected, one way or the other.

OPERATION PLAN

Gravity discharges

No gravity discharges are expected for the Wild Horse Ridge mines, Bear Canyon No. 3 or No. 4 (reference page 7-56).

Water quality standards and effluent limitations

Water quality standards and effluent limitations must be conducted according to State Standards and the approved UPDES permit. A copy of the current permit, which includes a discharge point for Pond D is included in Appendix 7-B.

Diversions

Diversion designs are provided for the 10 year- 6 hour event. The applicant committed to maintain the minimum required cross sectional area. Freeboard was presented to be 0.30 to 0.48 feet. Standard engineering practices generally use a minimum of 0.3 feet, so this is acceptable. Along the roads, additional culverted cross drains may be advantageous in meeting the ditch requirements without requiring changes in the road surface slope.

The culvert containing Bear Creek for the road to get to the new addition has been designed to meet the 100-year 6-hour storm. This is described in Appendix 7-G. This is the appropriate design storm.

Road Drainage

The applicant should consider placing a culvert at the approximate location of label D-21U on Plate 7-1 F. The primary road retains this drainage along the in slope for a significant distance in this region. Also, the slope breaks from a steep section to a low gradient area at this location which may result in maintenance problems due to sediment settling out in the ditch.

Stream buffer zones

Construction in the buffer zone will be necessary to build the roads and portal in the east fork of Bear Creek. Map 2-4 shows buffer zone markers all along the access road, along the conveyor belt roads, and along the lower edges of the topsoil storage piles. The diversion channels and culverts have been properly designed according to the appropriate sections of the regulations. Several safeguards have been included to prevent adverse impacts to the stream. These include sediment control with silt fences, berms around the topsoil storage piles, enclosure of the conveyor system, sediment traps to catch coal fines, alternate sediment control areas, a berm around the fuel tank, and sediment pond D at the portal. These measures are expected to prevent violation of water quality standards and prevent mining operations from adversely affecting the stream.

OPERATION PLAN

pan. A dust cover will be placed over the belt to prevent fine coal wind transport. Details of the conveyor belt are presented in Figure 7K-1, Typical Conveyor Pan Structure. These appear to be reasonable measures to minimize the amount of coal fines leaving the conveyor belt.

In the lowest belt area, the pan will be cleaned with water draining to disturbed area ditch D-3D, which reports to the lower area sediment pond. The two upper conveyor belt areas will report to two catch basins, No. 1 and 2. The Wild Horse Ridge Coal Storage Bin area also reports to catch basin No. 2. These catch basins were included at the request of the Division to provide additional control of possible coal fines coming from the conveyor system. These areas are mapped on Plates 7-1C, 7-1F and 7-1G. The designs, calculations and certification for these basins are provided in Appendix 7-K. Capacity was based on a 10-year, 6-hour storm peak. Catch basins will be inspected and cleaned as necessary to maintain capacity. Both of the catch basins have an outlet spillway, so flow from the basin is controlled under situations that exceed the storage volume. These are detailed in Figures 7K -3 and -4. The spillways are provided with riprap linings.

Siltation structures.

See: Sedimentation Ponds.

Sedimentation ponds.

The proposed Wild Horse Ridge area includes designs for sedimentation pond 'D'. All runoff from the portal pad area will report to this pond. The pond was designed to the appropriate 10-year, 24-hour storm event using runoff curves of 90, which is appropriate for the pad area and the rocky drainage area leading to the pond. The pond is designed to store the full volume of the design storm. Reference Table 7.2-15, and Plate 7-11.

The sedimentation pond must maintain adequate sediment storage capacity. The proposed cleanout level of 60% meets this requirement. Reference Section 7.2.8.4 and Plate 7-11, Sediment Pond "D". At pond 'D', the decant structure is located above the 60% cleanout level. The cleanout elevation is 0.55 ft below the decant elevation. A Decant Structure Detail is included with the oil skimmer end in the pond and a control valve for sampling and draining at the downstream end.

A single open channel spillway is proposed for discharge from the pond. The spillway is appropriately designed using a 25-year, 6-hour design event and the spillway is lined with riprap. The D-50 rock size is six inches and appears appropriately designed. A fuel tank is located about 100 feet away from this pond. Plate 2-4 shows a containment berm should the tank leak. This berm and its design are to be part of the SPCC plan, which will be completed within six months after construction is completed. Full containment berms around fuel tanks are standard on the rest of the site, and will be included for this one.

OPERATION PLAN

The height of the pond from the bottom of the pond to the top of the embankment is 7.5 feet. The pond does not qualify as an MSHA pond.

- Plate 7-11 shows the plans and cross sections for Pond D. The plans have been certified by Charles Reynolds, a registered professional engineer.
- Dames and Moore conducted a stability analysis for the Portal Staging Area sedimentation pond. This analysis for steady state seepage assumes a 7-foot-deep pond is full and two seepage conditions exist: (1) A straight line condition through the fill, and (2) Seepage controlled by the native sandstone and colluvium interface. Results suggest during a pseudo-static loading condition, shallow surface slide and sloughing from the structural fill and native slopes could be expected with strong ground movement. Proposed embankments have a minimum safety factor of 1.46. The pond is required to have a minimum static safety factor of 1.3.
- The Division will monitor the construction of the Pond D to ensure that foundations are properly constructed and record made.
- The Division and the applicant used STABLE, a slope stability program, to determine that the pond would be stable under rapid drawdown conditions.
- No highwalls are associated with Pond D.
- The Division will review the inspection reports for Pond D during some monthly inspection, all complete inspection, and the review of annual reports.

Casing and sealing of wells

No changes to the plan for casing and sealing of wells is proposed. The existing plan is assumed to be adequate to handle this regulatory requirement.

Findings:

Information provided in the application is adequate to meet the requirements of this section of the regulations.

OPERATION PLAN

prepared and signed by Mr. Kevin Petersen who is known to have a current surface blasting certificate issued through the State of Utah.

The plan clearly indicates that there are no active or abandoned underground coal mines, dwellings or public buildings within the radial distances described within R645-301-524.211 and -524.212. The response clearly states that there are no active or abandoned underground coal mines within 500 feet of the proposed Wild Horse Ridge blasting area. No other buildings exist within 1,000 feet of the proposed Wild Horse Ridge blasting areas. Although a hunting cabin exists approximately 750 feet from the nearest proposed blasting area, the building cannot be classified as a dwelling or as a public building, (school, church, etc.). Although the applicant's response does contain an anticipated blast design, it was not necessary to submit it. Regulations R645-301-524.210 through -524.212 have been adequately addressed. The anticipated blast design which has been submitted appears to be able to successfully meet the fragmentation requirements being sought without incurring significant damage to the surrounding environment.

The applicant's response provides the following information to address deficiencies aired in the initial response:

- 1) A drawing that shows the burden, spacing and depth of boreholes for the bench type blasting to be used for bedrock removal (establishment of road grade) has been provided. A verbal description of the method to be used for boulder breakage has also been provided.
- 2) Page 3M-3 of the revised blasting plan clearly states that satchel type directional charges will not be used in order to minimize air blast and fly-rock. A description of the explosive to be used (Irecoal D 378), is not a satchel type directional charge.
- 3) Borehole will have the proper diameter for safe blasting.
- 4) The revised blast design has more than doubled the weight of explosive which will be used per borehole. They will be using 1.3 pounds per hole, with a maximum of ten holes per round; hence a maximum of 13 pounds of explosive will be used per round. This improves the powder factor significantly in the anticipated blast design. The ability to adjust fragmentation within the round is within the jurisdiction of the certified blaster performing the work, and it is not necessary to obtain DOGM approval for minor changes in powder factor.

Findings:

Information provided in the application is adequate to meet the requirements of this section of the regulations.

RECLAMATION PLAN

RECLAMATION PLAN

GENERAL REQUIREMENTS

Regulatory Reference: PL 95-87 Sec. 515 and 516; 30 CFR Sec. 784.13, 784.14, 784.15, 784.16, 784.17, 784.18, 784.19, 784.20, 784.21, 784.22, 784.23, 784.24, 784.25, 784.26; R645-301-231, -301-233, -301-322, -301-323, -301-331, -301-333, -301-341, -301-342, -301-411, -301-412, -301-422, -301-512, -301-513, -301-521, -301-522, -301-525, -301-526, -301-527, -301-528, -301-529, -301-531, -301-533, -301-534, -301-536, -301-537, -301-542, -301-623, -301-624, -301-625, -301-626, -301-631, -301-632, -301-731, -301-723, -301-724, -301-725, -301-726, -301-728, -301-729, -301-731, -301-732, -301-733, -301-746, -301-764, -301-830.

Analysis:

Terracing as a reclamation method is described on page 3-75. The areas proposed to be terraced are shown on the reclamation map. Although terracing may be appropriate in some locations it is found to be less effective than simple slope changes in many locations in Utah. Slope form or slope breaks that decrease the gradient and retain the overland flow are best technology available for erosion control. In steep sections, slope faces steepened at the top and concave toward the base integrated with low angle slopes are known to be successful.

The plan says, "Since a cut slope existed along portions of this area prior to mining there may not be enough material to completely eliminate the entire cut. In areas where cuts existed prior to mining, the (fill) material will be placed so as to backfill the cut to the extent possible. These areas are shown on Plates 3-2," (pg. 3-119). These areas are on the upper side of the roads that were constructed before mining and these same roads will be left after mining. Typically the cuts are 15 to 20 feet high with the maximum at one location of 30 feet. Such cut slopes are typical of early roads constructed in the area. Since the area is exposed bedrock, no impact has been noted nor is any anticipated.

Portals will be sealed with backfill beginning at the Blind Canyon portal and backfilling the cut slope as it is excavated from down slope side. A narrow access road will be retained for topsoil access. Topsoil will be placed on excavated areas and then the access road will be reclaimed (3-117 to 3-118). The amendment clarifies the reclamation for the Wild Horse Ridge Blind Canyon portal is separate from the portal west of Bear Creek.

Findings:

Information provided in the application is adequate to meet the requirements of this section of the regulations.

RECLAMATION PLAN

couched in the backfilling and grading regulations. The only regulation that specially mentions AOC requirements is R645-301-553.110 that says:

Achieve the approximate original contour (AOC), except as provided in R645-301-553.500 through R645-301-553.540 (previously mined areas (PMA's), continuously mined areas (CMA's) and areas subject to the AOC provisions), R645-301-553.600 through R645-301-553.612 (PMA's and CMA's), R645-302-270 (non-mountaintop removal on steep slopes), R645-302-220 (mountaintop removal mining), R645-301-553.700 (thin overburden) and R645-301-553.800 (thick overburden);

Since the Wild Horse Ridge site is a post-SMCRA underground site the applicant must show that the AOC requirements can be met. Even if an AOC variance is granted, the applicant must show that the site can be restored to AOC standards.

The Division's technical directive Tech-002 gives additional AOC guidelines. That guideline was also used to evaluate the Wild Horse Ridge site for AOC compliance.

Except as specifically exempted, all disturbed areas shall be returned to the approximate original contour. The final surface configuration shall closely resemble the general surface configuration of the land prior to mining. To evaluate compliance with this requirement, the term "surface configuration" must be clarified. Surface configuration refers to the premining and postmining topography of the mine site and surrounding area.

The term AOC does not mean that the land is restored to the original contours. Elevation of the premining and postmining site should only play a minor role if any in evaluating AOC.

The main criterion should be whether the postmining topography, excluding elevation, closely resemble the premining configuration. The Division evaluates premining and postmining topography on slope length and angle, and whether restoring the site to the original contours would violate other rules.

In some cases the applicant cannot restore the site to the premining contours without violating other regulations, such as slope stability and erosion. Many of the natural slopes in the area are at the angle-of-repose. By definition when a slope is at its angle-of-repose the safety factor is 1.0. The minimum safety factor for reclaimed slopes is 1.3. If all slopes were returned to the premining conditions, the safety factor requirement could not be met.

When the natural slope has a safety factor less than 1.3, the applicant usual opts to reduce the slope angle by either extending the toe or decreasing the height. Extending the slope's toe may block the drainage which violates other regulations. If the applicant decreases the slope height then a cut slope will be left.

BACKFILLING AND GRADING

Regulatory Reference: 30 CFR Sec. 785.15, 817.102, 817.107; R645-301-234, -301-537, -301-552, -301-553, -302-230, -302-231, -302-232, -302-233.

Analysis:

The general backfilling and grading requirements are (1) achieve the approximate original contour; (2) eliminate all highwalls, spoil piles and depressions; (3) achieve a postmining slope that does not exceed the angle of repose or such lesser slopes as is necessary to achieve a minimum long term static safety factor of 1.3 and to prevent slides; (4) minimize erosion and water pollution both on and off site; and (5) support the approved postmining land use. The AOC, highwall elimination, erosion and water pollution, and postmining land use requirements have all been discussed in the AOC section of this technical analysis, refer to that section for more details.

The applicant does not plan to produce any spoil material at the Bear Canyon Mine including the Wild Horse Ridge project. The postmining contour maps show that no depression will be left after final reclamation.

A Dames and Moore study investigated the slope stability for the reclaimed slopes. The information in the reports shows that all reclaimed slopes will meet or exceed the minimum safety factor requirements. The Division reviewed the report and found that it met the minimum requirements for slope stability studies.

The backfilling and grading requirements have some specific requirements. The only such requirement relative to the Wild Horse Ridge project is that all coal seams be backfilled adequately covered. All coal seams at the Wild Horse Ridge site will be covered and backfilled.

Findings:

Information provided in the application is adequate to meet the requirements of this section of the regulations.

RECLAMATION PLAN

to the hunting lodge. During upgrading and widening of the road during mining, topsoil will be recovered (15 inch depth) from isolated areas of new additional disturbance (0.22 acres). During reclamation, salvaged soils will be redistributed to the same additional disturbed areas (0.22 acres) of the road at the same depth (15 inches).

TS-13, Conveyor Belt Access Road/ Topsoil Stockpile Area

The plan states that following re-contouring of this area at the time of final reclamation, topsoil recovered prior to construction will be redistributed to obtain an approximate depth of 13 to 14 inches. Soil salvage ranges from 12 inches on the slopes in the upper portions of the road to 40 inches from lower portions of the road. The plan states that 2,054 cubic yards of topsoil from this area may be utilized in other areas of the mine site.

TS-14, Upper Conveyor belt/Access Road

The upper conveyor belt/access road will have 10 to 30 inches of topsoil recovered. Topsoil redistribution will be performed in conjunction with regrading due to the remoteness of the site and the reclamation procedures of this area. The plan states that topsoil recovered from this area will be redistributed at an average depth of 13 to 14 inches.

TS-15, WHR Blind Canyon Seam Portal

This area will have 10 to 30 inches of topsoil salvaged for reclamation. Topsoil redistribution will be performed in conjunction with regrading due to the remoteness of the site and the reclamation procedures of this area. The plan states that topsoil recovered from this area will be redistributed at an average depth of 13 to 14 inches.

Soil Nutrients and Amendments

Section 8.11, Nutrients and Amendments, states that following final grading, each of the reclamation areas will be sampled (see Table 8.11-1 for Sample Density) and the collected soil samples analyzed. The plan states that additional samples will be taken in the event that the initial sample indicates unsuitable material. Composite samples will be taken from 0 to 2 feet and from 2 to 4 feet at each sample location. The section concludes that all necessary fertilization and chemical treatments will be applied according to the results of the soil sampling and analysis program approved by the Division. In addition to analyzing the samples for micro nutrients, analyses will also include standard fertility tests for pH, EC, nitrogen, phosphorus, and potassium. All sampling, testing and result interpretation will be done by a qualified soil scientist. The soil scientist will be qualified to sample, test and interpret data results. Prior to sampling and testing of the topsoil material, the Division will review the soil scientist's qualifications.

RECLAMATION PLAN

roads that are to be reclaimed will be closed to traffic during reclamation. The reclaimed road design will be the same as the operational design, and is shown on Plate 3-5.

As backfilling and grading is completed, operational areas will be scarified by gouging to a depth of approximately 8 inches with a trackhoe. This will reduce compaction and prevent topsoil slippage, and improve soil retention and vegetation establishment in the gouges.

The road reclamation plan adequately addresses the requirements to close the roads to the public during reclamation, describes how the culverts will be reclaimed and disposal of road surface materials.

The applicant did not address road closure during reclamation, or how the roads that provide access to the conveyors would be reclaimed, or the condition that the main access road will be left in and how the road surface material will be disposed and how the road will be scarified.

Retention

The applicant states that those sections of the road that will be retained as part of the post mining land use will have the same design as the roads during operations.

Findings:

Information provided in the application is adequate to meet the requirements of this section of the regulations.

HYDROLOGIC INFORMATION

Regulatory Reference: 30 CFR Sec. 784.14, 784.29, 817.41, 817.42, 817.43, 817.45, 817.49, 817.56, 817.57; R645-301-512, -301-513, -301-514, -301-515, -301-532, -301-533, -301-542, -301-723, -301-724, -301-725, -301-726, -301-728, -301-729, -301-731, -301-733, -301-742, -301-743, -301-750, -301-751, -301-760, -301-761.

Analysis:

Ground-water monitoring

The operational ground-water monitoring plan will continue through reclamation to bond release.

RECLAMATION PLAN

Sediment control measures

All re-graded and top soiled areas will be mulched or otherwise treated to retain moisture and control sediment, page 4-13. Related surfaces will be ripped and scarified using a trackhoe which includes roughening to 8-12 inch deep pockets. See the section of this analysis discussing sedimentation ponds.

Siltation structures

See sedimentation ponds.

Sedimentation ponds

Sediment pond 'D' is proposed to be removed during reclamation of the portal pad as described in Appendix 7-K, and Section 3.6.12, Wild Horse Reclamation Plan. The reclamation construction sequence describes the methods used during pad area reclamation to minimize sediment contributions to the drainage. These include installation of silt fences on the downstream sides of all construction areas, especially the portal pad area. After highwall removal, the road cut slope will be eliminated. A "pilot cut" will be retained to allow topsoil placement in the area. The pilot cut will then be reclaimed.

Other treatment facilities

No other treatment facilities are proposed in conjunction with the Wild Horse Ridge amendment.

Exemptions for siltation structures

No exemptions for siltation structures are requested in association with the Wild Horse Ridge amendment.

Discharge structures

No discharge structures are proposed for retention in association with the Wild Horse Ridge amendment.

Impoundments

See sedimentation ponds.

Mulching and other soil stabilizing practices.

Chapters 3 and 8 discuss surface preparation. As backfilling and grading are completed, operational areas will be scarified by gouging about eight inches deep with a trackhoe. All areas will be gouged to increase surface roughness.

Following surface preparation, the site would be hydroseeded or otherwise broadcast seeded. All hydroseeded or hand seeded areas will be raked lightly to ensure adequate seed-soil contact. On slopes steeper than 2h:1v, one-half of the seed will be applied, the area will be raked, then the rest of the seed will be applied.

The applicant has added canyon sweetvetch to the seed mix. This species will be planted on the topsoil pile. The applicant will obtain seed for final reclamation by harvesting seed from the topsoil pile and from nearby undisturbed areas.

The applicant has proposed to reduce the number of rose seedlings, and this reduction is acceptable. Willows will be cut from a source area in close proximity to the mine site and planted in the reclaimed area. In areas of suitable habitat, willows will be planted with at least one cutting every foot. Other operators have needed to come back after a few years to supplement willow plantings, and it may be necessary for the applicant to do this. It is common that sediment builds up over a few years in a riprapped channel, and these areas with sediment accumulation become good places to plant willows.

The plan gives detailed descriptions of how seedlings would be handled and planted and about the quality of seed that would be used. Following these commitments should help ensure successful revegetation.

A minimum of 120 pounds per acre of wood fiber hydromulch will be used when hydroseeding. It is a standard practice to add some hydromulch when hydroseeding, but adding all the mulch when seeding reduces seed contact with the soil.

Following seeding, all areas with slopes flatter than 2h:1v will hydromulched and fertilized. Slopes steeper than 2h:1v will be mulched with erosion control matting.

Section 9.5.5.1 contains a list of noxious weeds, and this list has been updated.

The current mining and reclamation plan includes a revegetation monitoring schedule. The performance standards in R645-301-356 require that for lands with a postmining land use of wildlife habitat, at least 80% of woody plants must have been in place for at least 60% of the extended responsibility period, and no trees or shrubs in place for less than two years may be counted toward the success standard. To show this standard has been met, it would be necessary to monitor for woody plant density in the fourth and eighth years after reclamation, and the

RECLAMATION PLAN

MAPS, PLANS, AND CROSS SECTIONS OF RECLAMATION OPERATIONS

Regulatory Reference: 30 CFR Sec. 784.23; R645-301-323, -301-512, -301-521, -301-542, -301-632, -301-731.

Analysis:

Affected area boundary maps

The applicant did not give the Division an affected area boundary map. The Division usually considers the permit area to be equal to the affected area. Plate 2-1 is the permit area map, and the Division found that the map accurately shows the permit boundaries.

Bonded area map

The Division usually considers the bonded area to be equal to the permit area. Plate 3-2A, Plate 3-2B and Plate 3-2F show the disturbed area boundaries during reclamation.

Reclamation backfilling and grading maps

The applicant must give the Division detailed maps that show how the backfilling and grading requirements will be met. The specific items missing from maps and cross sections are: the location of the highwalls, cut slopes and coal seams.

Reclamation facilities maps

The applicant gave the Division detailed maps of all reclaimed facilities including the access road.

Final surface configuration maps

The applicant gave the Division detailed maps and cross sections that show the final surface configuration.

Findings:

Information provided in the application is adequate to meet the requirements of this section of the regulations.

RECLAMATION PLAN

- **Upper Storage Pad:** The amount of fill needed is 8,083 CY. Local cuts will produce 6,447 CY, and the remaining fill will be shipped from the coal storage pad. The cut and fill operation is assumed to be a continuous operation with an excavator. Placing the imported fill will also be done with an excavator. The transportation costs for hauling the fill from the coal storage pad will be calculated in the coal storage pad subsection.
- **Portal Pad Area & Road:** The amount of fill needed is 7,908 CY. Local cuts will produce 6,648 CY, and the remaining fill will be shipped from the coal storage pad. The cut and fill operation is assumed to be a continuous operation with an excavator. Placing the imported fill will also be done with an excavator. The transportation costs for hauling the fill from the coal storage pad will be calculated in the coal storage pad subsection.
- **Portal Pad Area:** The amount of fill needed is 7,908 CY. The fill material will come from on site and the coal storage area if needed. The cut and fill operation is assumed to be a continuous operation with an excavator. Placing the imported fill will also be done with an excavator. The transportation costs for hauling the fill from the coal storage pad will be calculated in the coal storage pad subsection.
- **Portal Access Road:** The amount of fill needed is 9,167 CY. The fill material will come from on site and the coal storage area if needed. The cut and fill operation is assumed to be a continuous operation with an excavator. Placing the imported fill will also be done with an excavator. The transportation costs for hauling the fill from the coal storage pad will be calculated in the coal storage pad subsection.
- **Lower Road to Switchback:** The amount of cut and fill material needed is 4,028 CY. The cut and fill amounts balance, so no material will be imported or exported from the site. The applicant assumes that all cut and fill operations can be done with an excavator.
- **Tipple Access Road:** The amount of cut and fill material needed is 1,167 CY. The cut and fill amounts balance, so no material will be imported or exported from the site. The applicant assumes that all cut and fill operations can be done with an excavator.
- **Coal Storage Pad:** The site has 19,453 CY of cut material and needs 15,333 CY of fill material. The on site cut and fill operation will be done with a bulldozer. The loading and trucking of material will be done with a front-end loader and dump trucks.

RECLAMATION PLAN

- The approved mining and reclamation plan and the proposed addition of the Wild Horse Ridge area. In addition a Division biologist review the reclamation cost estimate.
- The revegetation rate would be 25%.
- Seeds and seedlings costs were based on costs for purchasing them from local dealer. Since these costs can fluctuate on an annual basis the Division will continually review the costs and make adjustments as needed.

Indirect Costs:

The indirect costs that the Division calculates are as follows:

- **Startup Costs:** The startup costs include mobilization/demobilization, permits, insurance and bonds. **The Division assumes that the startup costs for a reclamation project are 10% of the direct costs.** The 10% amount is based on a flat rate stated on Page 23 of the OSM's Handbook for Calculation of Reclamation Bond Amount Revised April 2000. The OSM handbook did not include a reference for the 10%. That amount is verified by AML costs.
- **Contingency:** The contingency amount is listed in the section entitled "How to Use the Book: The Details" in the R. S. Means Company, Inc. publications. For example see Page vii of the 14th Edition of the R. S. Means Heavy Construction Cost Data 2000. The contingency range in the year 2000 is 5% to 10%. **Therefore, the Division will use the low range of 5%.**

Note: The contingency fee is for items that will be encountered but have not yet been identified in the permit application, Mining and Reclamation Plan, proposed amendments or significant revisions.

- **Engineering Redesign Fee:** The engineering redesign fee is the line item identified in the R. S. Means Company, Inc. publications by the reference number 01107 3000 0800, also known as Landscape & Site Development, minimum. **The minimum engineering redesign fee for the year 2000 is 2.5%.**
- **Main Office Expense:** The cost for the main office expense is shown as line items in the R. S. Means Company, Inc. publications. Main office expense cover costs that are not directly incurred for a specific project but are needed by the contractor to operate. Examples of main office expense include, but are not limited to, administrative costs, building rental, equipment storage areas, and certain types of insurance and taxes. The following reference numbers are used to calculate main office expenses: 01310 400 0130, 01310 400 0150, 01310 400 0200, 01310 400 0250

SEND TO:

ms 110-SIB

Richard Bryson, Chief
Division of Regulatory Support
OSM Headquarters
South Interior Building, Room 110
Washington, D.C.

FROM: Joseph Wilcox



Enclosed is your copy of a mining plan decision document for the Bear Canyon Mine. Please review it and have the Director and the Assistant Secretary, Land and Minerals Management sign the tagged signature pages.

After the document is signed by the Assistant Secretary, please:

- 1) **Make copies of the signed and dated pages** for your copy of the document;
- 2) **Fax me a copy** of the signed pages; and,
- 3) **Return the original signed and dated pages** to this office via FEDEX so that we may insert them into the original decision document which is kept on file here.

I understand that your normal review/signature process can be completed within 2 weeks of the date of this memo. Please advise me if you expect the review and signature process to extend beyond that time period.

There are no major interagency issues involved with this mining plan decision.

Thank you for your assistance in this matter.



United States Department of the Interior

OFFICE OF THE SOLICITOR

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Lakewood, CO. 80215
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January 9, 2002

Memorandum

To: Joseph Wilcox, Federal Lands State Coordinator, WRCC,
Program Support, Division, Office of Surface Mining,
Reclamation and Enforcement

From: *John R. Kunz*
John R. Kunz, Assistant Regional Solicitor

Subject: Mining Plan Decision Document for Bear Canyon Mine
(Federal Leases U-020668 and U-38727)

I have reviewed the draft mining plan decision document for the subject mine. I find that this document is legally sufficient for the purposes for which it is intended.

I did not attempt to verify land or legal descriptions or map depictions.

The draft mining plan decision document is attached.

Attachment