0010

STATE OF UTAH
NATURAL RESOURCES
Oil, Gas & Mining

Norman H. Bangerter, Governor
Dee C. Hansen, Executive Director
Dianne R. Nielson, Ph.D., Division Director

355 W. North Temple • 3 Triad Center • Suite 350 • Salt Lake City, UT 84180-1203 • 801-538-5340

April 16, 1985

CERTIFIED RETURN RECEIPT REQUESTED
(P402 457 124)

Mr. J. Herickhoff, President
Beaver Creek Coal Company
P. O. Box 1378
Price, Utah 84501

Dear Mr. Herickhoff:

RE: Final Permit Approval, Huntington #4 Mine, ACT/015/004, #2 and #4, Emery County, Utah

Please find enclosed the final state permit approval for the Beaver Creek Coal Company Huntington #4 Mine. Appended to the actual permit is the Technical Analysis (TA) and supporting documentation. Please examine the TA and associated stipulations and sign the attached permit, ACT/015/004, 4/85, on page 5 of that document. Upon signing, please keep a copy of the permit for your records and return the original Certified Return Receipt Requested to the Division at your earliest convenience.

A signed and executed performance bond for the Huntington #4 Mine has been received by the Division in the amount of $360,104.00 payable to the state of Utah. Therefore, upon your signature of the permit, it will become valid and enforceable.

Thank you for your cooperation on this matter. Should you have any questions, please feel free to contact the Division.

Best regards,

Dianne R. Nielson

Dianne R. Nielson
Director

JW/btb
Enclosures
cc: Allen Klein
Robert Hagen
Lowell Braxton
Joe Helfrich
John Whitehead
9294R-12 & 13

FEDERAL
(February 1985)

Permit Number ACT/015/004 , 4/85

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING
355 West North Temple
3 Triad Center, Suite 350
Salt Lake City, Utah 84180-1203
(801) 538-5340

This permit, ACT/015/004 , which incorporates the Office of Surface Mining (OSM) Permit UT-0004 , is issued for the state of Utah by the Utah Division of Oil, Gas and Mining (DOGM) to:

Beaver Creek Coal Company
P. O. Box 1378
Price, Utah 84501

for the Huntington #4 Mine. Beaver Creek Coal Company is the lessee of federal coal leases U-33454 and SL-064903, the lessee of state coal leases NA , and/or the lessee/owner of certain fee-owned parcels 717.5 acres . The permit is not valid until a performance bond is filed with the DOGM in the amount of $360,104.00 (1989 $), payable to the state of Utah, Division of Oil, Gas and Mining and OSM, and the DOGM has received 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 Relamation Act of 1979, Utah Code Annotated (UCA) 40-10-1 et seq, hereafter referred to as UCMRA.

Sec. 2 The permittee is authorized to conduct surface coal mining and reclamation operations on the following described lands (as shown on ownership map) within the permit area at the Huntingtion #4 Mine situated in the state of Utah, Emery County, and located:

Township 16 South, Range 7 East, SLBM
Section 8: S1/4 SE1/4
Section 16: NW1/4 NE1/4, N1/2 NW1/4, SW1/4 NW1/4, NW1/4 SW1/4
Section 17: NE1/4

Township 16 South, Range 7 East, SLBM
Section 16: NE1/4 SW1/4, NW1/4 SE1/4, SE1/4 NW1/4, SW1/4 NE1/4

Township 16 South, Range 7 East, SLBM
Section 9: SW1/4 SE1/4, SE1/4 SW1/4, SW1/4 SW1/4

Township 16 South, Range 7 East, SLBM
Section 17: W1/2 SE1/4

This legal description is for the permit boundary (as shown on the permit area map) of the Huntington #4 Mine. The permittee is authorized to conduct surface and reclamation operations connected with mining on the foregoing described property subject to the conditions of the leases, the approved mining plan, and OSM permit UT-0004, to be issued April 10, 1985, including all conditions and all other applicable conditions, laws and regulations.

Sec. 3 This permit is issued for a term of five (5) years commencing on the date the permit is signed by the permittee, except that this permit will terminate if the permittee has not begun the surface coal mining and reclamation operations covered herein within three (3) years of the date of issuance.

Sec. 4 The permit rights may not be transferred, assigned or sold without the approval of the Director, DOGM. Request for 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 UMC 788.17-.19.

Sec. 5 The permittee shall allow the authorized representative of the DOGM, including but not limited to inspectors, and representatives o the Office of Surface Mining, 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, UMC 840.12, 30 CFR 842.13 and UMC 842.13; and,

B. be accompanied by private persons for the purpose of conducting an inspection in accordance with UMC 842.12 and 30 CFR 842, when the inspection is in response to an alleged violation reported by the private person.

Sec. 6 The permittee shall conduct surface coal mining and reclamation operations only on those lands specifically designated as within the permit area on the maps submitted in the mining plan and permit application and approved for the term of the permit and which are subject to the performance bond.

Sec. 7 The permittee shall minimize any adverse impact to the environment or public health and safety including but not limited to:

A. 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. 8 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. 9 The lessee 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 and OSM in approving alternative methods of compliance with the performance standards of the Act, the approved Utah State Program and the Federal Lands Program.

Sec. 10 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. 11 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. 12 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. 13 If during the course of mining operations, previously unidentified cultural resources are discovered, the applicant shall ensure that the site(s) is not disturbed and shall notify the state Regulatory Authority (RA). The state RA, after coordination with OSM, shall inform the operator of necessary actions required.

Sec. 14 APPEALS - The lessee shall have the right to appeal: (a) under 30 CFR 775 from actions or decisions of any official of OSM; (b) under 43 CFR 3000.4 from an action or decision of any official of the Bureau of Land Management; (c) under 30 CFR 290 from an action, order or decision of any official of the Minerals Management Service; or (d) under applicable regulations from any action or decision of any other official of the Department of the Interior arising in connection with this permit. In addition, the lessee shall have the right to appeal as provided for under UMC 787.

Sec. 15 SPECIAL CONDITIONS - In addition to the general obligations and of performance set out in the leases, OSM permit UT-0004 and this permit, the permittee shall comply with the special conditions of OSM permit UT-0004 and the conditions appended hereto as Attachment A.

The above conditions (Secs. 1-15) are also imposed upon the permittee's agents and employees. The failure or refusal of any of these persons to comply with these conditions shall be deemed a failure of the permittee to comply with the terms of this permit and the lease. The permittee shall require his agents, contractors and subcontractors involved in activities concerning this permit to include these conditions in the contracts between and among them. These conditions may be revised or amended, in writing, by the mutual consent of the grantor and the permittee at any time to adjust to changed conditions or to correct an oversight. The grantor may amend these conditions at any time without the consent of the permittee in order to make them consistent with any new federal or state statutes and any new regulations.

THE STATE OF UTAH

By: Dianne R. Nielson

Date: April 10, 1985

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

Authorized Representative of
the Permittee

Date: _____

APPROVED AS TO FORM:

By: Barbara W. Roberts
Assistant Attorney General

Date: 4-10-85

0216R

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Huntington Canyon No. 4 Mine

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   b. Branch of Solid Minerals (BLM)

   c. U.S. Forest Service

   d. State Historic Preservation Office

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8. Technical Analysis.

9. Notification.

RECEIVED
APR 10 1985
DIVISION OF OIL
GAS & MINING

United States Department of the Interior
OFFICE OF SURFACE MINING
Reclamation and Enforcement
BROOKS TOWERS
1020 15TH STREET
DENVER, COLORADO 80202

MEMORANDUM

TO: Allen D. Klein, Administrator, Western Technical Center

FROM: Melvin Shilling, Chief, Mining Analysis Division

SUBJECT: Recommendation for Approval of Beaver Creek Coal Company's Huntington Canyon No. 4 Mine Mining Plan and Permit, Emery County, Utah, Federal Leases: U-33454 and SL-064903

I. Recommendation

I recommend approval with conditions of the Beaver Creek Coal Company's Huntington Canyon No. 4 Mine permit for reclamation of an underground mining operation. The permit is in accordance with the approved Utah State Program and is consistent with the mine plan approved January 30, 1980 by the Assistant Secretary of Energy and Minerals. This is an existing mine that completed mining operations and was closed permanently November 1, 1984. The previous mining plan and permit were approved under the Federal lands and State interim programs. My recommendation is based on the technical analysis (TA) and environmental assessment (EA) of the complete application. The applicant conducted underground mining on Federal coal leases U-33454 and SL-064903, and private fee coal during production at the mine. The permit with conditions included with this memorandum, will be in conformance with the applicable Federal regulations, the Utah State Program, and the Mineral Leasing Act, as amended. A bond in the amount of $259,404.88 is adequate, based on reclamation activities being substantively completed by the end of 1985.

The Utah Division of Oil, Gas and Mining (DOGM), U.S. Forest Service (USFS), and the U.S. Fish and Wildlife Service (FWS), identified elements of the applicant's proposal which require conditions to comply with State and Federal law. The State permit ACT/015/004 stipulations are incorporated into the proposed Federal permit UT-0004, 3/85 as conditions 1 through 7. The State regulatory authority will issue permit ACT/015/004 subsequent to the Federal permit.

My recommendation for approval is based on the reclamation portions of the complete permit application package, updated to January 23, 1985. I have determined that this action will not have a significant impact on the human environment.

Beaver Creek Coal Company has requested the permit only be issued for the reclamation of Huntington Canyon No. 4 Mine, since the mining operations permanently ceased November 1, 1984.

II: Background

The Huntington Canyon No. 4 Mine is located in Emery County, Utah, approximately 12 miles northwest of Huntington, Utah, in Mill Fork Canyon. The proposed permit area contains 1,320 surface acres, of which 440 acres are in Federal lease No. U-33454 and 160 acres are in Federal lease No. SL-064903, and 720 acres are private. All of the Federal lands involved have been leased. This reclamation operation will not significantly affect any environmentally-sensitive areas. The underground operations utilized room-and-pillar mining methods mining the Blind Canyon and Hiawatha coal seams. All underground mine operations ceased November 1, 1984.

Beaver Creek Coal Company originally planned to mine beneath Little Bear Spring. However, OSM and UDOGM determined the permit application package to contain insufficient information to assess the potential for material damage to Little Bear Spring. Beaver Creek Coal Company abandoned mining prior to reaching the fault zone where the spring is located. There are no impacts to Little Bear Spring anticipated as a result of Beaver Creek Coal Company's past mining operations in Huntington Canyon No. 4 Mine.

The riparian area, considered a sensitive habitat, will be disturbed during the dismantling and grading operations for the pumphouse and collection basin located in the intermittent stream channel. The impact will be short lived and consist of increased sediment load in the stream channel. Immediately upon completion of the grading, the natural stream channel will be restored utilizing rip-rap and revegetation methods identified in the permit application (pages 3-58 through 3-69). Impact to the stream will be minimal.

On March 1, 1985, OSM received the U.S. Forest Service (USFS) comments and conditional concurrence. Concurrence was conditional upon OSM response to specific questions about the purpose of the reclamation activities. OSM responded to the USFS in a letter dated March 19, 1985, and incorporated the appropriate comments into the decision document.

The Huntington Canyon No. 4 Mine permit application was reviewed by UDOGM, using the approved Utah State Program. The technical analysis for this mine application was prepared by UDOGM, and the environmental assessment was prepared by OSM. These documents, other documents prepared by UDOGM, the company's application, and other correspondence developed during the completeness and technical reviews are part of OSM's public administrative file. UDOGM and OSM jointly developed proposed conditions to assure compliance with State and Federal regulations.

The Bureau of Land Management (BLM) has provided a memorandum dated March 11, 1985 indicating that the applicant is in compliance and is currently sealing the portal under BLM's inspection.

On January 4, 1984, and continuing for four consecutive weeks, Beaver Creek Coal Company published a public notice in Price, Utah's Sun-Advocate, announcing the availability of a complete permit application package for public review and comment. After the Beaver Creek Coal Company published the newspaper notice as required, no written comments, objections, or requests for an informal conference were received.

A chronology of events related to this permit application is enclosed. Written concurrence was provided by Bureau of Land Management, Branch of Solid Minerals; U.S. Forest Service; and letters from U.S. Fish and Wildlife Service; and the State Historic Preservation Officer. Conditions were developed from comments received from the Manti-LaSal National Forest (Condition No. 8) and the Ecological Services Branch of the U.S. Fish and Wildlife Service (Condition No. 9).

The information in the permit application, as well as other information documented in the recommendation package and made available to the applicant, has been reviewed by Utah Division of Oil, Gas and Mining staff in coordination with the OSM Project Leader. Other information included the 1983, Bureau of Land Management Final Environmental Impact Statement (FEIS) entitled "Uinta Southwestern Utah Coal Region."

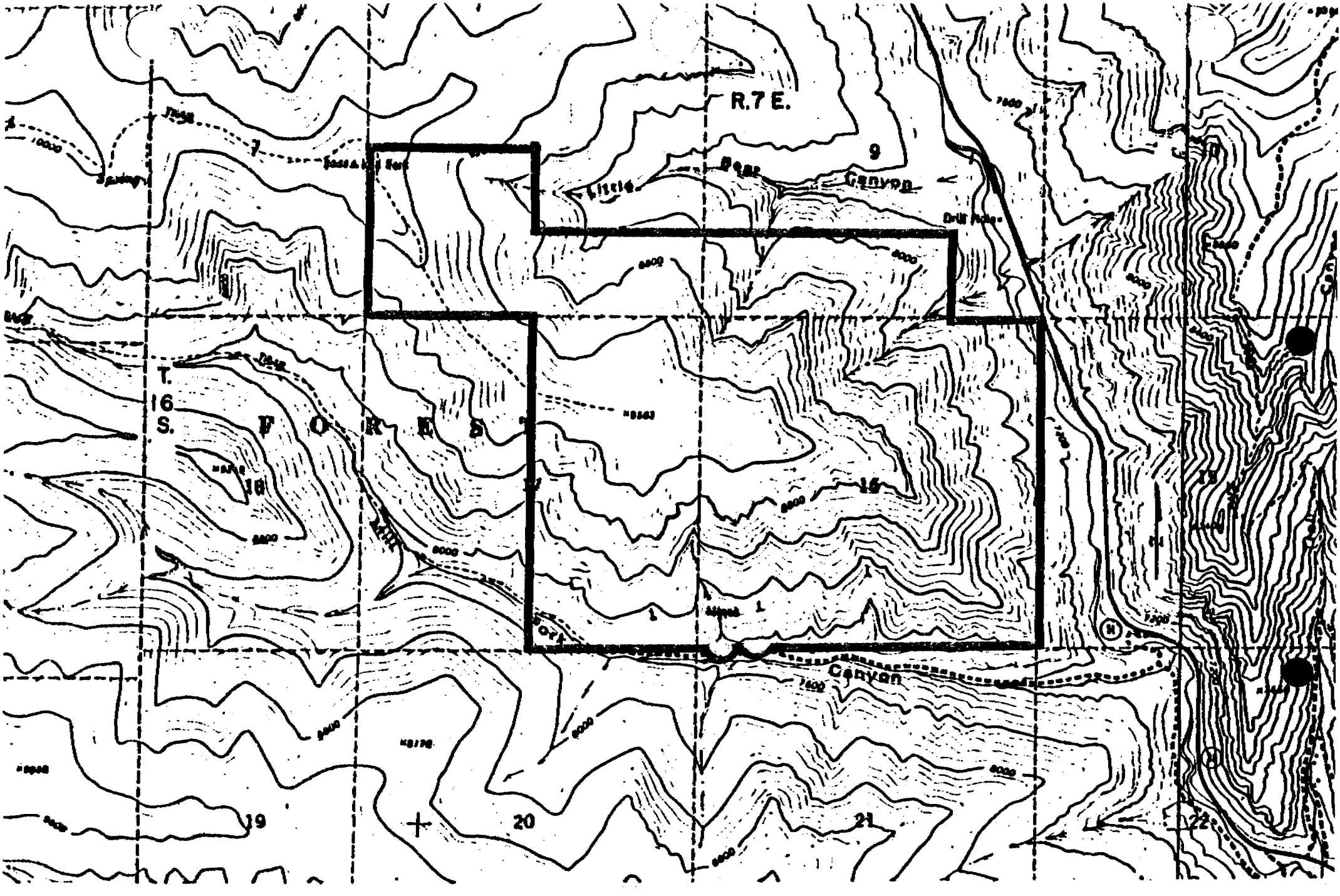
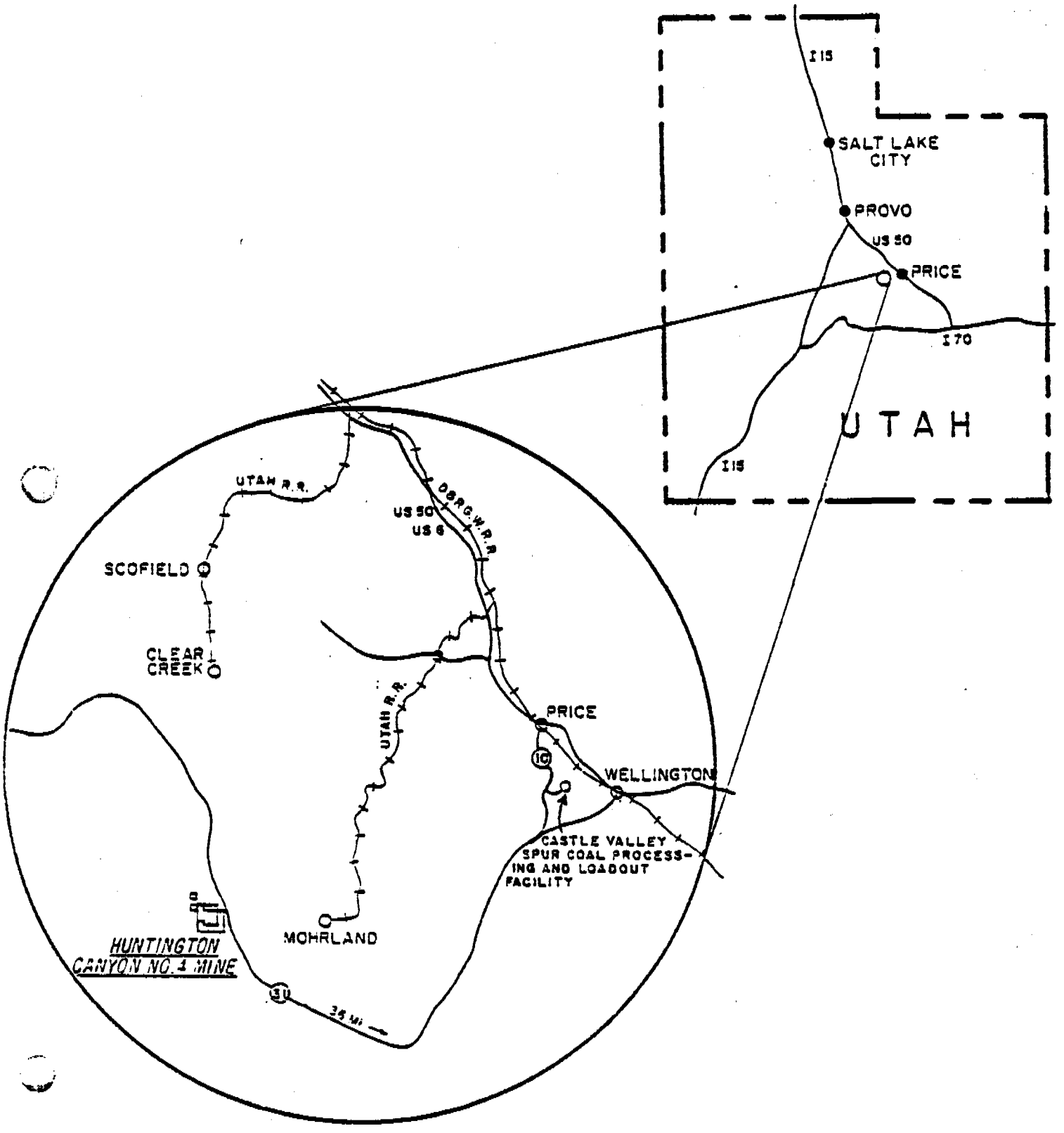


FIGURE 2. Huntington Canyon No. 4 Mine Permit Area

Figure I

BEAVER CREEK COAL COMPANY

AREA OF OPERATIONS



CHRONOLOGY OF EVENTS

Beaver Creek Coal Company
Huntington Canyon No. 4 Mine

Application for Permit Approval

DATE	EVENT
January 30, 1980:	Assistant Secretary of Energy and Minerals approved Beaver Creek Coal Company's (BCCC) mine plan.
March 23, 1981:	BCCC submitted permit application and mining plan, under the approved Utah Program, to the Utah Division of Oil, Gas and Mining (UDOGM) and the Office of Surface Mining (OSM).
September 4, 1981:	UDOGM performed an apparent completeness review (ACR) and deemed the application incomplete and technically deficient.
December 11, 1981:	UDOGM invoked an "administrative delay" to allow continued operation under interim approval.
April 2 & 13, 1982:	BCCC submitted additional material in response to ACR.
June 22, 1982:	BCCC resubmitted the permit application package (PAP) to OSM and UDOGM.
October 21, 1983:	The Endangered Species Office of the U.S. Fish and Wildlife Service submitted a memorandum determining that no threatened or endangered species or their habitat exists within Huntington Canyon No. 4 mine permit area. However, canyon sweet vetch (Hedysarum occidentale var. canone) is under review for proposed listing as a threatened species. Section 7 consultation was requested.
December 20, 1983:	UDOGM and OSM determined BCCC's permit application and mining plan to be complete and UDOGM commenced the technical analysis.
January 4, 1984:	BCCC published fourth consecutive weekly notice in the Sun-Advocate that the PAP had been filed.

DATE	EVENT
January 24, 1984:	UDOGM submitted the draft TA for the Huntington Canyon No. 4 mine to OSM for review and comment, and notified BCCC of deficiencies in the Huntington Canyon No. 4 PAP in preparation of the TA.
March 20, 1984:	BCCC responded to UDOGM concerning deficiencies identified in the draft TA.
April 12, 1984:	OSM submitted comments regarding the draft TA for the Huntington Canyon No. 4 mine to UDOGM.
July 19, 1984:	OSM submitted a Biological Assessment of canyon sweet vetch (Hedysarum occidentale var. canone) to the Endangered Species Office (FWS) as required under formal Section 7 consultation.
July 27, 1984:	OSM prepared draft EA.
August 27, 1984:	UDOGM submitted the draft final decision document for the Huntington Canyon No. 4 mine to OSM for review and comment, and notified BCCC of deficiencies in the Huntington Canyon No. 4 PAP during preparation of the TA.
September 21, 1984:	OSM submitted comments regarding the draft TA for the Huntington Canyon No. 4 mine to UDOGM.
September 27, 1984:	State Historic Preservation Officer (SHPO) submitted a concurrence letter for Huntington Canyon No. 4 mine with the standard condition that is included in Section 12 of the SMCRA permit.
October 19, 1984:	The Endangered Species Office (FWS) submitted a concurrence with OSM's memorandum dated September 26, 1984, concerning a "no effect" determination on the canyon sweet vetch and the endangered fishes of the Upper Colorado River Basin.
November 1, 1984:	BCCC permanently closed the Huntington No. 4 mine.

DATE	EVENT
January 23, 1985:	BCCC responded to UDOGM concerning deficiencies identified in the draft final decision document.
February 7, 1985:	UDOGM submitted a draft final TA and decision document for the Huntington Canyon No. 4 mine to OSM recommending approval of BCCC's PAP.
February 15, 1985:	OSM reviewed UDOGM's draft final TA and recommended that all reference to mining operations be deleted from the TA.
February 22, 1985:	Manti-LaSal National Forest submitted a concurrence letter for approval of the reclamation plan for Huntington Canyon conditional upon OSM's response to specific proposed reclamation activities in the PAP.
February 27, 1985:	Solid Minerals and Mining Law Branch (BLM) submitted a concurrence memorandum for the Huntington Canyon No. 4 mine to OSM stating that there were no conflicts with the R2P2.
March 8, 1985:	OSM prepared final EA and FONSI.
March 11, 1985:	OSM provided UDOGM with comments on their draft final TA and OSM's draft decision document.
March 15, 1985:	UDOGM submitted a final TA and comments on OSM's draft decision document.
March 19, 1985:	OSM responded to the Manti-LaSal National Forest concerning their February 22, 1985, concurrence letter.
April 1985:	OSM approved the PAP and issued a permit, with conditions.

FINDINGS

Beaver Creek Coal Company
Huntington Canyon No. 4 Mine

Application for Permit

I. The State of Utah and the Office of Surface Mining (OSM) have determined that the permit application package submitted on March 23, 1981, and updated through January 23, 1985, and the permit with conditions is accurate and complete and complies with the requirements of the approved Utah State Program, the Surface Mining Control and Reclamation Act (SMCRA), and the Federal Lands Program. [UMC 786.19(a)]

II. The Utah Division of Oil, Gas and Mining has reviewed the permit application, and prepared the Technical Analysis (TA). OSM has prepared the environmental assessment (EA) and reviewed the TA and incorporated documents and based on this has made the following findings:

1. The applicant proposes acceptable practices for the reclamation of disturbed lands. These practices have been shown to be effective in the short-term; there are no long-term reclamation records utilizing native species in the Western United States. Nevertheless, the Utah staff has determined that reclamation, as required by the Act, can be feasibly accomplished under the reclamation plan when supplemented by a condition. (See conditions 1 and 2.)

   OSM has determined that reclamation at Huntington Canyon No. 4 Mine is technologically and economically feasible under SMCRA Section 522(a)(2) and (b). [UMC 786.19(b); TA, Sections UMC 817.21-.25 and 817.111-.117); and permit application package (PAP), pages 3-1 through 3-78.]

2. The probable cumulative hydrologic impact assessment (PCHIA) of all existing and anticipated mining by surface coal mining operations in the general area on the hydrologic balance is addressed in Appendix I to these findings.

   The reclamation operations proposed under the application have been designed to prevent damage to the hydrologic balance in associated off-site areas. [UMC 786.19(c); and TA, Section UMC 817.45; PAP, page 7-1 through 7-96.]

3. After reviewing the description of the proposed permit area, Utah Division of Oil, Gas and Mining and OSM determine this area is:

   a. Not within an area designated unsuitable for mining pursuant to 30 CFR Parts 762, 764, and 769, or subject to the prohibitions or limitations of 30 CFR 761.11 and 761.12 of this chapter. [UMC 786.19(d)(1).]

   b. Not within an area under study or administrative proceedings under a petition, filed pursuant to 30 CFR Parts 764, and 769 of this chapter, to have an area designated as unsuitable for surface coal mining operations, unless the applicant demonstrates that before January 4, 1977, he has made substantial legal and financial commitments in relation to the operation covered by the permit application. [UMC 786.19(d)(2).]

   c. Not on any lands subject to the prohibitions or limitations of 30 CFR 761.11(a) (national parks, etc.), 761.11(f) (public buildings, etc.), and 761.11(g) (cemeteries). [UMC 786.19(d)(3); PAP, page 2-16.]

   d. Not within 100 feet of the outside right-of-way of a public road. [UMC 786.19(d)(4); PAP, page 2-16.]

   e. Not within 300 feet of any occupied dwelling. [UMC 786.19(d)(5); PAP, page 3-3]

   f. Not unsuitable in accordance with 522(b) and (a)(3) of SMCRA.

   g. Located on Federal lands within the boundaries of the Manti-LaSal National Forest. However, based on OSM's analysis and on the concurrence of the Forest Service, the surface operations and impacts incident to the Huntington Canyon No. 4 Mine will not be incompatible with significant recreational, timber, economic or other values of the Manti-LaSal National Forest.

4. OSM's issuance of a permit is in compliance with the National Historic Preservation Act and implementing regulations (36 CFR 800). [UMC 786.19(e); EA, Attachment I; State Historic Preservation Officer concurrence letter.]

5. The applicant has the legal right to enter and begin surface coal mining activities in the permit area. [UMC 786.19(f); PAP, page 2-16.]

6. The applicant has submitted proof and OSM's records indicate that prior violations of applicable law and regulations have been corrected. [UMC 786.19(g); PAP, page 2-8; personal communication with Frank Antencio, OSM Reclamation Specialist, in OSM Albuquerque Field Office on March 4, 1985.]

7. OSM's records confirm that all fees for the Abandoned Mine Reclamation Fund have been paid. [UMC 786.19(h); personal communication with John Sender, OSM Fee Compliance Officer, in OSM Albuquerque Field Office on March 4, 1985.]

8. OSM records show that the applicant does not control and has not controlled mining operations with a demonstrated pattern of willful violations of the Act of such nature, duration, and with such resulting irreparable damage to the environment as to indicate an intent not to comply with the provisions of the Act. [UMC 786.19(i); personal communication with Frank Antencio, OSM Reclamation Specialist, in OSM Albuquerque Field Office on March 4, 1985.]

9. Surface coal mining and reclamation operations to be performed under the permit will not be inconsistent with the Crandell Canyon, Bear Canyon, Deer Creek and Wilberg underground mines in the immediate vicinity of the Huntington Canyon No. 4 mine. [UMC 786.19(j); State findings, page 3.]

10. The applicant has provided evidence and the Utah Division of Oil, Gas and Mining has found there are no prime farmlands in the permit area. [UMC 786.19(l); letter of negative determination from Soil Conservation Service, PAP, page 8-14A.]

11. Negative alluvial valley floor determinations have been made for the drainages in the proposed permit and adjacent area for life-of-mine. These determinations were made on the basis of of a lack of unconsolidated streamlaid deposits, current and historical flood irrigation or subirrigation and the incapability to irrigate this area due to the steep canyon walls and narrow valley bottoms. [UMC 786.19(l); TA, Section UMC 785.19; and State findings, page 3.]

12. As applicable, the permittee shall comply with UMC 700.11(e) and Subchapter B and K for compliance, modification, or abandonment of existing structures.

13. The proposed postmining land use of the permit area has been approved by the Utah Division of Oil, Gas and Mining, U. S. Forest Service and OSM. [UMC 786.19(m); letter of concurrence from U.S. Forest Service; State findings, page 3; and TA, Section UMC 817.133]

14. Utah Division of Oil, Gas and Mining and OSM have made all specific approvals required by the Act, the approved Utah State Program and the Federal Lands Program. [UMC 786.19(n); and State findings, page 3.]

15. The proposed operation will not affect the continued existence of threatened or endangered species or result in the destruction or adverse modification of their critical habitats. [UMC 786.19(o); TA, Sections UMC 817.97 and 817.111 through .117; Chronology of Events; and memorandum dated October 12, 1983, September 26, 1984, and October 19, 1984, from U.S. Fish and Wildlife Service.]

16. Procedures have complied with requirements of the Act for public participation, the approved Utah State Program, the Federal Lands Program, and Council on Environmental Quality regulations (40 CFR Part 1500 et seq.). [30 CFR 740.13(c)(3); Chronology of Events.]

17. The applicant has complied with all other requirements of applicable Federal laws and either have or have applied for permits from Environmental Protection Agency and Utah Division of Health and Southeastern Utah Health District; [30 CFR 746.13(g); Letters of Concurrence and Clearance; and PAP, page 2-16.]

_____

Administrator
Western Technical Center

FINDINGS
APPENDIX I

Cumulative Hydrologic Impact Assessment Summary

Huntington Canyon No. 4 Mine

Introduction

The Huntington Creek drainage basin is located in east-central Utah about 20 miles southwest of Price, Utah. The upper reaches of the drainage area originate in the Wasatch Plateau uplands at altitudes of up to 11,300 feet above sea level. Drainage trends generally southeast to the confluence of Huntington Creek with the San Rafael River, at an elevation of approximately 5,400 feet. The drainage system is located within the Green River watershed of the Colorado River.

The Huntington Creek drainage basin encompasses approximately 190 square miles above gage 09318000 near Huntington. Huntington Creek maintains an average stream gradient of about 300 feet per mile, and is characterized by deep, narrow canyons. The Huntington Creek drainage basin includes Huntington Canyon No. 4, Deer Creek, Crandall Canyon, Trail Canyon and Bear Canyon Mines.

Geologic Setting

The Huntington Creek drainage basin is located along the eastern flank of the central Wasatch Plateau. The Creek drains the steep slopes of the plateau before joining the San Rafael River in Castle Valley.

The Wasatch Plateau is underlain by Cretaceous rocks containing valuable coal beds. The eastern part of the plateau is known as the Wasatch Coal Field. The plateau extends in a north-south direction with precipitous cliffs and narrow, steep-sided valleys on the east and west sides. The average vertical relief is about 2,500 feet.

Stratigraphic units in the Huntington drainage basin include, in ascending order, the Mancos Shale, Star Point Sandstone, Blackhawk Formation, Castlegate Sandstone, Price River Formation, North Horn Formation, and Flagstaff Limestone. A generalized stratigraphic sequence which gives the lithologic description and hydraulic characteristics of each is illustrated in Figure 2-4 of the Cumulative Hydrologic Impact Assessment (CHIA).

The area is generally characterized by slightly dipping lenticular and overlapping sedimentary rocks varying in origin from shallow to moderately deep marine to deltaic and nonmarine. Intertongueing relationships between these sediments and coal beds makes correlation difficult. See Figure 2.5.

The lithology of these strata, as well as their dip (from two to nine degrees average), and the fault system in the area tend to control the ground- and surface-water movement. For example, the ground-water flow system (i.e., from the recharge areas along the ridges to discharge along the valleys) is a function of the amount of recharge available, the hydraulic characteristics of the strata and geologic structure in the area, and discharge.

There are two mineable coal seams in the area: the Hiawatha seam at the base of the Blackhawk Formation, and the Blind Canyon seam approximately 90 feet above the Hiawatha seam.

Surface Water Impacts

Impacts to surface water quality of Huntington Creek are expected to gradually increase over the next 20 years as underground mining operations advance further underneath East Mountain and Trail Mountain. The primary impact associated with the discharge of intercepted ground water is the introduction of additional dissolved solids which are expected to reach a maximum near the year 1990 and remain at intermediate levels through 2015. Impacts are quantified by flow-weighting the estimated dissolved solids concentrations of the mine discharge water with that of the average monthly water quality and discharge of Huntington Creek. The maximum predicted impacts for this period are given in Table 5.1 of the CHIA, which indicates that the highest concentration of dissolved solids is predicted to occur the month of February, reaching 308 mg/l. The largest increase in TDS concentration occurs in January and March when mine water discharge contributes a 13 mg/l increase above average monthly background concentration. This can be contrasted with the increase of over 1,500 mg/l resulting from irrigation return flows in the reach of Huntington Creek immediately downstream of the cumulative impact area.

The Utah Division of Health specifies a maximum recommended dissolved solids concentration of 1,200 mg/l for agricultural use (irrigation and stock watering) (Table 5.2, CHIA). Dissolved solids limitations for other uses are adjusted on a case-by-case basis. The U.S. Public Health Service provides guidelines for drinking water standards which recommend a maximum dissolved solids concentration of 500 mg/l for primary standards and 1,000 mg/l for secondary standards. Additionally, the U.S. Environmental Protection Agency has published recommended limits for various irrigation hazards and industrial uses, described in Table 5.3 (CHIA).

It can be seen from Tables 5.2 and 5.3 (CHIA) that mining-related increases in dissolved solids concentrations in Huntington Creek will not degrade or preclude anticipated uses below the cumulative impact area. This is in contrast to the marked degradation which presently occurs downstream of the mined area due to irrigation activity on Mancos Shale soils. This irrigation activity increases dissolved solids concentrations to levels which exceed the recommended limits for almost every use listed.

Ground-Water Impacts

Impacts to ground-water quantity and quality are difficult to quantify accurately. Comprehensive monitoring of surface springs and in-mine ground-water inflows will be required to detect and document changes in the ground-water system.

The maximum impact to the discharge of Huntington Creek can be estimated by assuming that all of the ground water which is intercepted by mining activities is water that would normally provide base flow recharge to the drainage basin. This assumption serves to define an upper limit on the magnitude of the potential dewatering impacts.

During and immediately following the retreat stage of the mining process, mine dewatering activities will decrease sharply and the ground-water system will begin to re-equilibrate. The transition time period required for resaturation of dewatered formations and the re-establishment of hydraulic heads is unknown and cannot be predicted. However, the maximum reduction in the discharge of Huntington Creek due to the diminution of base flow during this transition period can be estimated by invoking logic similar to that used to estimate the potential decrease in stream flow during mining. By assuming that the rate of resaturation during retreat mining will be equal to the rate of dewatering during mining, the reduction of discharge in Huntington Creek can be estimated on a monthly basis. This reasoning is overly conservative in that it assumes that all of the ground water which had been diverted by mining operations would have entered Huntington Creek naturally at the same monthly rate and volume, and also that immediately upon initiation of retreat mining activities this water will be totally consumed by the resaturation process. Of course, retreat mining does not occur instantaneously but rather is instituted in phases in various portions of the mines; however, this approach serves to provide an upper limit to the range of potential reduction in flow rates in Huntington Creek.

Using the values of average monthly flow rates based on Figure 4.3 (CHIA), the maximum percent reduction in average monthly flows in Huntington Creek is presented in Table 5.4 (CHIA). This includes all future effects from mines which discharge both within and outside the cumulative impact area below Electric Lake. It can be seen from the table that the greatest percent change occurs during the non-irrigation season, November through April. Changes to the average monthly flow of Huntington Creek during the growing season are less that 10 percent of the average monthly discharge of Huntington Creek. Thus, even if changes to the ground-water system were as great as these conservative estimates indicate, the timing of the impacts within the yearly cycle is such that minimal impacts occur during the period of greatest demand, May through October. This is due to a combination of effects, including the natural hydrologic seasonal cycle, regulation of Electric Lake, and the anticipated amounts and seasonality of future mine dewatering based on present inflow rates and drainage basin characteristics.

Summary

The hydrologic impacts of present and future coal mining activity within Huntington Creek basin have been addressed both quantitatively and qualitatively in this Cumulative Hydrologic Impact Assessment. Quantitative assessments presented in this report focus primarily on surface-water impacts resulting from the discharge of intercepted ground water. This analysis utilizes average monthly water quality and discharge records from Huntington Creek and Deer Creek Mine in combination with anticipated future mine inflows to predict future quality and quantity impacts including seasonal variation.

Qualitative analysis of the effects of mine dewatering and subsidence on the ground-water system has been presented, with particular emphasis on the potential for diminution of base flow recharge. Because of the complex lithologic relationship in the study area, the lack of piezometric data from water-bearing formations, the unknown vertical and horizontal extent of subsidence cracking and the strong relationship between spring discharge and precipitation, a prediction of future impacts to the ground-water system based on analytical methods was not attempted. The most definitive method for detecting subsidence-related changes in the ground-water system appears to be a continuation of the hydrologic monitoring programs which are currently ongoing in the area, coupled with future monitoring at proposed minesites. These programs will provide data on the progressive modification of surface topography, spring discharge and water chemistry, and climatological conditions. Spring discharge recession curves might also be used to detect changes in the ground-water regime, but this technique requires frequent of continuous flow monitoring of selected springs; a permanent program has not yet been established by either the USGS, Forest Service or mine operators for this purpose.

FINDING OF NO SIGNIFICANT IMPACT

Beaver Creek Coal Company
Huntington Canyon No. 4 Mine

The technical analysis (TA), prepared by the State of Utah, and the environmental assessment (EA), prepared by the Office of Surface Mining (OSM) preceding this "Finding of No Significant Impact" Statement, identifies certain environmental impacts that would result from the Federal approval of the reclamation plan for Beaver Creek Coal Company's Huntington Canyon No. 4 Mine. The 5-year permit application, submitted to the State under its approved permanent program, proposes a total permit area of 1,320 acres, all of which were previously permitted under the interim program. The permit area encompasses portions of Federal leases U-33454 and SL-064903.

The regional impacts of coal mining in central Utah are addressed in the Bureau of Land Management's Uinta Southwestern Utah Coal Region environmental impact statement, 1983.

The State TA determined that impacts to the Huntington Canyon No. 4 Mine area would result from reclaiming Huntington Canyon No. 4 Mine. However, OSM finds that impacts would not be significant.

Based upon the evaluation of impacts given in the TA and EA, I find that no significant impacts to the human environment would result from the proposed reclamation of the mine area. Therefore, an environmental impact statement is not required.

_____
Administrator
Western Technical Center

_____
Date

ENVIRONMENTAL ASSESSMENT
BEAVER CREEK COAL COMPANY
HUNTINGTON CANYON NO. 4 MINE
CARBON COUNTY, UTAH
FOR A
UTAH PERMANENT PROGRAM SMCRA PERMIT
PREPARED BY
THE OFFICE OF SURFACE MINING (OSM)
UNITED STATES DEPARMENT OF THE INTERIOR
MARCH 1985

Introduction

The Huntington Canyon No. 4 Mine, also known as the Huntington #4 Mine, is owned and operated by Beaver Creek Coal Company, a wholly owned subsidiary of the Atlantic Richfield Company of Los Angeles, California. The operation is located in Mill Fork Canyon, tributary to Huntington Creek, approximately 12 road miles northwest of Huntington, Emery County, Utah. The mine began production in early 1977 on areas disturbed by mining operations in the 1940's. The mine was temporarily inactive from October, 1978 through March, 1980. The mine was in full operation from March, 1980 through November, 1984, when the mine was permanently closed.

The surface area at Huntington #4 Mine is 46 percent Federal and 54 percent private. Mineral leases (coal ownership) are also 46 percent Federal and 54 percent fee. Total permit acreage is 1,320 acres. The Huntington #4 Mine, at full operation, employed about 53 people. The mine employed approximately 30-35 persons at the time the mine was closed. These individuals were transferred to Beaver Creek Coal Company's Gordon Creek No. 7 Mine.

The surface facilities area and roads encompass 12.5 acres of disturbance. Surface disturbance is located on a steep slope of primarily southerly exposure. Beaver Creek Coal Company intends to perform reclamation upon the 12.5 acres of disturbed lands used in the operation of the Huntington #4 Mine.

On November 1, 1984, Beaver Creek Coal Company completed mining operations in the Huntington #4 Mine. Beaver Creek Coal Company determined that the maximum coal recovery had been achieved and the Bureau of Land Management inspected the mine and concurred with the company. Huntington #4 Mine operated in the Blind Canyon and Hiawatha coal seams. All mining was performed using room-and-pillar methods at 45 to 50 percent recovery. Average annual production was 365,000 tons per year.

Purpose and Need for Action

The Huntington #4 Mine is a permanently closed mine that was operating under an interim permit issued on January 30, 1980 by the

Office of Surface Mining to Beaver Creek Coal Company (then Swisher Coal Company). Beaver Creek Coal Company has submitted a reclamation plan in compliance with the Coal Mining and Reclamation Permanent Regulatory Program (Chapter I) of the State of Utah. The necessary Federal action is to approve, disapprove, or conditionally approve the application in accordance with the requirements of the Surface Mining Control and Reclamation Act (SMCRA).

This environmental assessment will address the environmental consequences of the proposed reclamation plans in the permit application. The consequences of no permit approval will also be addressed. The purpose of this document is to assist the Administrator, Western Technical Center (OSM) to make a decision with respect to NEPA compliance.

Proposed Action - Approve Beaver Creek Coal Company's SMCRA Permit With Conditions

This alternative is for OSM to approve reclamation of Beaver Creek Coal Company's proposed SMCRA permit area as described in the permit application package (PAP) as updated through January 23, 1985, and conditions of the permit. Conditions are necessary to bring the proposed reclamation plan into compliance with SMCRA and avoid unnecessary delays in reclamation of Huntington #4 minesite.

During the SMCRA permit term, Beaver Creek Coal Company proposes to reclaim 12.5 acres of disturbed area within the permit area. Beaver Creek Coal Company intends to initiate reclamation immediately upon permit approval.

Alternatives

Alternative No. 1: Approval of the SMCRA Permit Without Conditions.

Approval of Beaver Creek Coal Company's proposed SMCRA permit at this time without conditions would result in noncompliance with SMCRA, and is therefore not legally feasible. A decision to require Beaver Creek Coal Company to revise the PAP to eliminate all noncompliance would delay reclamation of Huntington #4 minesite possibly for a full year.

Alternative No. 2: Disapproval of the SMCRA Permit.

Disapproval of Beaver Creek Coal Company's proposed SMCRA permit is not a feasible alternative. Disapproval unnecessarily places Beaver Creek Coal Company in noncompliance with SMCRA by preventing the company from reclaiming the minesite as required by SMCRA.

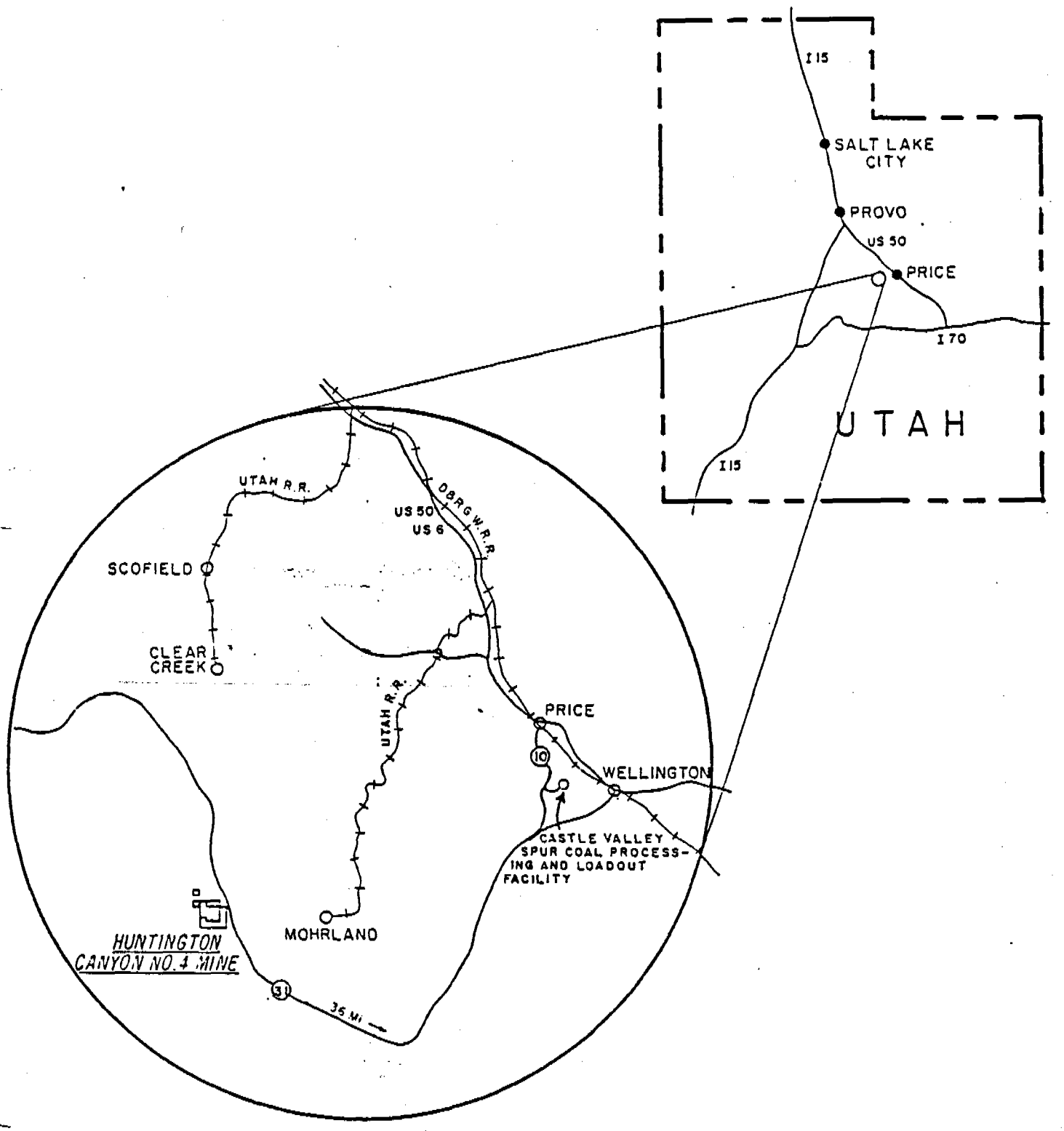
Description of the Affected Environment

The Huntington #4 minesite is located in Mill Fork Canyon, a small side canyon in the lower Huntington Canyon drainage. This portion of the Huntington Canyon watershed area is characterized by steep,

Figure I

BEAVER CREEK COAL COMPANY

AREA OF OPERATIONS



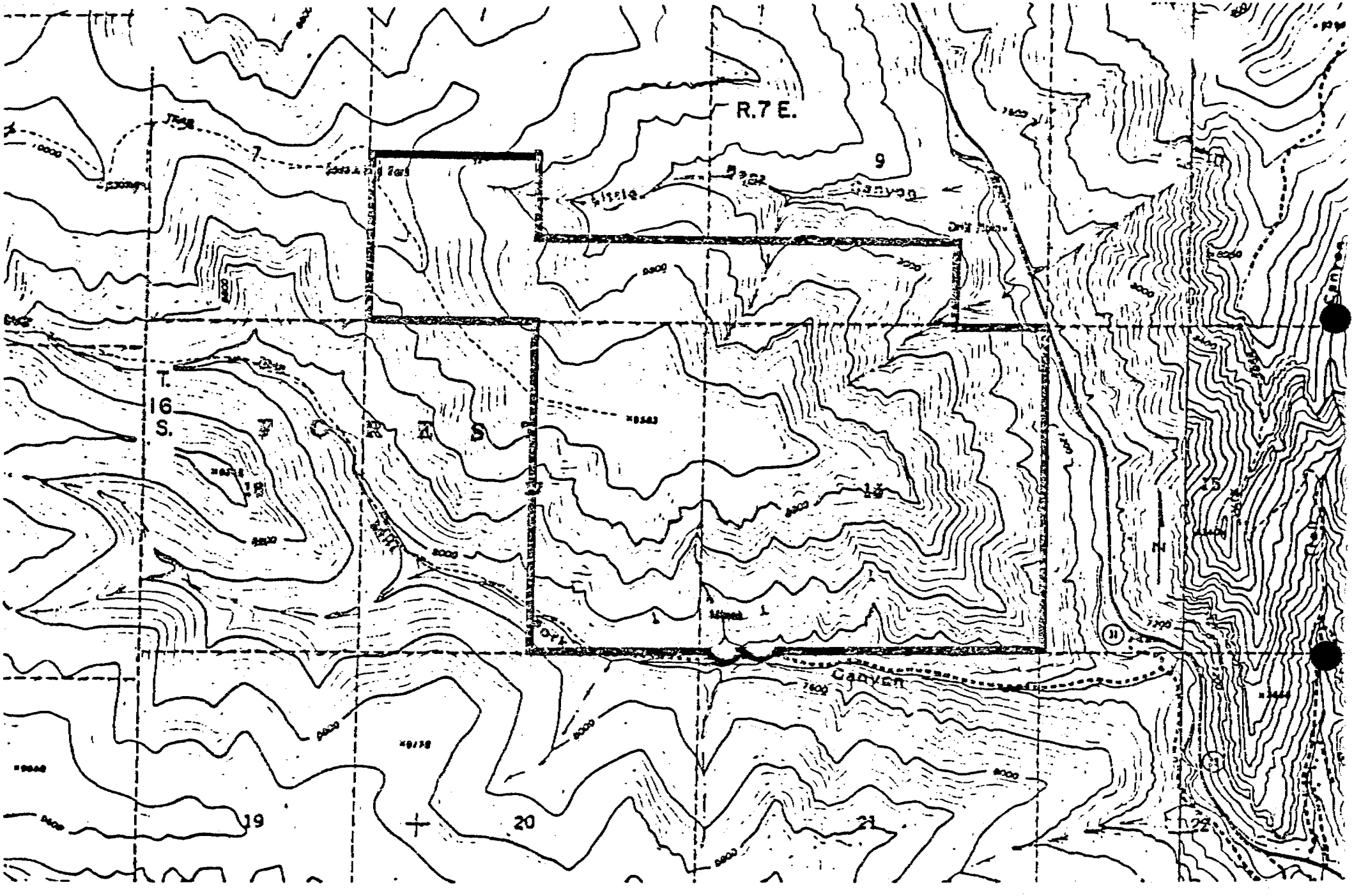


FIGURE 2. Huntington Canyon No. 4 Mine Permit Area

relatively narrow canyons which typically dissect the eastern edge of the Wasatch Plateau. Huntington Creek is tributary to the Colorado River via the San Rafael and Green Rivers.

Stream flow in the Huntington Canyon drainage is largely derived from snowmelt which constitutes about 65 percent of the annual discharge (Danielson 1981). The snowmelt season typically occurs from April through July.

Huntington #4 Mine is located within Wasatch Plateau Coal Field. The sedimentary rocks of the Wasatch Plateau are of Tertiary and Cretaceous age. Rocks are of both continental and marine origin and are principally shale and sandstone. Siltstone, mudstone and limestone also occur but in lesser amounts. Cretaceous sedimentary rocks contain the economically significant coal beds in the Wasatch Plateau.

The Blind Canyon and Hiawatha coal seams at Huntington #4 Mine occur in the Blackhawk Formation of the Upper Cretaceous Mesa Verde Group. Four stratigraphic units are formally recognized in the Mesa Verde Group: the Star Point Sandstone, Blackhawk Formation, Castlegate Sandstone, and Price River Formation. The mine facilities are located at an elevation of approximately 7,400 to 7,800 feet and are on the south facing slope of the canyon. The south face is more hydrologically responsive to high intensity summer precipitation events due to the reduced vegetative cover on the dryer south side.

Huntington #4 minesite is located at an elevation of between 7,400 and 7,800 feet on a southern exposure. Annual precipitation ranges from 15 to 20 inches, and the frost free days from 60 to 120. Mean annual temperature range from 38 degrees to 45 degrees fahrenheit.

Soils in the area have evolved from the weathering of sandstone and shale on slopes ranging from nearly level to as steep as 90 percent. Three soil series were found to exist in the area: Patmos, Quigley and Podo. The Patmos and Podo series are the Ustorthents and the Quigley is a Haploboroll. The A horizons range from as thin as 2 inches in the Podo to as thick as 7 inches in the Quigley. Soil permeability is moderate to moderately rapid and the erosion hazard due to water is slight to high. The native vegetation is Salina wildrye, juniper, big sagebrush, rabbitbrush and lodgepole pine.

The Huntington #4 Mine lease area is generally located within the pinyon-juniper vegetation zone as described by Cronquist, et al (1972). The elevation ranges from approximately 7,200 feet to 9,580 feet. Precipitation varies with elevation and ranges from approximately 12 to 20 inches, with 60 to 70 percent occurring as snow during the months of October through May.

Eight vegetation types are delineated in the permit area (Plate 9-1). These include aspen woodland, mixed coniferous forest, burned mixed coniferous forest, pinyon-juniper-curl leaf mountain mahogany woodland, manzanita shrubland, big sagebrush shrubland, riparian and mountain grassland. Only the pinyon-juniper-curl leaf mountain mahogany woodland community occurs in the area of disturbance.

The major aquatic habitats within the permit area are Mill Fork and Little Bear Creek. All surface facilities are within Mill Fork Canyon. Based on benthic macroinvertebrate and acquatic habitat surveys conducted by the operator and on data provided by the Utah Division of Wildlife Resources (UDWR), neither supports game or nongame fish and both lack sufficient flow in most years to provide spawning sites. However, these streams probably contribute some invertebrate food items and a small amount of surface flow to Huntington Creek, an important fishery in the region.

The most important aspects of these streams is the riparian habitat which they provide to wildlife. Approximately 1.4 acres of riparian vegetation exists on the lease area. This habitat type is listed by UDWR as high priority due to availability of water and compositional diversity of the plant community. Other high priority areas include seeps and springs and cliffs which afford nesting sites for many species of raptorial birds.

Habitats in and around the Huntington #4 Mine permit area includes areas of high priority summer range and crucial-critical winter range for both deer and elk (PAP, Figure 10-6, 10-7). No specific elk calving or deer fawning areas have been identified in the study area. A portion of the study area provides moose winter range, but field studies indicate that preferred habitat is quite limited.

A wide variety of wildlife species utilize the highly variable habitats within and adjacent to the permit area. Economically important and high interest species include mule deer, elk, moose, beaver, bobcat, coyote, mountain lion, snowshoe hare, fox and flying squirrel. Twenty-nine species of birds including gamebirds and raptors are listed as being on high state interest. Seven species of raptors have been observed on the permit area and nesting areas for red-tailed hawks, sharp-shinned hawks, American kestrels and great horned owls have been on-site. Gamebirds include blue grouse, ruffled grouse and mourning doves.

Of the 22 species of migratory birds, six are of high Federal interest listed by the U.S. Fish & Wildlife Service (USFWS) for the Uintah-Southwestern Utah area. These are the bald eagle, golden eagle, peregrine falcon, Williamson's sapsucker, black swift and western bluebird. No active nests for these species have been found on or adjacent to the permit area.

Mill Fork Canyon lies primarily in an east-west direction with the stream running in an easterly direction into Huntington Canyon. The stream is characterized as intermittent. The canyon is paralleled on the north by Little Bear and Crandall Canyons and on the south by Rilda Canyon.

The ground-water system in the general area of the Huntington #4 Mine is characterized by localized aquifers in the Castlegate Sandstone, apparent perched conditions in the Blackhawk Formation (coal bearing formation) with an extensive regional aquifer occurring in the Star Point Sandstone. The Star Point Sandstone lies just below the Blackhawk Formation. Danielson et al., notes this refers to the Star Point Sandstone as the Star Point - Blackhawk aquifer (page 22, U.S. Geological Survey Open File Report 81-539.)

Ground-water recharge appears to be largely associated with snowmelt rather than rainfall based on deuterium studies performed by the U.S. Geological Survey (USGS) and Beaver Creek Coal Company.

Ground water is discharged by springs and seeps, a few of which occur near the Huntington #4 Mine lease area. In addition, base flow of perennial creeks is thought to be sustained via gaining reaches most likely fed from the Star Point - Blackhawk aquifer.

The general area in which the Huntington #4 Mine is located has been used for coal mining since the turn of the century. Three underground mine operations were located within Mill Canyon -- Leamaster, Skeen and Helco Mines. The Leamaster Mine, last to close, operated nearly 25 years ago (1960). Other than coal mining, private landowners presently administer the lands in this area for limited livestock, grazing, wildlife habitat, watershed and dispersed recreation. No threatened or endangered species are known to occur on the permit area.

IMPACTS OF THE PROPOSED ACTION

Air Quality

Regional impacts from Huntington Canyon #4 reclamation operations on air quality are expected to be minimal since there will be reduced traffic and surface facilities will be reclaimed. Particulate matter is the only air pollutant that has the potential to degrade air quality. The particulate matter is predominately fugitive dust, which will occur only during reclamation operations during the first year. Increases in concentrations of other pollutants such as sulfur dioxide, nitrogen oxides, carbon monoxide, and photochemical oxidants are insignificant. The regional annual particulate impact of coal development in the Castle Valley area is expected to be less than the Class I increment standard of 10 ug/M3. (See Table 11-3 and 11-4 for regional total suspended particulate data.)

As a result of low particulate emissions from reclamation operations at the Huntington #4 Mine, neither the Utah Bureau of Air Quality nor the Environmental Protection Agency have established any air quality monitoring network requirements. Therefore, no air quality monitoring is planned for the minesite. (PAP, pages 3-41 to 3-44)

Geology and Topography

Beaver Creek Coal Company has completed mining operations in the Blind Canyon seam of the Huntington #4 Mine. The room-and-pillar method was used in the extraction of coal and secondary mining removed pillars. Minimal subsidence impacts are anticipated on the surface above the mine. There are no man-made structures or significant ground-water resources above the mine.

Beaver Creek Coal Company is committed to a monitoring plan which includes on-the-ground visual inspection.

The Castlegate Sandstone above the mine should reduce the potential for surface impacts resulting from subsidence. The Castlegate Sandstone should provide sufficient bridging strength to prevent most of the effects of subsidence. However, subsidence effects at the Castlegate outcrop may cause fracturing and separation of large blocks.

Soil Resources

Approximately 12.5 acres of soil have been disturbed by surface activities, the majority of which occurred prior to topsoil salvaged laws (Public Law 95-87). Therefore, except in the area occupied by the sediment pond, no topsoil was salvage and stockpiled for final reclamation.

Mitigation of the topsoil shortage will be alleviated by using soil material side casted during mine construction as plant growth medium for final reclamation. According to chemical and physical analysis, the side cast material is suitable as a plant growth medium. During reclamation the topsoil substitute will be retrieved by a backhoe and placed on the road and pad areas. A bulldozer will spread the soil material after it has been retrieved from the fill slopes.

Topsoil salvaged and stockpiled during construction of the sediment pond will be placed on the sediment pond after it has been regraded. After redistribution of all topsoil, the area will be deeply scarified to reduce compaction and additional soil samples will be taken to evaluate nutritional deficiencies (N, P & K) for preparation for reseeding.

Vegetation Resources

Approximately 12.5 acres of vegetation was originally disturbed by earlier mining activities in the old Leamaster, Skeen and Helco Mines. The existing structures currently occupies the same 12.5 acres.

The entire 12.5 acres will be reclaimed after final grading during the first planting season (fall). The planting mixture for final revegetation consists of primarily native grasses, forbs and shrubs. The riparian area will also be revegetated with compitable plant species. Revegetation will be monitored for at least every two years following plant establishment.

Canyon sweet - vetch (Hedysarum occidentalin var canone) is under review by the U.S. Fish and Wildlife Service (FWS) for possible listing as a threatened plant species. Huntington #4 minesite has been identified by the FWS as potential habitat for canyon sweet-vetch. (See Attachment II, Biological Assessment.) Also, canyon sweet-vetch is listed a sensitive plant species on the Manti-LaSal National Forest, by the U.S. Forest Service, (surface management agency) at Huntington #4 Mine. A survey of areas to be redisturbed during grading operation will be conducted to locate any potential individuals or communities of canyon sweet-vetch. Mitigation will be developed and implemented under the direction of the regulatory authorities.

The entire 12.5 acres will be reclaimed after final grading during the first planting season (fall). The planting mixture for final revegetation consists of primarily native grasses, forbs and shrubs. The riparian area will also be revegetated with compatible plant species. Revegetation will be monitored for at least every two years following plant establishment.

Fish and Wildlife Resources

Wildlife impacts typically can be categorized into three groups: loss or modification of habitat, disturbance and mortality.

The limited amount of surface disturbance associated with the Huntington #4 Mine results in a total habitat loss of about 12.5 acres during the life of the mine. This loss of habitat has already occurred and no additional disturbance is foreseen.

Virtually all reclamation activity is confined to the pinyon-juniper-curl-leaf mountain mahogany habitat type. It does not appear that this amount of loss within this habitat type has had a significant impact on wildlife within or adjacent to the permit area.

Aquatic habitat loss along Mill Fork apparently has not occurred, even though the stream is adjacent to the mine access road and downhill from the active mining area. However, loss habitat is a potential impact wherever mining activities are conducted in close proximity to a stream.

Disturbance of wildlife species results from the levels of noise and activity associated with reclamation of the mine. Thus, most larger species of birds and mammals (including deer, carnivores and raptors) tend to avoid the minesite, at least during working hours. Most of these species are likely to move freely around the minesite on weekends and to quickly reinhabit the area after reclamation.

Beaver Creek Coal Company has committed to avoiding additional disturbance of important habitats such as riparian areas, to not using persistent pesticides and to preventing fires. Also, employee awareness programs inform mine personnel of sensitive periods or habitats, such as deer fawning seasons and areas, critical winter ranges, etc., to minimize impacts to wildlife.

The operator has committed to reporting any observations of threatened and endangered species not previously reported on the permit area to the regulatory authority, UDWR and the USFWS. Active nests and trees will not be disturbed.

Habitat loss or deterioration of the Mill Fork aquatic ecosystem has been limited by the establishment of a 100-foot buffer zone adjacent to the stream and existing sediment ponds to protect the stream from an increased sediment load from the mine affected area. In addition, monthly inspections of sediment load in Mill Fork are conducted.

Revegetation methods are designed to restore and enhance wildlife habitat on disturbed area. The revegetation planting mixture includes herbaceous and woody species that are adapted to on-site conditions and are of known value to wildlife for cover, forage or both.

Surface Water Hydrology

Surface water impacts resulting from mining at the Huntington No. 4 Mine and all mines within the general area would be expressed within the Huntington Creek Basin. Streamflow records have shown suspended-sediment concentrations vary widely in the Huntington Creek drainage basin (PAP Table 7-10). Higher concentrations are generally associated with areas of surface disturbance.

Little Bear Creek is an intermittent stream located immediately north of Huntington #4 permit area. Little Bear Creek is fed by Little Bear Spring which is perennial. The bulk of the spring's discharge is diverted through a pipeline by the city of Huntington for domestic use.

Continuous discharge measurement are not available; however, the high yield from Little Bear Spring suggests that the source of recharge extends outside Little Bear Basin. No impacts to this spring or creek are anticipated.

Mill Fork, the other principal drainage, is an intermittent stream producing about 20 acre feet of water per year. Like Little Bear, the channels are more developed on the north facing slopes indicating the importance of evapotranspiration and snowmelt runoff to the hydrologic balance. Sparse vegetation and exposed rock on the south facing slope appear to have an important role in the production of storm runoff. Areas with high soil moisture along the stream channel also contribute to storm water runoff. The average change in elevation along the Mill Fork Creek is approximately 590 feet per mile. (See Plate 7-2). Water is not concentrated as quickly in Mill Fork channel as in the steep, short dendritic channel pattern found in the Little Bear drainage.

Mill Fork Creek is the only stream that lies immediately down gradient from Huntington #4 Mine surface disturbance. Flow from disturbed areas is controlled by diversions and sediment ponds. A buffer zone has been established between the haul road and stream. Disturbance in this zone was limited to impacts from road maintenance, which has been directed to the north side of the road. Snow and other accumulated material were removed and stored in an area with sediment control facilities

Reclamation of the surface facilities appears to have the greatest potential for impacts on surface hydrology. The potential risk to the deterioration of surface water quality is in increased total suspended solids (TSS) caused by erosion of the regraded surface. Erosion control measures during and after reclamation should reduce a potentially significant increase in TSS to Mill Fork and Huntington Creeks.

Ground-Water Hydrology

In the Huntington #4 Mine area, the Castlegate Sandstone crops as vertical cliffs near the top of slopes. Water entering it moves readily through it into the underlying Blackhawk Formation. However, at those locations where an impermeable bed is present at the base of the Castlegate Sandstone, the migrating ground water moves along it and discharges as a seep along the base of the unit.

The Star Point Sandstone and lower portion of the Blackhawk Formation are believed to form the only significant regional aquifer. The Star Point Sandstone is the host rock for Little Bear Springs and flow appears to be controlled by a fault zone. It is unlikely that water quality or quantity will be affected since mining activity did not penetrate the fault zone. The ongoing surface water monitoring program will provide the long term data needed to confirm projected potential hydrologic

impacts. An alternative water supply agreement has been made between Beaver Creek Coal Company and the City of Huntington to replace water from Little Bear Spring, the city's water supply, in the event that it is impacted by the applicant's past mining activities.

Surface disturbance will be revegetated to minimize erosion from surface runoff. Ground water encountered during mining operations has been used for abatement of dust generated by operating equipment underground. Whenever an amount of water was encountered during mining which could not be used for dust abatement, the water was released into the sedimentation ponds to meet effluent limitations before discharge. Up to the present time, minor amounts of ground water have been encountered during mining, resulting in only occasional discharge from the ponds.

Agricultural Resources

Agriculture in the vicinity of Huntington #4 Mine consists of livestock grazing (sheep). The mountainous terrain and high elevation precludes farming. No alluvial valley floor (AVF) areas exist within or adjacent to the permit area. The Soil Conservation Service has not identified any prime farmland soils within or adjacent to the permit area.

Postmining Land Use

The SMCRA permit area has long been used for coal mining. Other than coal mining, this area has been used for deer hunting, sightseeing, and hiking. There are no developed campgrounds or public roads within the area and none planned for the future.

The U.S. Forest Service presently administers the lands in this area for limited livestock forage, wildlife habitat, watershed, dispersed recreation and coal mining. There are no range improvements on the area.

The postmining uses of the land will be the same as the premining and present uses described above. In areas of surface disturbance, reclamation and revegetation will restore the area to a condition capable of supporting premining uses.

Socioeconomics

Upon closure of Huntington #4 Mine, employees working at the mine were transferred to Beaver Creek Coal Company's Gordon Creek No. 7 Mine. Reclamation of Huntington #4 Mine will provide short term secondary employment for a local contracting firm to reclaim the minesite. Reclamation of the Huntington #4 Mine will not have an adverse affect on the socieconomics of the local communities.

Cultural and Historical Resources

The permit and surrounding areas were fully inventoried for cultural resources in 1980 by personnel of Utah Archeological Research Corporation with additional survey work conducted on emergency lease areas in 1981-1982. No prehistoric or historic sites were recorded by the survey in the proposed permit area. Lack of sites is attributed to altitude, steepness of the topography, and lack of exploitable natural resources.

OSM received a "no effect" determination on Huntington Canyon #4 Mine from the Utah State Historic Preservation Office. Unanticipated cultural resource finds will be handled in accordance with standard permit section No. 12.

Esthetics

Huntington #4 Mine is an existing mine located in Mill Fork Canyon The surface facilities are situated such that they are not readily visible to the public from Huntington Canyon Road. The surface facilities consist of graded pad areas with buildings, parking lot, stacking tube, loadout facilities, portals and conveyor belt. The areas above mining operations consist of natural vegetation and rock outcrops.

~~The facilities~~ will be dismantled and removed, and the area will be reclaimed to approximate adjacent natural areas. The portals will be sealed and backfilled, the pad will be recontoured to the approximate original contour and the area will be revegetated with native plant species. Upon termination of Beaver Creek Coal Company's liability of reclamation for the area, the area should blend into the adjacent undisturbed areas.

Impacts of Alternative No. 1: Approval of the SMCRA Without Conditions

Approval of the SMCRA permit without conditions would result in noncompliance with SMCRA and potential environmental damage to the hydrologic system and potential failure of the proposed reclamation plan. The restored channel design for Mill Fork Creek as proposed in the permit application could restrict flow in the reclaimed channel and increase flow velocity. The net result would be increased erosion and destruction of reclaimed riparian habitat.

Beaver Creek Coal Company has not submitted information concerning the quality of the proposed topsoil for use in reclaiming the pumphouse site. Without this information, determination as to the suitability of this material cannot be made. Unsuitable material could result in revegetation failure.

Beaver Creek Coal Company's proposed planting mixtures will not achieve the diversity and stocking equal to or better than adjacent similar communities. Also the company needs to survey the areas to be redisturbed during reclamation to locate any canyon sweet-vetch (Hedysarum occidentale var. canone) individual plants and communities, a sensitive species listed by the U.S. Forest Service and proposed threatened species listed by the U.S. Fish and Wildlife Service.

A delay in the approval of this permit will result in a loss of time and opportunity to return the disturbed area to premining conditions and land uses, as well as additional operating expense to the applicant.

Impacts of Alternative No. 2: Disapproval of the SMCRA Permit

If the SMCRA permit is disapproved, reclamation of Huntington Canyon No. 4 minesite will be delayed until a permit application can be resubmitted and approved. The operation is currently operating under an interim permit and administrative delay. Disapproval would end Beaver Creek Coal Company's authority to operate, which would terminate maintenance of sediment control systems. If maintenance is terminated, the effluent limitation requirements could potentially be violated. This alternative is environmentally and legally infeasible.

United States Department of the Interior

FISH AND WILDLIFE SERVICE
ECOLOGICAL SERVICES
2060 ADMINISTRATION BUILDING
1745 WEST 1700 SOUTH
SALT LAKE CITY, UTAH 84104-5110

IN REPLY REFER TO:
(ES)

March 21, 1985

MEMORANDUM

TO: Acting Deputy Administrator
Office of Surface Mining
Denver, Colorado
ATTN: Mark Humphrey

FROM: Field Supervisor

SUBJECT: Huntington Canyon No. 4 (UT0004)

This letter provides our concurrence that the Mining and Reclamation Plan for Huntington Canyon No. 4, operated by Beaver Creek Coal Company, should be finalized.

Our concurrence is conditioned that a stipulation be inserted that provides for consultation with our agency and requiring mitigation should subsidence be the cause of loss of raptor nests on the tract.

Please contact Bruce Waddell (FTS 588-5649) if further assistance is required.

cc: DWR, Price, Utah
DWR, Salt Lake City, Utah
OGM, Salt Lake City, Utah

UT0005
UT0017
UT0014
UT0004
UT0010

United States Department of the Interior

FISH AND WILDLIFE SERVICE
AREA OFFICE COLORADO—UTAH
1311 FEDERAL BUILDING
125 SOUTH STATE STREET
SALT LAKE CITY, UTAH 84138-1197

IN REPLY REFER TO:

21 October 1983

1983 OCT 27 AM 11:11
WESTERN TECHNICAL CENTER
OSM-WTC

MEMORANDUM

TO: Chief, Technical Support Branch
Office of Surface Mining, Denver, Colorado

FROM: Field Supervisor, Endangered Species Office
U. S. Fish and Wildlife Service, Salt Lake City, Utah

SUBJECT: Threatened and Endangered Species in underground mines in Carbon and Emery Counties, Utah.

We have reviewed your memorandum of 23 September 1983 requesting lists of threatened and endagered species for various existing underground mines in Carbon and Emery counties in Utah. It appears that listed endangered species may occur in the area of influence of this action.

To comply with Section 7(c) of the Endangered Species Act of 1973, as amended, Federal agencies or their designees are required to obtain from the Fish and Wildlife Service (FWS) information concerning any species, listed or proposed to be listed, which may be present in the area of a proposed construction project. Therefore, we are furnishing you the following list of species which may be present in the concerned area:

Mine	Species	
Emery Deep	Wright fishhook cactus	Sclerocactus wrightae

In addition to the above listed species we would like to bring to your attention the following plant species which is under review by the Fish and Wildlife Service for possible listing in the future. While this species is not currently protected under the endangered species act, we encourage you that it be given consideration in environmental plans.

Mine	Species	
Trail Mountain, Sunnyside, Huntington No. 4 Gordon Creek No. 2	Canyon sweet-vetch	Hedysarum occidentale var. canone

Section 7 (c) also requires the Federal agency proposing a major Federal action significantly affecting the quality of the human environment to conduct and submit to the FWS a biological assessment to determine the effects of the

proposal on listed and proposed species. The biological assessment shall be completed within 180 days after the date on which initiated or a time mutually agreed upon between the agency and the FWS. Before physical modification/alteration of a major Federal action is begun the assessment must be completed. If the biological assessment is not begun within 90 days, you should verify this list with us prior to initiation of your assessment. We do not feel that we can adequately assess the effects of the proposed action on listed and proposed species or critical habitat and proposed critical habitat without a complete assessment. When conducting a biological assessment, you shall, at a minimum:

1. conduct a scientifically sound on-site inspection of the area affected by the action, which must, unless otherwise directed by the FWS, include a detailed survey of the area to determine if listed or proposed species are present or occur seasonally and whether suitable habitat exists within the area for either expanding the existing population or potential reintroduction of populations;

2. interview recognized experts on the species at issue, including those within the Fish and Wildlife Service, state conservation agencies, universities, and others who may have data not yet found in scientific literature;

3. review literature and other scientific data to determine the species' distribution, habitat needs, and other biological requirements;

4. review and analyze the effects of the action on the species, in terms of individuals and populations, including consideration of the cumulative effects of the action on the species and habitat;

5. analyze alternative actions that may provide conservation measures;

6. conduct any studies necessary to fulfill the requirements of (1) through (5) above;

7. review any other relevant information.

The FWS can enter into formal Section 7 consultation only with another Federal agency or its designee. State, county, or any other governmental or private organizations can participate in the consultation process, help prepare information such as the biological assessment, participante in meetings, etc.

After your agency has completed and reviewed the assessment, it is your responsibility to determine if the proposed action "may affect" any of the listed species or critical habitats. You should also determine if the action is likely to jeopardize the continued existence of proposed species or result

in the destruction or an adverse modification of any critical habitat proposed for such species. If the determination is "may affect" for listed species you must request in writing formal consultation from the Field Supervisor, Endangered Species Office, U.S. Fish and Wildlife Service at the address given above. In addition, if you determine that the proposed action is likely to jeopardize the continued existence of proposed species or result in the destruction or adverse modification of proposed critical habitat, you must confer with the FWS. At this time you should provide this office a copy of the biological assessment and any other relevant information that assisted you in reaching your conclusion.

Your attention is also directed to Section 7(d) of the Endangered Species Act, as amended, which underscores the requirement that the Federal agency or the applicant shall not make any irreversible or irretrievable commitment of resources during the consultation period which, in effect, would deny the formulation or implementation of reasonable and prudent alternatives regarding their actions on any endangered or threatened species.

We are prepared to assist you whenever you have questions which we may be able to answer. If we can be of further assistance, please advise us.

The FWS representative who will provide you with technical assistance is Larry England (FTS) 588-4430.

John L. England

Acting Field Supervisor

United States Department of the Interior
FISH AND WILDLIFE SERVICE
ENDANGERED SPECIES OFFICE
1406 FEDERAL BUILDING
125 SOUTH STATE STREET
SALT LAKE CITY, UTAH 84138-1197

IN REPLY REFER TO:

October 19, 1984

MEMORANDUM

To: Chief, Technical Support Branch, Office of Surface Mining, Denver, Colorado

From: Field Supervisor, Endangered Species Office, U.S. Fish and Wildlife Service, Salt Lake City, Utah

Subject: Informal Section 7 Consultation - Huntington Canyon Mine

This responds to your memorandum of September 26, 1984, concerning your "no effect" determination for the operation of Huntington Canyon Mine. We agree that the depletion of 7.22 acre-feet per year from Mill Fork Creek will be compensated for by the 16.13 acre-feet per year which enters the mine from an unconnected aquifer and is pumped into Mill Fork Creek. Therefore, we concur with your "no effect" determination for the endangered fishes of the upper Colorado River basin.

Your interest in conserving endangered species is appreciated.

Fred L. Bolwahnn
Field Supervisor

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
UTAH STATE OFFICE
324 SOUTH STATE, SUITE 301
SALT LAKE CITY, UTAH 84111-2303

IN REPLY REFER TO
3482
SL-064903
(U-921)

February 27, 1985

Memorandum

To: Walter Swain, OSM Senior Project Manager, State of Utah, Denver

Attention: Mark Humphrey

From: Chief, Mining Law and Solid Minerals, BLM-SO, Salt Lake City

Subject: Beaver Creek Coal Company, Huntington Canyon No. 4 Mine, Emery County, Utah, Permit Application Package (PAP)

The Resource Recovery and Protection Plan (R2P2), or underground mining part of the subject PAP, was considered adequate for BLM administration of the associated Federal coal leases. Our memorandum dated October 23, 1984, stated that the R2P2, on file in this office, would safely obtain maximum economic recovery of the coal resource within the plan area by following the planned technology and by using the types of equipment listed in the plan. Since that time we have received the following information:

> A page forwarded with your letter dated February 13, 1985, and identified as "02/01/85 submittal of revision for mining and reclamation plan."

We have reviewed the supplemental information listed above and have determined there are no conflicts with the planned coal recovery procedures or with future recovery of coal resources.

Within the limits of our authority we concur with the Huntington Canyon No. 4 Mine R2P2 plan, on file in this office as amended, and recommend that it be included as an integral part of the subject PAP.

J. H. Moffitt

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Moab District
P. O. Box 970
Moab, Utah 84532

3400
(SL-064903)
U-33454
(U-066)

MAR 11 1985

Memorandum

To: Center Administrator, OSM, Denver

Attn: Mark Humphrey

From: ACTING District Manager, Moab

Subject: Beaver Creek Coal Company's Huntington Canyon No. 4

Beaver Creek Coal Company (BCCC) completed mining operations in its Huntington Canyon No. 4 Mine and sealed the portals with concrete block walls in November 1984. The seals, located from 20 to 50 feet inby the portal in the three exiting entries, are agreeable with the mine permit application package (PAP) specifications (3.5.3.1 Sealing of Mine Openings). Backfilling operations to fill the area from the seal to the portals were started in November 1984. Backfilling will be completed in the spring or early summer of 1985, or after the PAP has been approved. The exposed coal seams in the highwall will also be covered at that time.

Mining in No. 4 mine included coal removal from two seams, the Blind Canyon (upper seam) into which the portals entered and the Hiawatha (lower seam) entered by a rock tunnel inside of the mine. Mine development was stopped because of complex geologic features. A pinching down of the coal seams due to channel sands was the major deterrent to continued development. Faults, oxidized coal and burned coal were also chief causes that halted mine development short of reaching the lease boundaries.

There may be minable reserves remaining in the property beyond the reach of this mine, but BCCC has no further plans to explore or develop these leases at this time. Maximum economic recovery (MER) of the coal resource was met by BCCC.

If you have any questions concerning this mine, please contact Allen Vance in our Price office at (801) 637-4584.

cc: SD, Utah (U-921)

United States Department of Agriculture
Forest Service
Manti-LaSal National Forest
599 West Price River Dr.
Price, Utah 84501

Reply to: 2820

Date: February 22, 1985

Al Klein, Administrator
OSM-Reclamation and Enforcement
Brooks Towers - 1020 15th Street
Denver, Colorado 80202

Dear Mr. Klein:

We received a revised copy of Beaver Creek Coal Company's Mining and Reclamation Plan (MRP) for the Huntington Canyon No. 4 Mine July 15, 1983. A copy of the Draft Final Technical Analysis/Decision Package (TA) was received October 15, 1984. Our review encompassed all revisions to the MRP and TA received prior to January 1, 1985.

Comments to the MRP and TA have been structured around a permanent mine closure as per the October 3, 1984, correspondence by Beaver Creek Coal Company to BLM, ... Beaver Creek Coal Company is hereby notifying the BLM that the Huntington Canyon No. 4 Mine will be permanently closed on or about November 1, 1984. Any comments made relative to the MRP also apply to the TA. The same holds true for the TA.

COMMENTS ON MRP

Pages 3-33 and 3-34.
The temporary seed mix, as proposed by Beaver Creek Coal Company, is found in Table 3-1.

The Forest Service recommends the following seed mix because 28 pounds of seed per acre is too much, and does not provide a proper balance of species:

	Pounds of Pure Live Seed per Acre (Broadcast or Hydroseed)
Grass and Forb Species	
Fairway crested wheatgrass *Agropyron cristatum*	2
Bluebunch wheatgrass *A. spicatum*	2
Streambank wheatgrass *A. riparium*	2

Slender wheatgrass A. trachycaulum	3
Indian ricegrass Oryzopsis hymenoides	1
Mountain brome Bromus marginatus	1
Cicer milkvetch Astragalus cicer	1
Palmer penstemon Penstemon palmeri	1/2
Silky lupine Lupinus sericeus	1/2
Total	13# PLS

Stratified Shrubs

Curl-leaf mountain mahogany Cercocarpus ledifolius	.5
Utah serviceberry Amelanchier utahensis	.5
Total	1.0# PLS

Relatively Low-Growing Shrubs

Rubber rabbitbrush Chrysothamnus nauseosus var. albicaulis	.5
Snowberry Symphoricarpos oreophilus	.5
Antelope bitterbrush Purshia tridentata	.5
Total	1.5# pls

Page 3-57.
In general, the benches are not as wide in comparison to the highwall as shown in Figure 3-6. The benches should be obliterated as much as is physically possible by expanding areas 1 and 2.

Page 3-58.
Until the reclaimed channel as shown on Plate 3-9 has been stabilized, water in the channel should be diverted into the lower sediment ponds.

Page 3-58b.
The natural drainage channel will be re-established and riprapped, as shown on Plates 3-7 and 3-8 and Figures 3-6 and 3-7, and reseeded as per the plan.

The two plates and two figures do not show that the natural drainage channel will be re-established and riprapped. The drawings need to include more detail to indicate that the natural channel has been re-established and riprapped, or delete the references for the two plates and figures.

Instead, the area will be smoothed and contoured to be compatible with post-mining land uses, and available topsoil will be respread over the area to ensure the success of revegetation.

We recommend that prior to smoothing and recontouring that will make the area compatible with post-mining land uses, coal dust and other mine waste be disposed of properly.

Page 3-60.
The procedure, as noted above, will continue down the upper road with the backhoe and cat operating in conjunction to reclaim this area down to the property line.

The Forest Service is working with Beaver Creek Coal Company and some private landowners on obtaining two right-of-ways. The establishment of the right-of-ways will determine how much of the mine access road will be reclaimed. Activities, such as constructing a turnaround near the gate area, adding proper water drainage facilities, etc., will be finalized at the time the right-of-ways are consummated.

Page 3-62a.
To ensure successful permanent revegetation, fences will be erected around permanent reseeded areas to exclude domestic grazing (e.g., cattle or sheep).

We recommend that the fence posts be spaced 12 feet apart with two stays between each post, so the fence will have a better chance of standing at the end of the winter season.

Plate 3-1A.
A gate is located in the SE¼SW¼SE¼ of Section 17, T16S, R7E, S.L.M. of Utah. We recommend that this gate be left in place until the reclamation above it is completed.

Page 9-29.
Currently, eight species are listed as endangered or threatened in Utah. None of these threatened or endangered species, as defined and identified by the U.S. Department of Interior, Fish and Wildlife Service (USDI, 1980), were observed at Huntington Canyon No. 4 Mine.

There are currently five species of plants listed by the U.S.D.I. as threatened or endangered in Utah.

No species are currently proposed as endangered or threatened in Utah (USDI, 1980). One hundred and sixty-nine plant taxa are currently considered candidate species (USDI, 1980). At sbme future date, some of these species may be proposed for endangered or threatened status. Of these species, five are known to occur in Emery County.

Hedysarium occidentale var. canone is present in Huntington Canyon (Emery County). This species is a candidate species for listing as threatened, and should be discussed in the text.

Appendix 7, Page 6.
The seed mix is composed of a permanent reclamation species, primarily grasses: approximately 34 lbs./acre. This should be used in combination with a cover crop made up of approximately 20 lbs./acre oats and/or rye, to ensure rapid establishment and vegetative stabilization.

The 54 pounds of seed per acre is too much. We recommend 12-15 pounds per acre. A cover crop is not recommended with the use of a hydro-mulch.

Recommending approximately two locations in a 10' x 10' clump, with a ratio by species:

50% Engelman Spruce
30% Sub-Alpine Fir
20% Douglas Fir

We recommend that they be containerized stock.

Appendix 7, Attachment A.
This section indicates seed mixtures proposed for riparian areas. The Forest Service recommends the following seed mixtures:

Grasses (Seed)

Scientific Name	Pounds/Acre
Agropyron smithii	3
Agropyron trachycaulum	3
Bromus carinatus	2
Carex Spp.	1
Poa pratensis	1
Bromus inermis	2
	12# PLS

Trees and Shrubs

Rosa woodii	.50
	.50# PLS

A cover crop is not recommended in conjunction with the use of a hydro-mulch.

Salix exigua exigua and Populus angustifolia should be planted using bare root stock. This is in addition to the seed mixtures already proposed.

COMMENTS ON TECHNICAL ANALYSIS

Page 4.
A commitment must be made, within 30 days of permit approval, to supply the regulatory authority with the annual subsidence report, commencing in January 1985, by January 31 of each year, until such time as the regulatory authority, in conjunction with the applicant, deems that it is no longer necessary to supply this information.

If such a subsidence report as mentioned above has been completed, the Forest Service will need two copies. The subsidence and hydrologic monitoring program, as agreed to by Beaver Creek Coal Company and the Forest Service, is still in effect.

The decision of determining the time when the subsidence program is no longer a necessary requirement rests with the Forest Service. This program is part of the Special Stipulations required by the Forest Service, and is found in the lease agreement. This stipulation cannot be waived or modified by any Federal or State agency without written approval of the Forest Service.

The applicant shall commit to the removal of power lines in the permit area. This removal must be included in the narrative of the MRP, the reclamation schedule and the bond estimate.

The powerline mentioned above is owned by Utah Power and Light Company. A Special Use Permit was issued by the Forest Service May 3, 1976, to Utah Power and Light to install a 25 KV line to serve the Huntington Canyon No. 4 Mine. The management of facilities under the Special Use Permit rests with the Forest Service.

Page 43.
The Mill Fork Road is controlled by the USFS and Beaver Creek Coal operates on this road under a Special Use Permit with the USFS.

Delete Special and insert Road.

I will consent for the Forest Service to Beaver Creek Coal Company's Huntington Canyon No. 4 MRP. Consent is subject to satisfactory responses to our comments.

Sincerely,

Reed C Christensen

REED C. CHRISTENSEN
Forest Supervisor

1984 OCT -4 AM 9:12

SCOTT M. MATHESON
GOVERNOR

STATE OF UTAH
DEPARTMENT OF COMMUNITY AND
ECONOMIC DEVELOPMENT

Division of
State History
(UTAH STATE HISTORICAL SOCIETY)

MELVIN T. SMITH, DIRECTOR
300 RIO GRANDE
SALT LAKE CITY, UTAH 84101-1182
TELEPHONE 801/533-5755

September 27, 1984

Rex L. Wilson
Chief Archeologist
Office of Surface Mining
Reclamation and Enforcement
Brooks Towers
1020 15th Street
Denver, Colorado 80202

RE: Huntington Canyon #4 Mine, Emery County

In Reply Refer to Case No. H426

Dear Mr. Wilson:

The Utah Preservation Office has received for consideration your letter of September 18, 1984, concerning the Huntington Canyon #4 Mine. After review of the letter and the report referenced, our office would concur with your determination of no effect on cultural resources, considering attached conditions for the Huntington Creek #4 Mine permit in Emery County.

The above is provided on request as information or assistance. We make no regulatory requirement, since that responsibility rests with the federal agency official. However, if you have questions or need additional assistance, please let us know. Contact Jim Dykman at 533-7039.

Sincerely,

Wilson G. Martin
Deputy State Historic
Preservation Officer

JLD:jrc:H426/0874V

State History Board: Milton C. Abrams, Chairman • Thomas G. Alexander • Phillip A. Bullen • J. Eldon Dorman • Elizabeth Griffith
Wayne K. Hinton • Dean L. May • David S. Monson • William D. Owens • Helen Z. Papanikolas • Anand A. Yang

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF SURFACE MINING

This permit, UT-0004, 3/85, is issued for the United States of America by the Office of Surface Mining (OSM) to

Beaver Creek Coal Company
P.O. Box AU
Price, Utah 84501

for the Huntington Canyon No. 4 Mine. Beaver Creek Coal Company is the lessee of Federal coal leases U-33454 and SL-064903.

Sec. 1 STATUTES AND REGULATIONS - This permit is issued pursuant to the Surface Mining Control and Reclamation Act of 1977, 30 U.S.C. 1201 et seq., hereafter referred to as SMCRA, and the Federal coal lease(s) issued pursuant to the Mineral Leasing Act of 1920, as amended, 30 U.S.C. 181 et seq., the Federal Coal Leasing Amendments Act of 1976, as amended 30 U.S.C. 201 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 permit is also subject to all regulations of the Secretary of the Interior including, but not limited to, 30 CFR Chapter VII and 43 CFR Part 3400, and to all regulations of the Secretary of Energy promulgated pursuant to Section 302 of the Department of Energy Organization Act of 1977, 42 U.S.C. 7152, which are now in force or, except as expressly limited herein, hereafter in force, and all such regulations are made a part hereof.

Sec. 2 The permittee is authorized to conduct reclamation of an underground coal mining operation on Federal lands, as well as on such other lands affecting or affected by those operations on Federal lands situated in the State of Utah, Emery County, and located within:

Township 16 South, Range 7 East, Salt Lake Meridian;

Section 8: S1/2SE1/4, SW1/4
Section 9: S1/2SW1/4, SW1/4SE1/4
Section 16: All
Section 17: E1/2
Section 21: Portions of the NE1/4NW1/4

and shown on the attached map (Page 8 of 8); and to conduct reclamation operations on the foregoing described property subject to the conditions of the leases, and all other applicable conditions, laws, and regulations.

Sec. 3 The term of this permit is 5 years from the date of issuance, except that this permit will terminate if the permittee has not begun the surface coal mining and reclamation operations covered herein within 3 years of the date of permit issuance.

Sec. 4 The permit rights may not be transferred, assigned, or sold without the approval of the Director, OSM. Request for transfer, assignment, or sale of permit rights must be done in accordance with 30 CFR 740.13(e) and UMC 788.17 through .19.

Sec. 5 The permittee shall allow the authorized representatives of the Secretary, and the Utah Division of Oil, Gas and Mining including but not limited to inspectors and fee compliance officers, 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 842.13 and UMC 786.19(f) and UMC 840.12; and,

b. Be accompanied by a private person for the purpose of conducting an inspection in accordance with 30 CFR 842.12 and UMC 840.15, when the inspection is in response to an alleged violation reported by the private person.

Sec. 6 The permittee shall conduct surface coal mining and reclamation operations only on those lands specifically designated as being within the permit area on the maps submitted in the permit application and approved for the term of the permit and which are subject to the performance bond.

Sec. 7 The permittee shall minimize any adverse impact to the environment or public health and safety resulting from noncompliance with any term or condition of this permit by including, but not being limited to:

a. 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. 8 The permittee shall dispose of solids, sludge, filter backwash, or pollutants removed 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. 9 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 OSM, the approved Utah State Program, and the Federal Lands Program.

Sec. 10 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. 11 Upon expiration, this permit may be renewed for areas within the boundaries of the existing permit in accordance with SMCRA, the approved Utah State Program and the Federal Lands Program.

Sec. 12 If during the course of mining operations previously unidentified historic properties are discovered, the permittee shall ensure that the site(s) is not disturbed and shall notify the State Regulatory Authority (RA) and OSM. The State RA, after coordination with OSM shall inform the permittee of necessary actions required.

Sec. 13 The operator shall pay all reclamation fees required by 30 CFR Chapter VII, Subchapter R for coal produced under this permit.

Sec. 14 APPEALS - The permittee shall have the right to appeal: (a) under 30 CFR 775 from an action or decision of any official of OSM; (b) under 43 CFR 3000.4 from an action or decision of any official of the Bureau of Land Management; (c) under 30 CFR 290 from an action, order, or decision of any official of the Minerals Management Service; or (d) under applicable regulations from any action or decision of any other official of the Department of the Interior arising in connection with this permit. The appeal period commences with the date of publication of the notice of decision in the newspaper.

Sec. 15 SPECIAL CONDITIONS - The permittee shall comply with the terms and conditions set out in the lease(s) and this permit. In addition, the permittee shall comply with the conditions appended hereto as Attachment A. These conditions 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. In accordance with 30 CFR Part 774 (1983), these conditions may be revised or amended, in writing, by the mutual consent of the grantor and the permittee at any time to adjust to changed conditions or to correct an oversight. The grantor may, by order, require reasonable revisions of this permit to ensure compliance with SMCRA and the regulatory program.

OFFICE OF SURFACE MINING

By: _____
Administrator, Western Technical Center

_____
Date

Attachment A

SPECIAL CONDITIONS

1. Results from soil analysis, identification of the best available topsoil substitute materials, estimates of material volumes for final reclamation, and a commitment to selectively place the best suitable topsoil substitute material during final reclamation of the pumphouse must be submitted to the regulatory authority for approval no later than June 1, 1985. At a minimum, the analyses must include data on soil texture, pH, EC, SAR, N, P, and K. A sufficient number of samples must be taken to adequately characterize this material.

2. The regulatory authority is willing to grant a variance to the requirements of UMC 817.44(b)(2) if the permittee can adequately demonstrate to the regulatory authority that these cross-sections represent a conclusive demonstration of comparable, adjacent drainage. The following parameters will have to be demonstrated in order to assess the comparability of the two watershed systems.

   1. Similar drainage area and channel capacity.

   2. Similar slopes and aspects.

   3. Cross-sections must be located in an area which gives comparable channel configurations.

   4. Natural armoring or riprap size must be noted, as well as natural energy dissipators (i.e., large boulders, log jams, drops and eddies, etc.) so they can be engineered into the new designs.

   These requirements must be met during the site visit in the spring of 1985 and the permittee must submit within 30 days of this site visit adequate plans for the proposed stream channel reclamation plans. These plans must include the following engineering designs at a minimum:

   1. Energy dissipators within the channel at crucial points, namely where flows come onto the upper pad and drop off the cliff area below the upper pad onto the lower pad.

   2. A design flow and channel configuration criteria compatible with this condition and 817.44(d)(1) (2)(3).

3. The permittee shall sample on a quarterly basis until bond release any discharges from the underground workings which occur after mining. Sampling will assess if discharges are in compliance with the effluent standards of UMC 817.42 and all other applicable State and Federal regulations. The permittee will provide treatment, if necessary, of any discharges to achieve compliance with applicable standards during the period of discharge.

4. The permittee shall provide, within 60 days of the effective date of this permit, documentation of assignment or transfer of 800 shares in the Huntington-Cleveland Irrigation Company from the Hardy Coal Company to Beaver Creek Coal Company.

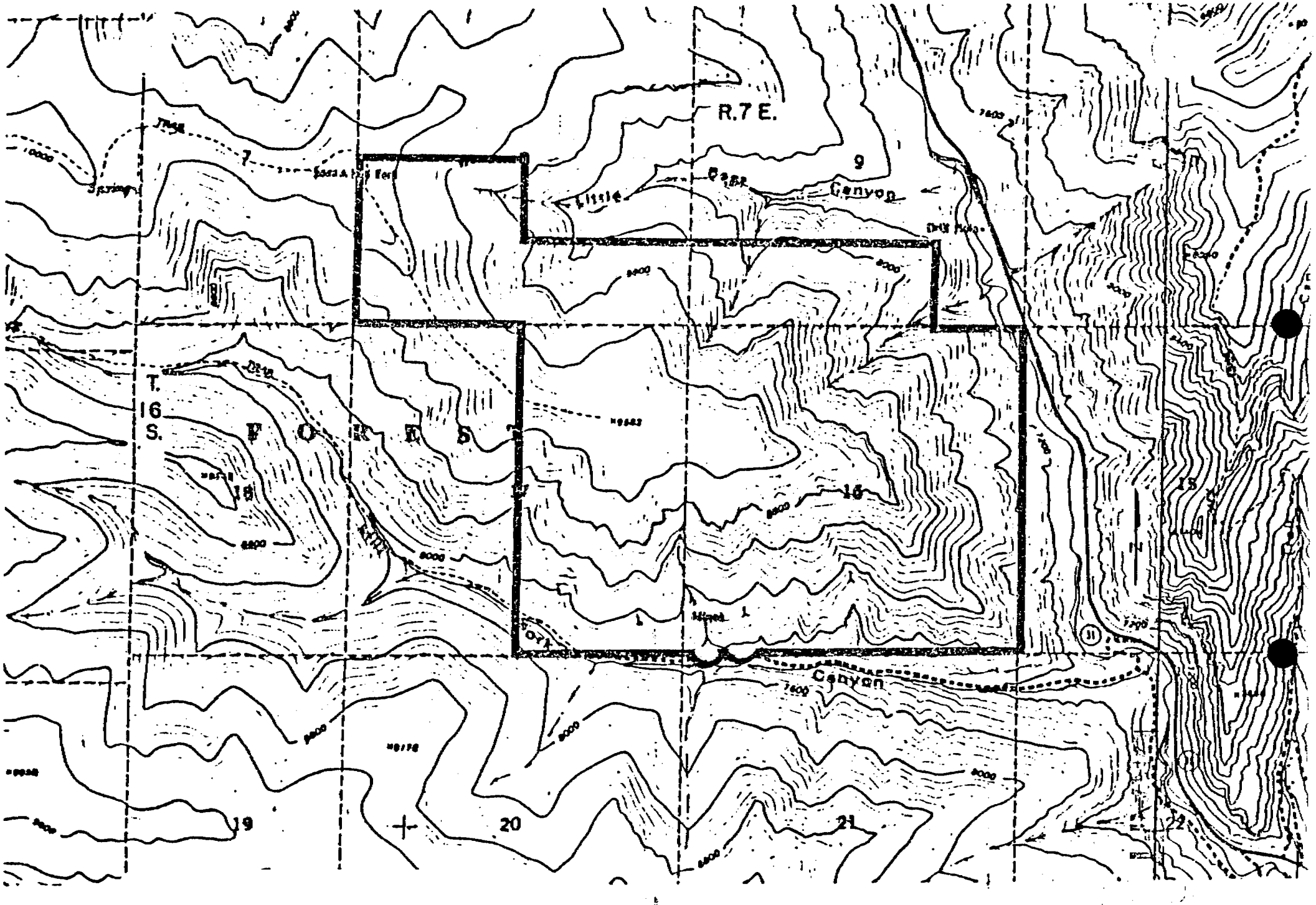
5. Within 15 days of the effective date of this permit, the operator must revise the permanent seed mixture for the riparian area by including at least two forb species. The species must meet all the requirements of this section and UMC 817.97.

6. Within 15 days of the effective date of this permit, the operator must revise the tree seedling stocking rate for the pinyon-juniper-curl leaf-mountain mahogany vegetation type (Table 3-2) by replacing the pinyon and juniper seedlings with an equal number of seedlings of woody shrub species native to the area. The species must meet all the requirements of this section and UMC 817.97.

7. Before any site redisturbance occurs, the permittee must conduct a survey, under the supervision of the regulatory authority, of the areas to be redisturbed. The survey shall identify and record locations of individuals and populations of Hedysarum occidentale var. canone (canyon sweet-vetch). If canyon sweet-vetch is found in portions of the permit area to be redisturbed, the permittee must develop and submit a mitigation plan for regulatory authority approval and after approval implement this plan before redisturbance occurs.

8. The entrance gate to the mine facilities must not be dismantled until after reclamation operations are completed and permanent self regenerating vegetation is established on the reclaimed mine site. The gate should remain locked to prevent public vehicle access to the reclaimed area. Written permission must be obtained from the Forest Supervisor of the Manti-LaSal National Forest prior to removal of the gate.

9. If existing raptor nests are affected by mine related subsidence, the permittee shall replace or otherwise mitigate the nest loss in consultation with the U.S. Fish and Wildlife Service and the Utah Division of Wildlife Resources according to the requirements of UMC 784.21 and UMC 817.97. Notification of the loss to the above agencies and the regulatory authority must take place within two working days of the permittee's discovery of the loss.



Mine Permit Area

STATE OF UTAH
NATURAL RESOURCES
Oil, Gas & Mining

Norman H. Bangerter, Governor
Dee C. Hansen, Executive Director
Dianne R. Nielson, Ph.D., Division Director

355 W. North Temple • 3 Triad Center • Suite 350 • Salt Lake City, UT 84180-1203 • 801-538-5340

March 14, 1985

Mr. Allen D. Klein, Administrator
Western Technical Center
Office of Surface Mining
Brooks Towers
1020 Fifteenth Street
Denver, Colorado 80202

Dear Mr. Klein:

RE: Draft Mine Plan Decision Document, Beaver Creek Coal Company, Huntington #4 Mine, ACT/015/004, #2, Emery County, Utah

Enclosed please find the Draft Mine Plan Decision Document for the above-referenced Mining and Reclamation Plan (MRP).

Division technical staff have reviewed the federal portion of the draft decision document and have provided comments and/or recommendations along the margins. Western Technical Center recommendations for the Final Technical Analysis have been incorporated, as appropriate.

The Associate Director for Mining has reviewed these documents in accordance with the Division's quality control review policy. The Division is satisfied with the state portion of the decision package and accordingly, is enclosing a signed Findings Document.

The required Cumulative Hydrologic Impact Analysis (CHIA), as related to UMC 786.19(c), has been prepared by OSM and reviewed by the Division. DOGM comments and recommendations are located within and along the margin of the CHIA.

The Division appreciates the assistance provided by the Western Technical Center during our review of this MRP and the formulation of the Technical Analysis and Findings Document. We now look forward to a timely approval of this MRP, not only from a state and federal perspective, but from the operator's perspective as well.

Should you have any questions regarding these documents, please contact the Division as soon as possible.

Sincerely,

for Dianne R. Nielson
Director

TM/btb
Enclosure
cc: Barbara Roberts
Ron Daniels
Lowell Braxton
Tom Munson
9562R-7 & 8

FINDINGS DOCUMENT

Beaver Creek Coal Company
Huntington #4 Mine
ACT/015/004, Emery County, Utah

March 14, 1985

1. The plan and the permit application are accurate and complete and all requirements of the Surface Mining Control and Reclamation Act (the "Act"), and the approved Utah State Program have been complied with (786.19[a]).

2. The applicant proposes acceptable practices for the reclamation of disturbed lands. These practices have been shown to be effective in the short-term; there are no long-term reclamation records utilizing native species in the western United States. Nevertheless, the regulatory authority has determined that reclamation, as required by the Act, can be feasibly accomplished under the Mining and Reclamation Plan (MRP). Yards, roads and portal areas were dozed out of very steep rock and will be backfilled and compacted prior to redistribution of topsoil substitute material (see Technical Analysis [TA], (Section UMC 817.101). After backfilled areas are compacted, topsoil substitute material will be applied and these areas will be deeply scarified to reduce compaction in the rooting zone to assist revegetation efforts (UMC 786.19[b]). (See TA, Section UMC 817.21-.25 and 817.111-.117.)

3. The assessment of the probable cumulative impacts of all anticipated coal mining in the general area to the hydrologic balance has been made by the regulatory authority. The mining operation proposed under the application has been designed to prevent material damage to the hydrologic balance outside the permit area for the anticipated life of the mine (UMC 786.19[c] and UCA 40-10-11[2][c]). (See Cumulative Hydrologic Impact Analysis [CHIA] Section, attached to this Findings Document.)

4. The proposed permit area is:

   A. Not included within an area designated unsuitable for underground coal mining operations. (See letter from Bureau of Land Management [BLM] to the Office of Surface Mining [OSM] dated October 25, 1983.)

   B. Not within an area under study for designated lands unsuitable for underground coal mining operations. (See letter from BLM to OSM dated October 25, 1983.)

   C. Not on any lands subject to the prohibitions or limitations of 30 CFR 761.11(a) (national parks, etc.), 761.11(f) (public buildings, etc.) and 761.11(g) (cemeteries). (See MRP, Section 4.4.2, pages 4-25, 26.)

D. Within 100 feet of the outside right-of-way line of a public road, however, the mine was in operation prior to August 3, 1977 (UMC 761.11). (See MRP, Section 3.2, page 3-1.)

E. Not within 300 feet of any occupied dwelling (UMC 786.19[d]). (See MRP, page 3-44.)

5. The regulatory authority's issuance of a permit is in compliance with the National Historic Preservation Act and implementing regulations (36 CFR 800) (UMC 786.19[e]). (See attached letter from SHPO dated July 15, 1983.)

6. The applicant has the legal right to enter and begin underground activities in the permit area through one Special Warranty Deed, two Warranty Deeds, two Federal Coal Leases, two Fee leases, two Special Use Permits and one Road Use Permit (UMC 786.19[f]). (See MRP, Section 4.3.4.)

7. The applicant has shown that prior violations of applicable law and regulations have been corrected (UMC 786.19[g]). (See MRP, Section 2.3.3, Table 2-3.) (Personal communications with Division of Oil, Gas and Mining [DOGM], Inspection and Enforcement section, and OSM, Albuquerque Field Office, January 16, 1985.)

8. Neither Beaver Creek Coal Company nor its parent company, Atlantic Richfield Company, are delinquent in payment of fees for the Abandoned Mine Reclamation Fund for its active mining operations (UMC 786.19[h]). (Personal communication, John Sender, OSM, Albuquerque, January 12, 1984 and April 19, 1984.)

9. The applicant does not control and has not controlled mining operations with a demonstrated pattern of willful violations of the Act of such nature, duration and with such resulting irreparable damage to the environment as to indicate an intent not to comply with the provisions of the Act (UMC 786.19[i]) (See MRP, Section 2.3.) (Personal communications with DOGM, Inspection and Enforcement section, and OSM, Albuquerque Field Office, January 16, 1985.)

10. Underground coal mining and reclamation operations to be performed under the permit will not be inconsistent with other such operations anticipated to be performed in areas adjacent to the proposed permit area (UMC 786.19[j]). (See MRP, Section 4, Volume 1.) The Crandall Canyon Mine lies immediately north of the Huntington #4 leases, and Utah Power & Light Company's Federal Leases (U-02437 and U-06039) lie immediately south. The latter are not being mined, nor are they within a distinct mine plan area to date.

11. A detailed analysis of the proposed bond has been made. The bond estimate is $360,104.00 in 1990 dollars. The regulatory authority has made appropriate adjustments to reflect costs which would be incurred by the State, if it was required to contract the final reclamation activities for the minesite, and is deemed adequate by the regulatory authority. The bond shall be posted (UMC 786.19[k]) with the regulatory authority prior to final permit issuance. An interim bond in the amount of $154,275.00 is currently on file.

12. No lands designated as prime farmlands or alluvial valley floor occur on the permit area (UMC 786.19[l]). (See MRP, Section 8.4, Figure 8-1; Section 7.27.)

13. The proposed postmining land-use of the permit area has been approved by the regulatory authority (UMC 786.19[n]). (See TA, Section UMC 817.133.)

14. The regulatory authority has made all specific approvals required by the Act, and the approved State Program (UMC 786.19[n]).

15. The proposed operation will not affect the continued existence of any threatened or endangered species or result in the destruction or adverse modification of their critical habitats (UMC 786.19[o]). (See MRP, Section 9.4, Section 10.3.3.1; see attached U. S. Fish & Wildlife Service [USFWS] letter dated September 30, 1983.)

16. All procedures for public participation required by the Act, and the approved Utah State Program have been complied with (UMC 741.21[a][2][ii]).

Prior to the permit taking effect, the applicant must forward a letter stating its compliance with the special stipulations in the permit and post the performance bond for reclamation activities.

Thomas Munson 3/14/85
acting Permit Supervisor

Lowell P. Braxton 3-19-85
Administrator, Mineral Resource
Development and Reclamation Program

Conrad W. Dennis 3/14/8
Associate Director, Mining

for Conrad W. Dennis 3/14
Director

7196R

FINDINGS
DIVISION OF OIL, GAS AND MINING

Cumulative Hydrologic Impact Assessment Summary

Huntington Canyon No. 4 Mine

Introduction

The Huntington Creek drainage basin is located in east-central Utah about 20 miles southwest of Price, Utah. The upper reaches of the drainage area originate in the Wasatch Plateau uplands at altitudes of up to 11,300 feet above sea level. Drainage trends generally southeast to the confluence of Huntington Creek with the San Rafael River, at an elevation of approximately 5,400 feet. The drainage system is located within the Green River watershed of the Colorado River.

The Huntington Creek drainage basin encompasses approximately 190 square miles above gage 09318000 near Huntington. Huntington Creek maintains an average stream gradient of about 300 feet per mile, and is characterized by deep, narrow canyons. The Huntington Creek drainage basin includes Huntington Canyon No. 4, Deer Creek, Crandall Canyon, Trail Canyon and Bear Canyon Mines.

Geologic Setting

The Huntington Creek drainage basin is located along the eastern flank of the central Wasatch Plateau. The Creek drains the steep slopes of the plateau before joining the San Rafael River in Castle Valley.

The Wasatch Plateau is underlain by Cretaceous rocks containing valuable coal beds. The eastern part of the plateau is known as the Wasatch Coal Field. The plateau extends in a north-south direction with precipitous cliffs and narrow, steep-sided valleys on the east and west sides. The average vertical relief is about 2,500 feet.

Stratigraphic units in the Huntington drainage basin include, in ascending order, the Mancos Shale, Star Point Sandstone, Blackhawk Formation, Castlegate Sandstone, Price River Formation, North Horn Formation, and Flagstaff Limestone. A generalized stratigraphic sequence which gives the lithologic description and hydraulic characteristics of each is illustrated in Figure 2-4 of the Cumulative Hydrologic Impact Assessment (CHIA).

The area is generally characterized by slightly dipping lenticular and overlapping sedimentary rocks varying in origin from shallow to moderately deep marine to deltaic and nonmarine. Intertongueing relationships between these sediments and coal beds makes correlation difficult. See Figure 2.5.

The lithology of these strata, as well as their dip (from two to nine degrees average), and the fault system in the area tend to control the ground- and surface-water movement. For example, the ground-water flow system (i.e., from the recharge areas along the ridges to discharge along the valleys) is a function of the amount of recharge available, the hydraulic characteristics of the strata and geologic structure in the area, and discharge.

There are two mineable coal seams in the area: the Hiawatha seam at the base of the Blackhawk Formation, and the Blind Canyon seam approximately 90 feet above the Hiawatha seam.

Surface Water Impacts

Impacts to surface water quality of Huntington Creek are expected to gradually increase over the next 20 years as underground mining operations advance further underneath East Mountain and Trail Mountain. The primary impact associated with the discharge of intercepted ground water is the introduction of additional dissolved solids which are expected to reach a maximum near the year 1990 and remain at intermediate levels through 2015. Impacts are quantified by flow-weighting the estimated dissolved solids concentrations of the mine discharge water with that of the average monthly water quality and discharge of Huntington Creek. The maximum predicted impacts for this period are given in Table 5.1 of the CHIA, which indicates that the highest concentration of dissolved solids is predicted to occur the month of February, reaching 308 mg/l. The largest increase in TDS concentration occurs in January and March when mine water discharge contributes a 13 mg/l increase above average monthly background concentration. This can be contrasted with the increase of over 1,500 mg/l resulting from irrigation return flows in the reach of Huntington Creek immediately downstream of the cumulative impact area.

The Utah Division of Health specifies a maximum recommended dissolved solids concentration of 1,200 mg/l for agricultural use (irrigation and stock watering) (Table 5.2, CHIA). Dissolved solids limitations for other uses are adjusted on a case-by-case basis. The U.S. Public Health Service provides guidelines for drinking water standards which recommend a maximum dissolved solids concentration of 500 mg/l for primary standards and 1,000 mg/l for secondary standards. Additionally, the U.S. Environmental Protection Agency has published recommended limits for various irrigation hazards and industrial uses, described in Table 5.3 (CHIA).

It can be seen from Tables 5.2 and 5.3 (CHIA) that mining-related increases in dissolved solids concentrations in Huntington Creek will not degrade or preclude anticipated uses below the cumulative impact area. This is in contrast to the marked degradation which presently occurs downstream of the mined area due to irrigation activity on Mancos Shale soils. This irrigation activity increases dissolved solids concentrations to levels which exceed the recommended limits for almost every use listed.

Ground-Water Impacts

Impacts to ground-water quantity and quality are difficult to quantify accurately. Comprehensive monitoring of surface springs and in-mine ground-water inflows will be required to detect and document changes in the ground-water system.

The maximum impact to the discharge of Huntington Creek can be estimated by assuming that all of the ground water which is intercepted by mining activities is water that would normally provide base flow recharge to the drainage basin. This assumption serves to define an upper limit on the magnitude of the potential dewatering impacts.

During and immediately following the retreat stage of the mining process, mine dewatering activities will decrease sharply and the ground-water system will begin to re-equilibrate. The transition time period required for resaturation of dewatered formations and the re-establishment of hydraulic heads is unknown and cannot be predicted. However, the maximum reduction in the discharge of Huntington Creek due to the diminution of base flow during this transition period can be estimated by invoking logic similar to that used to estimate the potential decrease in stream flow during mining. By assuming that the rate of resaturation during retreat mining will be equal to the rate of dewatering during mining, the reduction of discharge in Huntington Creek can be estimated on a monthly basis. This reasoning is overly conservative in that it assumes that all of the ground water which had been diverted by mining operations would have entered Huntington Creek naturally at the same monthly rate and volume, and also that immediately upon initiation of retreat mining activities this water will be totally consumed by the resaturation process. Of course, retreat mining does not occur instantaneously but rather is instituted in phases in various portions of the mines; however, this approach serves to provide an upper limit to the range of potential reduction in flow rates in Huntington Creek.

Using the values of average monthly flow rates based on Figure 4.3 (CHIA), the maximum percent reduction in average monthly flows in Huntington Creek is presented in Table 5.4 (CHIA). This includes all future effects from mines which discharge both within and outside the cumulative impact area below Electric Lake. It can be seen from the table that the greatest percent change occurs during the non-irrigation season, November through April. Changes to the average monthly flow of Huntington Creek during the growing season are less that 10 percent of the average monthly discharge of Huntington Creek. Thus, even if changes to the ground-water system were as great as these conservative estimates indicate, the timing of the impacts within the yearly cycle is such that minimal impacts occur during the period of greatest demand, May through October. This is due to a combination of effects, including the natural hydrologic seasonal cycle, regulation of Electric Lake, and the anticipated amounts and seasonality of future mine dewatering based on present inflow rates and drainage basin characteristics.

Summary

The hydrologic impacts of present and future coal mining activity within Huntington Creek basin have been addressed both quantitatively and qualitatively in this Cumulative Hydrologic Impact Assessment. Quantitative assessments presented in this report focus primarily on surface-water impacts resulting from the discharge of intercepted ground water. This analysis utilizes average monthly water quality and discharge records from Huntington Creek and Deer Creek Mine in combination with anticipated future mine inflows to predict future quality and quantity impacts including seasonal variation.

Qualitative analysis of the effects of mine dewatering and subsidence on the ground-water system has been presented, with particular emphasis on the potential for diminution of base flow recharge. Because of the complex lithologic relationship in the study area, the lack of piezometric data from water-bearing formations, the unknown vertical and horizontal extent of subsidence cracking and the strong relationship between spring discharge and precipitation, a prediction of future impacts to the ground-water system based on analytical methods was not attempted. The most definitive method for detecting subsidence-related changes in the ground-water system appears to be a continuation of the hydrologic monitoring programs which are currently ongoing in the area, coupled with future monitoring at proposed minesites. These programs will provide data on the progressive modification of surface topography, spring discharge and water chemistry, and climatological conditions. Spring discharge recession curves might also be used to detect changes in the ground-water regime, but this technique requires frequent of continuous flow monitoring of selected springs; a permanent program has not yet been established by either the USGS, Forest Service or mine operators for this purpose.

RECEIVED

OCT 24 1984

DIVISION OF OIL
GAS & MINING

SCOTT M. MATHESON
GOVERNOR

STATE OF UTAH
DEPARTMENT OF COMMUNITY AND
ECONOMIC DEVELOPMENT

Division of
State History
(UTAH STATE HISTORICAL SOCIETY)

MELVIN T. SMITH, DIRECTOR
300 RIO GRANDE
SALT LAKE CITY, UTAH 84101-1182
TELEPHONE 801/533-5755

October 22, 1984

James W. Smith, Jr., Administrator
Mineral Resource Development
and Reclamation Program
Division of Oil, Gas & Mining
4241 State Office Building
Salt Lake City, Utah 84114

Attn: Mary M. Boucek

RE: Response to Stipulations, Draft Final Technical Analysis and Decision Package, Beaver Creek Coal Company, Huntington Canyon #4 Mine, ACT/015/004, #2, Emery County

In Reply Refer To Case No. H426

Dear Ms. Boucek:

The Utah Preservation Office has received for consideration your letter of October 15, 1984, concerning the response to stipulations by the Beaver Creek Coal Company for their Huntington Canyon #4 Mine. After review of the material attached, our office notes that no changes in cultural resources are noted. Therefore, our office has no comment.

Consultation provided in this letter by authority of the 1966 Preservation Act as amended, does not indicate approval or comment concerning Tax Act regulations (reference ERTA, 1981, P.L. 97-34, U.S.C., Section 46).

Since no formal consultation request concerning eligibility, effect or mitigation as outlined by 36 CFR 800 was indicated by you, this letter represents a response for information concerning location of cultural resources. If you have any questions or concerns, please contact me at 533-7039.

Sincerely,

James L. Dykman
Cultural Resource Advisor
Office of State Historic
Preservation Officer

JLD:jrc:H426/0967V

State History Board Milton C. Abrams, Chairman • Thomas G. Alexander • Phillip A. Bullen • J. Eldon Dorman • Elizabeth Griffith
Wayne K. Hinton • Dean L. May • David S. Monson • William D. Owens • Helen Z. Papanikolas • Anand A. Yang

STATE OF UTAH
NATURAL RESOURCES & ENERGY
Water Rights

136 West North Temple • Salt Lake City, UT 84116 • 801-533-6071

FILE
ACT/015/004, #2

CC Tom M.

Scott M. Matheson, Governor
Temple A. Reynolds, Executive Director
Dee C. Hansen, State Engineer

January 29, 1985

RECEIVED
JAN 31 1985
DIVISION OF OIL
GAS & MINING

Mr. Ronald W. Daniels, Acting Administrator
Mineral Resource Development
and Reclamation Program
Division of Oil, Gas & Mining
355 West North Temple
3 Triad Center
Suite 350
Salt Lake City, Utah 84180-1203

Re: Technical Deficiency
Response, Beaver Creek
Coal Co. Huntington #4
Mine, ACT/015/004, #2
Emery County, Utah

Dear Mr. Daniels:

This office has completed its review of the above-mentioned submittal. Those changes proposed for the sediment pond decrease the potential downstream threat; therefore, no additional approval is required.

Yours truly,

Robert L. Morgan

Dee C. Hansen, P.E.
FOR State Engineer

DCH:rlm

cc: Price Area Office

Deputy State Engineer/Earl M. Staker Directing Engineers/Harold D. Donaldson • Donald C. Norseth
Stanley Green • Robert L. Morgan
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Scott M. Matheson, Governor
Temple A. Reynolds, Executive Director
Douglas F. Day, Division Director

FILE
ACT/015/004 #2

Mary

Copy to:
Steve
Mary

RECEIVED
APR 20 1984
DIVISION OF OIL
GAS & MINING

April 4, 1984

Dr. Dianne R. Nielson, Director
Utah Division of Oil, Gas and Mining
4241 State Office Building
Salt Lake City, Utah 84114

JIM
APR 23 1984

Dear Dianne:

The Division has evaluated Beaver Creek Coal Company's Response to the Draft Technical Analysis (RDTA) dated January 24, 1984.

Enclosed are the Division's specific comments and recommendations. Generally, the company has failed to adequately address specific comments that OGM raised concerning protection and mitigation of wildlife habitat on Beaver Creek's Huntington #4 mine property.

Thank you for the opportunity to review the RDTA.

Sincerely,

Douglas F. Day
Director

DFD:db

Enclosure

Board/Warren T. Harward, Chairman • L. S. Skaggs • Lewis C. Smith • Jack T. World • Roy L. Young
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UTAH DIVISION OF WILDLIFE RESOURCES'
REVIEW COMMENTS ON THE RESPONSE TO THE DRAFT TECHNICAL ANALYSIS
OF BEAVER CREEK'S HUNTINGTON #4 MINE

Stipulation UMC 817.97-(1-6)-SC

No. 4. Beaver Creek's response (Sec. 10.5.1.2; p. 10-67) that subsidence of the cliffs in this area is "possible ..." but "... unlikely" does not address the specific question of protecting the cliffs from such subsidence. Specific measures for preventing such an occurence should be outlined as requested.

No. 6. The applicant has not committed to the replacement of drinking water or riparian-wetland habitat at seeps and springs in 3.4.8.3 should they be interrupted by mining. The discussion of large mammals in sec. 10.5.1.1, p. 10-66, ignores the fact that many wildlife species, far less mobile than deer and elk, would be negatively impacted by the loss of resources associated with any springs or seeps. The Division considsers all springs and seeps critical habitat and would expect mitigation should depletion or interruption of flows occur.

Stipulation 817.111-117-(1-2)-SC

No. 2 (Sec. 3.4.5., p. 3-34, Table 3-1). The Division recommends that rubber rabbitbrush (Chrysatramnus nauseosera var. albicaulis) be eliminated from the seed mixture. Rabbitbrush is an invader species and will establish itself without seeding.

p. 3-34a, Table 3-2: Tree Seedling Stocking Rates. The Division recommends that pinyon pine and Rocky Mountain juniper be eliminated from the seedling stocking rate. Wildlife needs would be better served by replacing juniper and pinyon pine with equal plantings of big sagebrush and bitterbrush and maintaining the proposed 310 plants/ac.

MINE PLAN INFORMATION

Mine Name: Huntington Canyon #4 State ID: ACT/015/004

Operator: Beaver Creek Coal Company County: Emery

Controlled By: J. Herickhoff, President

Contact Person: Dan Guy Position: Permits Manager
Telephone:: (801) 637-5050

New/Existing: Existing Mining Method: U.G. - Room and Pillar

Federal Lease No(s).: See attached sheets.
Legal
Description(s):

State Lease No(s).: N/A
Legal Description(s):

Other Leases (identify): See attached sheets.
Legal Description(s):

Ownership Data:

Surface Resources (acres) Area	Existing Permit Area	Proposed Permit Area	Total Life Of Mine
Federal	600.0	600.0	600.0
State	--	--	--
Private	720.0	720.0	720.0
Other	--	--	--
TOTAL	1,320.0	1,320.0	1,320.0
Coal Ownership (acres):			
Federal	600.0	600.0	600.0
State	--	--	--
Private	720.0	720.0	720.0
Other	--	--	--
TOTAL	1,320.0	1,320.0	1,320.0

Coal Resource Data	Total Reserves (1981)	Total Recoverable Reserves (1981)
Federal	6.4	3.12
State	--	--
Private	1.6	0.78
Other	--	--
TOTAL	8.0	3.90

Recoverable Reserve Data	Name	Thickness	Depth
Seam	Blind Canyon	4'-13' (6.5' Ave)	1,000'-1,600'
Seam	Hiawatha	4'-7' (5.2' Ave)	1,100'-1,700'
Seam			
Seam			
Seam			
Seam			

Mine Life: 10 years
Average Annual Production: 365,000 tons Percent Recovery: 45-50%
Date Projected Annual Rate Reached: 1984
Date Production Begins: 1977 Date Production Ends: 1994
Reserves Recoverable By: (1) Surface Mining: 0
(2) Underground Mining: 3.9 million tons
Reserves Lost Through Management Decisions:
Coal Market: Power Generation (steam)

Waste Water Disposal	10/26/82
Sedimentation Pond Modification	12/1/81
Office Trailer Installation	3/2/82

Huntington Canyon #4 Mine - Lease Descriptions

Federal Leases

1. Federal Coal Lease #U-33454

   Township 16 South, Range 7 East, SLBM

   Section 8: S1/4 SE1/4
   Section 16: NW1/4 NE1/4, N1/2 NW1/4, SW1/4 NW1/4, NW1/4 SW1/4
   Section 17: NE1/4

2. Federal Coal Lease #SL-064903

   Township 16 South, Range 7 East, SLBM

   Section 16: NE1/4 SW1/4, NW1/4 SE1/4, SE1/4 NW1/4, SW1/4 NE1/4

Other Leases

1. Coal Mining Lease Agreement, dated April 30, 1975 from Estate of Herbert Fleishhacker, Jr., Lessor, to Dick E. Bastian, Noel S. Tanner, Meldon J. Tanner, Ted L. Hanks and Francis W. Christiansen, Lessees, assigned to Swisher Coal Company (now Beaver Creek Coal Company) December 31, 1979 covering all coal located in the following described lands:

   Township 16 South, Range 7 East, SLBM

   Section 9: SW1/4 SE1/4, SE1/4 SW1/4, SW1/4 SW1/4

2. Coal Mining Lease dated April 1, 1975 from Marena Sevier Madden, Edward F. Madden, Russel H. Gittings, Alice Madden Bogren, Millie Madden, Marena Madden Hiatt, Nancy S. Madden, William J. Madden and Patrick A. Madden, Lessors, to Dick E. Bastian, Noel S. Tanner, Meldon J. Tanner and Ted L. Hanks, Lessees, assigned to Swisher Coal Company (now Beaver Creek Coal Company) December 31 1979 covering all coal located in the following described lands:

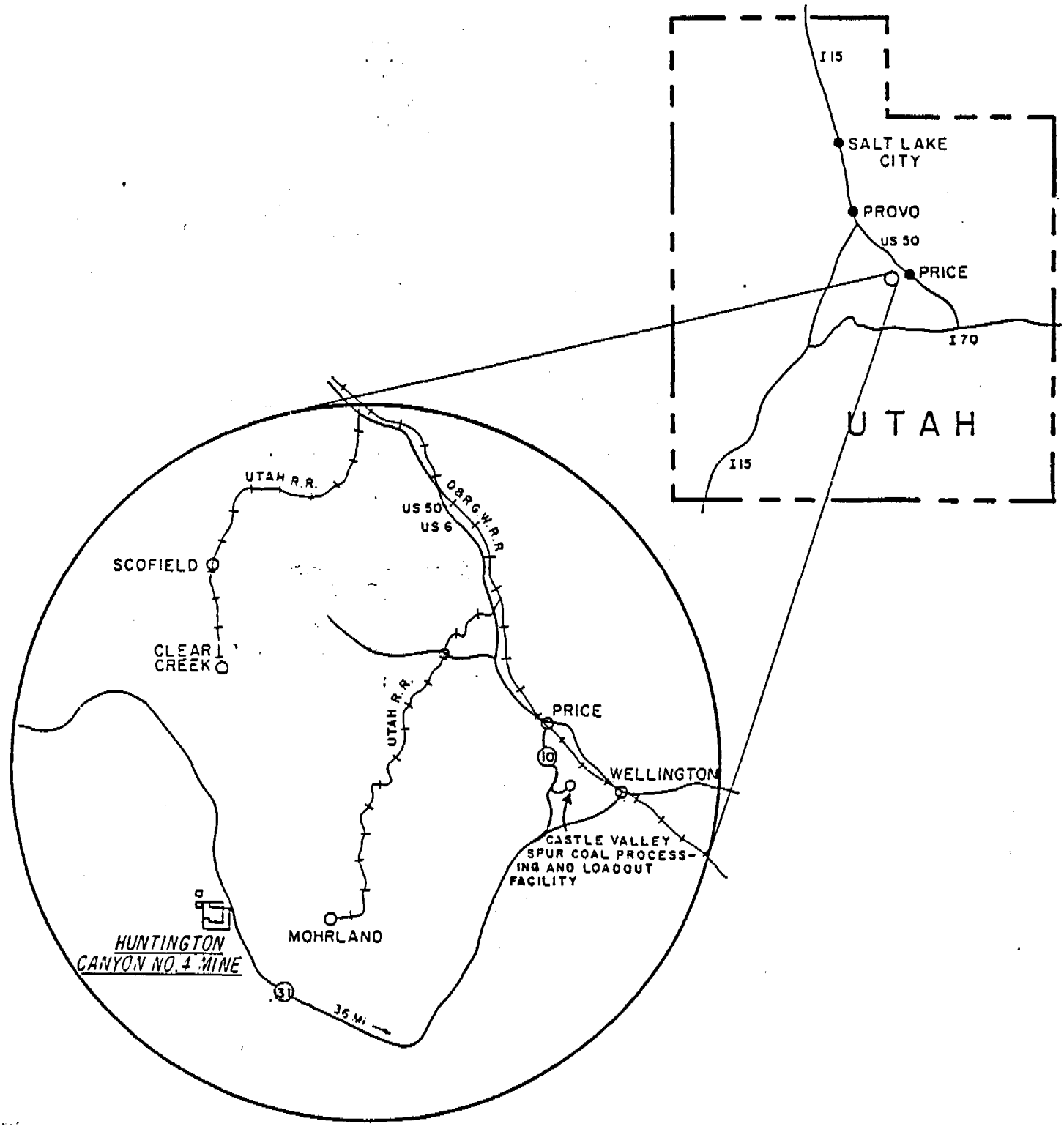
   Township 16 South, Range 7 East, SLBM

   Section 17: W1/2 SE1/4

Figure I

BEAVER CREEK COAL COMPANY

AREA OF OPERATIONS



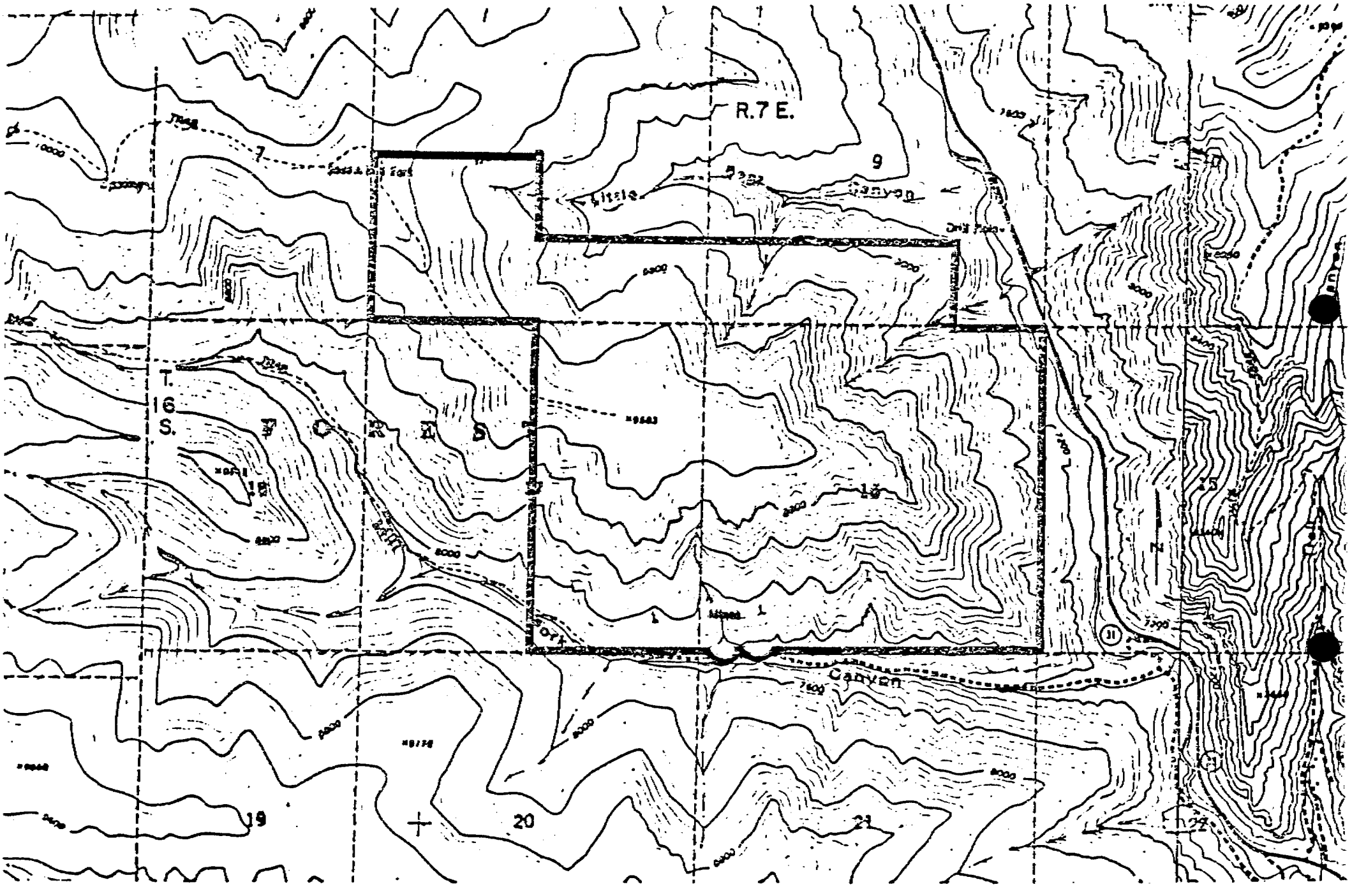


FIGURE 2. Huntington Canyon No. 4 Mine Permit Area

STIPULATIONS

Beaver Creek Coal Company
Huntington #4 Mine
ACT/015/004, Emery County, Utah

March 14, 1985

Stipulation 817.21-.25-(1)-EH

1. Results from soil analysis, identification of the best available topsoil substitute materials, estimates of material volumes for final reclamation, and a commitment to selectively place the best suitable topsoil substitute material during final reclamation of the pumphouse must be submitted to the regulatory authority for approval no later than June 1, 1985. At a minimum, the analyses must include data on soil texture, pH EC, SAR, N, P, and K. A sufficient number of samples must be taken to adequately characterize this material.

Stipulation 817.44-(1)-TM

1. The regulatory authority is willing to grant a variance to the requirements of UMC 817.44(b)(2) if the permittee can adequately demonstrate to the regulatory authority that these cross-sections represent a conclusive demonstration of comparable, adjacent drainage. The following parameters will have to be demonstrated in order to assess the comparability of the two watershed systems.

    1. Similar drainage area and channel capacity.

    2. Similar slopes and aspects.

    3. Cross-sections must be located in an area which gives comparable channel configurations.

    4. Natural armoring or riprap size must be noted, as well as natural energy dissipators (i.e., large boulders, log jams, drops and eddies, etc.) so they can be engineered into the new designs.

    These requirements must be met during the site visit in the spring of 1985 and the permittee must submit within 30 days of this site visit adequate plans for the proposed stream channel reclamation plans. These plans must included the following engineering designs at a minimum:

    1. Energy dissipators within the channel at crucial points, namely where flows come onto the upper

pad and drop off the cliff area below the upper pad onto the lower pad.

2. A design flow and channel configuration criteria compatible with this condition and 817.44(d)(1)(2)(3).

Stipulation 817.50-(1)-JW

1. The permittee shall sample on a quarterly basis until bond release any dischrges from the underground workings which occur after mining. Sampling will assess if discharges are in compliance with the effluent standards of UMC 817.42 and all other applicable State and Federal regulations. The permittee will provide treatment, if necessary, or any discharges to achieve compliance with applicable standards during the period of discharge.

Stipulation 817.54-(1)-JW

1. The permittee shall provide, within 60 days of the effective date of this permit, documentation of assignment or transfer of 800 shares in the Huntington-Cleveland Irrigation Company from the Hardy Coal Company to Beaver Creek Coal Company.

Stipulations 817.111-.117-(1, 2)-SC

1. Within 15 days of the effective date of this permit, the operator must revise the permanent seed mixture for the riparian area by including at least two forb species. The species must meet all the requirements of this section and UMC 817.97.

2. Within 15 days of the effective date of this permit, the operator must revise the tree seedling stocking rate for the pinyon-juniper-curl leaf-mountain mahogany vegetation type (Table 3-2) by replacing the pinyon and juniper seedlings with an equal number of seedlings of woody shrub species native to the area. The species must meet all the requirements of this section and UMC 817.97.

3. Before any site redisturbance occurs, the permittee must conduct a survey, under the supervision of the regulatory authority, of the areas to be redisturbed. The survey shall identify and record locations of individuals and populations of Hedysarum occidentale var. canone (canyon sweet-vetch). If canyon sweet-vetch is found in portions of the permit area to be redisturbed, the permittee must develop and submit a mitigation plan for regulatory authority approval and after approval implement this plan before redisturbance occurs.

TECHNICAL ANALYSIS

Beaver Creek Coal Company
Huntington #4 Mine
ACT/015/004, Emery County, Utah

March 14, 1985

Introduction

The Huntington Canyon #4 Mine, also called the Huntington #4 Mine, is owned and operated by Beaver Creek Coal Company, a wholly owned subsidiary of the Atlantic Richfield Company of Los Angeles, California. The operation is located in Mill Fork Canyon, tributary to Huntington Creek, approximately 12 road miles northwest of Huntington, Utah. The mine began production in early 1977 on areas disturbed by mining operations conducted during the 1940's. The mine started production in early 1977, was temporarily inactive in October 1978 and resumed full-time operation in March 1980. The mine was permanently closed November 1, 1984, when maximum coal recovery was achieved.

An application for a mining permit was received by the regulatory authority on March 20, 1981. An Apparent Completeness Review (ACR) was prepared and sent to the applicant on June 9, 1982. Beaver Creek Coal Company submitted their response to the ACR on June 20, 1983. The regulatory authority prepared a Determination of Completeness and Technical Deficiency Document (DOC/TD) which was sent to the applicant on August 1, 1983. Beaver Creek Coal Company responded to the latter on November 2, 1983, and the regulatory authority determined the Mining and Reclamation Plan (MRP) complete on December 20, 1983.

Existing surface facilities and roads encompass 12.5 acres of disturbance. Surface disturbance is located on a steep slope of primarily southerly exposure. Beaver Creek Coal Company intends to perform reclamation upon the 12.5 acres of disturbed lands used in the operation of the Huntington #4 Mine.

The Huntington #4 Mine is located in the upper Blind Canyon seam, approximately 80 to 100 feet above the lower Hiawatha seam. All mining was performed using the room-and-pillar method.

Surface ownership is 46 percent Federal and 54 percent fee. Mineral leases (coal ownership) are also 46 percent Federal and 54 percent fee. Total acreage is 1,320 acres. The Huntington #4 Mine, at full operation, employed about 53 people.

Description of Existing Environment

The Huntington #4 Mine is located in Mill Fork Canyon, a tributary to lower Huntington Canyon Creek. This portion of the Huntington Canyon

watershed is characterized by steep, relatively narrow canyons which typically dissect the eastern edge of the Wasatch Plateau. Huntington Creek is a tributary to the Colorado River via the San Rafael and Green Rivers.

Vegetation in the vicinity of the mine consists primarily of pinyon-juniper associations on south-facing exposures and mixed conifer stands on northerly exposures, comprised of Douglas fir, spruce and white fir. Riparian areas occur along stream channels in canyon bottoms and locally in association with springs and seeps. At upper elevations of the Wasatch Plateau, predominant vegetation consists of aspen and Douglas fir forests interspersed among areas dominated by montane big sagebrush.

Economically and aesthetically important wildlife inhabiting the environs of the mine are mule deer, elk, cougar, black bear, coyote, snowshoe hare, golden eagle and a variety of raptors, gamebirds and songbirds. Huntington Creek is classified by the State as a Class III fishery, providing habitat for salmonid species, primarily brown and rainbow trout.

Predominant land-uses in the general area of the minesite are wildlife habitat, limited grazing land and recreation. From an industrial aspect, the historic use of the land has been and continues to be coal mining.

Streamflow in the Huntington Canyon watershed result primarily from snowmelt which constitutes about 65 percent of the annual discharge (Danielson et al., 1981). The snowmelt season typically occurs from April through July.

Mill Fork Canyon is oriented in primarily an east-west direction, with Mill Fork Creek flowing easterly into Huntington Creek. The stream in Mill Fork Canyon is intermittent; it was dry during the summer of 1977, but flowed at the mouth of Mill Fork Creek during the summers of 1978 and 1979, both years of above-normal precipitation (Danielson et al. 1981). The canyon is approximately paralleled on the north by Little Bear and Crandall Canyons and on the south by Rilda Canyon. The mine facilities are located at an elevation of approximately 7,400 to 7,800 feet and are on the south facing slope of the canyon.

The ground water system in the area of the Huntington #4 Mine is characterized by localized aquifers in the Castlegate Sandstone, apparent perched aquifer conditions in the upper Blackhawk Formation and a regional aquifer occurring in the underlying Star Point Sandstone and lower portion of the Blackhawk Formation. Danielson, et al. (1981), recognized the regional aquifer system and formally termed it the Star Point-Blackhawk aquifer (page 22). The varied distribution of faults and

fractures, impermeable shale beds and paleochannels contributes to a complex pattern of ground water flow within and adjacent to the permit area.

Ground water recharge appears to be largely associated with snowmelt rather than rainfall, based on deuterium studies performed by the U. S. Geological Survey (USGS) and Beaver Creek Coal Company. Recharge of the Star Point-Blackhawk aquifer is thought to primarily occur through a conduit system of faults and fractures. Zones of fracturing and faulting would allow water to pass through less permeable beds that normally would impede vertical flow (Danielson, et al. 1981).

Ground water discharge occurs at springs and seeps, a few of which occur near the Huntington #4 Mine lease area. In addition, base flow for perennial drainages is thought to be sustained by recharge from the Star Point-Blackhawk aquifer.

Reference

Danielson, T. W., ReMillond, M. D., and Fuller, R. H. 1981. Hydrology of the coal resource areas in the upper drainages of Huntington and Cottonwood Creeks, central Utah: U. S. Geological Survey Open File Report, 81-539, page 85.

UMC 785.19 Alluvial Valley Floors

Existing Environment and Applicant's Proposal

Mill Fork Canyon lacks unconsolidated streamlaid deposits, current or historical flood irrigation or subirrigation and the capability to be flood irrigated. The applicant indicates no alluvial valley floors exist within and adjacent to the permit area (MRP, page 7-95).

Compliance

The applicant has provided sufficient information about alluvial deposits and irrigation (MRP, Section 7.3, pages 7-94 and 7-95, and Plate 6-1) for the Division to determine as required by UMC 785.19(c)(2) that no alluvial valley floors exist.

Stipulations

None.

UMC 817.11 Signs and Markers

Existing Environment and Applicant's Proposal

The applicant has placed identification signs at the entrance to the mine area. Perimeter markers have been placed around the perimeter of the disturbed area and buffer zone signs have been placed along Mill Fork Creek to prevent disturbance to this perennial drainage (MRP, Section 3.3.5.1). The one existing topsoil stockpile has been adequately marked. No explosives are used incident to surface activities (MRP Section 3.3.5.4).

Compliance

The applicant complies with this section.

Stipulations

None.

UMC 817.13-.15 Casing and Sealing of Underground Openings

Existing Environment and Applicant's Proposal

All exploration holes within the permit and adjacent area have been identified as to location, elevation at the collar and extent of casing. All boreholes designated by the code MC and HCD (MRP, Table 2, page 6-3) have been either cemented entirely or cased and plugged with cement at the surface. Thirteen exploration boreholes designated DH were drilled during 1974-1976. Completion records for DH boreholes were not maintained (MRP, page 6-14). The applicant attempted to locate and inspect DH boreholes during 1981 and states that boreholes associated with identifiable drill sites were covered or naturally plugged (MRP, page 6-14).

The first phase of the reclamation activity following final abandonment of the operation will be to permanently seal mine portals. The final sealing of mine portals will be accomplished by installing a recessed concrete block seal 20 to 50 feet from the mouth of the portal (MRP, page 3-56). Seals will be constructed of a double solid concrete block wall with a pilaster in the center. The seal will be recessed a minimum of six inches into the floor, roof and ribs and shall be coated with mortar on one side. Pipes or vents will not be placed within the seal since the portal will be backfilled and pipes can deteriorate over long periods of time, allowing air to enter the mine and increasing the possiblity of combustion. Since a portion of the mine slopes slightly towards the portals, seal design will accommodate mine inflows and a maximum hydrologic pressure of 30 psi. The area from the seal to the

mouth of the portal will be backfilled to minimize roof breakage. Portal structures will be removed and the exposed coal seam, including the former portal opening, will be covered during reclamation of the upper pad and highwall areas (Figure 3-6, MRP, page 3-57).

Compliance

MC and HCD boreholes have been adequately plugged with cement. Although the Division prefers cement to natural plugs, the applicant's inability to locate DH boreholes excludes initiating remedial procedures to excavate and install cement plugs. With regard to the above, the Division grants approval for the method of DH boreholes abandonment.

The applicant's methodology for permanently sealing mine portals adequately address the regulations. BLM has also reviewed the applicant's proposed methodology and inspected the site to assure the feasibility of implementation.

The applicant is in compliance with this section.

Stipulations

None.

UMC 817.21-.25 Topsoil

Existing Environment and Applicant's Proposal

Huntington #4 minesite is located at an elevation of between 7,400 and 7,800 feet on a southern exposure. The annual precipitation ranges from 12 to 20 inches and the frost free days range from 60 to 120. Mean annual temperature is 38o to 45o F.

Soil Resource Information is discussed in Volume 2, Section 8.3 of the MRP.

Soils in the area have evolved from the weathering of sandstone and shale on slopes ranging from nearly level to as steep as 90 percent. Three soil series were found to exist in the area; Patmos, Quigley and Podo. The Patmos and Podo series are Ustorthents and the Quigley is a Haploboroll. The A horizons range from as thin as two inches in the Podo to as thick as seven inches in the Quigley. Soil permeability is moderate to moderately rapid and the erosion hazard due to water is slight to high. The native vegetation is Salina wildrye, juniper, big sagebrush, rabbitbrush and pine.

Approximately 12.5 acres of land have been disturbed, the majority of which occurred prior to the enactment of Public Law 95-87. Therefore, except in the area of the sediment pond, no topsoil was removed and placed in storage for final reclamation. To alleviate the topsoil shortage the applicant has proposed to use the soil material that was sidecast during the construction of the mine, as a plant growth medium for final reclamation. Samples of the sidecast soil material were taken and chemical and physical analyses conducted. Based on these results (Table 8-4 of the MRP), the soil material was found to be suitable as a plant growth medium. In the area of the pumphouse and holding pond, the soil that is in place at the present time will be used for reclamation. No soil samples of this soil material have been taken at this time. During reclamation, the topsoil substitute will be retrieved by a backhoe and placed on the road and pad areas. A dozer (D-7 or equivalent) will be used to spread the soil material. The topsoil removed and saved during the construction of the sediment pond will be placed back on the sediment pond after it has been removed and graded. The area used for the pumphouse will be regraded and the in-situ soil material used for reclamation. After redistribution of the soil material, it will be deeply scarified to reduce compaction and additional soil samples will be taken to evaluate the need for N, P, K in preparation for reseeding, as per the revegetation plan (Section 3.5.4 of the MRP).

Compliance

The applicant is not in compliance at this time. Analysis of the soil material to be used for reclamation of the pumphouse and holding pond must be submitted before the applicant will meet the requirements of this section.

Stipulation 817.21-.25-(1)-EH

1. Soil analysis demonstrating the suitability of the soil material proposed for use in reclamation of the pumphouse must be submitted to the regulatory authority for approval no later than June 1, 1985.

UMC 817.41 Hydrologic Balance: General Requirements

Existing Environment and Applicant's Proposal

Volume 2, pages 7-1 through 7-96, of the MRP contains the hydrologic information for the permit and surrounding areas.

Surface Waters. The applicant proposes to route disturbed area runoff into sedimentation ponds via a series of structures including ditches and culverts. The sedimentation pond system includes two ponds in series with the lower pond having a gravel dike for filtering pond

effluent. The effectiveness of the ponds is assessed by a sampling program which monitors effluent from the lower pond (MRP, Sections 3.4.3 and 7.2.3.1).

Undisturbed drainage is routed around the minesite by a series of ditches and culverts to prevent mixing of undisturbed and disturbed drainage (MRP, page 3-7a).

Ground Water. The applicant has mined the Blind Canyon seam, the upper seam, and developed rock tunnels into the Hiawatha seam, the lower seam, which directly overlies the Star Point Standstone. Only perched water zones have been noted in the Blackhawk Formation (page 7-5, MRP).

The Star Point Sandstone and lower portion of the Blackhawk Formation form an important regional aquifer. Major sandstone units within this package of sediments are water-bearing and are separated by less permeable strata. Recharge to the Star Point-Blackhawk aquifer is thought to occur primarily through conduits in the form of faults and fractures. Significant faulting in the permit area may be the local source of recharge to the Star Point-Blackhawk aquifer as well as the source of recharge to the paleochannel sands in the Blackhawk Formation (Plate 6-1, MRP).

Little Bear Spring, an important municipal water supply for the city of Huntington, lies immediately north of the lease area. This spring issues from the Panther Sandstone Member, stratigraphically the lowest of the three Star Point Sandstone members, at about 350 feet below the Hiawatha seam. The applicant terminated mining activities prior to penetrating fault zones which may be the primary conduit supplying water to the spring.

Compliance

The applicant withdrew plans to mine into the fault zone. With the cessation of mining in the Huntington No. 4 Mine, there should be no impacts to Little Bear Spring.

The applicant is in compliance with this section.

Stipulations

None.

UMC 817.42 Hydrologic Balance: Water Quality Standards and Effluent Limitations

Existing Environment and Applicant's Proposal

The discussion of Water Quality Standards and Effluent Limitations can be found in Volume 2, Section 7 (pages 7-1 through 7-96) of the MRP. Other references addressed in this discussion are from Volume 1, Section 3 (pages 3-30, 3-58) of the MRP.

The applicant proposes to meet water quality effluent standards by routing all surface drainage from the disturbed area into a series of two sedimentation ponds. Mine water discharges are also routed into the sedimentation ponds (MRP, Section 3.4.3). The technical adequacy of the sediment pond system is discussed in Section UMC 817.46.

A NPDES permit has been obtained by the applicant for two discharge points at the minesite. Outfall 001 pertains to discharges from the cyclone overflow used as an intake for the water supply system for the mine. Outfall 002 pertains to the discharges from the lower sedimentation ponds (MRP, Section 3.4.3).

The applicant notes on page 3-58 of the MRP that the ponds will be the last structures removed at the minesite. Removal of the ponds will take place after revegetation of all other disturbed areas has been accomplished.

On page 3-30 of the MRP, the applicant notes that, pursuant to the on-going water quality monitoring program, should changes in water quality occur, the source of the problem will be identified and measures taken to correct any deficiencies.

Compliance

The measures proposed by the applicant are adequate based on the best technology currently available. The on-going water monitoring program will assess the effectiveness of the sediment control provided by the sedimentation ponds.

The applicant is in compliance with this section.

Stipulations

None.

UMC 817.43 Hydrologic Balance: Diversions and Conveyance of Overland Flow, Shallow Ground Water Flow and Ephemeral Streams

Existing Environment and Applicant's Proposal

The discussion of Diversions and Conveyance of Overland Flow, Shallow Ground Water Flow and Ephemeral Streams can be found in Volume 2, Section 7 (pages 7-1 through 7-96) of the MRP.

Diversion structures are located at the base of the highwall at the portal area. There are two separate structures, each diverting natural runoff to either side of the drainage in which the disturbed area is located. The diversions are temporary. They have been constructed by digging a trench along the base of the highwall and depositing the material in a compacted berm to the outside of the ditch (MRP, Section 702.3.1, page 7-78).

Approximately one half of the total discharge is intercepted and diverted by each of the diversion channels, and therefore, each channel must be capable of handling 4.2 cfs. To be conservative, a peak discharge of 5.0 cfs per channel was used in this analysis. The actual channels are not perfectly symmetrical; the highwall side is about 1:1 (H:V) and the berm side is about 2:1. For computation purposes, an average side slope of 1.5:1 was assumed. The channel bottom width is about 1.0 foot and the channel depth is about 1.5 feet and these values were, therefore, used in the analysis. The average slope of diversion A is 2.7 percent and that of diversion B is 1.7 percent. The channels are riprapped and the roughness coefficient was assumed to be 0.035 (MRP, page 7-80).

Energy dissipators are located at all discharge points from the diversion ditches and sedimentation ponds. In addition, energy dissipators are placed in the diversions at intervals of not less than 200 feet. These are in the form of small rock dikes or straw bales for sediment and erosion control. The discharges from the diversion ditches are onto a protective surface (i.e., conveyor belting or equivalent), and then into an area of rocks (or riprap) to dissipate the energy prior to allowing the drainage to run naturally. At the sedimentation ponds, overflows and channels are lined with riprap (see typical) to the point of final discharge into the ditch above the road (MRP, page 7-81).

Final reclamation includes removal of the diversion ditches by grading of the berm back into the trench. The entire yard will be reclaimed to the extent feasible and revegetated. Natural drainage will be restored to the extent practical.

Culverts. Drainage within the permit area is directed by diversions, open ditches and culverts. Undisturbed drainage areas are routed around the minesite by temporary diversions. Disturbed area drainage is directed to the sedimentation ponds by various culverts and ditches. These design characteristics and peak discharges are presented in Tables 7-16 and 7-19 on pages 7-68 and 7-83a of the Permit Application.

Reclamation of the disturbed area ditches is discussed on pages 3-62a and 3-63 of the MRP. Sediment control measures will consist of straw bale dikes placed at the lower edge of the reclaimed pad areas. All drainage from disturbed and reclaimed areas will still go into the sedimentation ponds until revegetation is established.

Compliance

The applicant has presented a feasible plan for diverting surface overland flow away from disturbed areas into Mill Fork Creek. The applicant also has presented calculations for certain diversion ditches and culverts within the disturbed area.

Based on the Sedimot model used by the regulatory authority, all diversion ditches and culverts prior to the March 16, 1984 submittal where deemed adequate to handle the peak flows from the 10-year, 24-hour peak flow. Following the March 16, 1984 submission, the applicant has recalculated peak flows for all the disturbed areas using a new rainfall value of 2.3 inches for the 10-year, 24-hour storm including disturbed area drainage shown on the sketch of Surface Disturbed Area Drainage (Figure 7-7).

The diversion ditch located between the outlet for the 36 inch culvert east of the fuel tank (Plate 3-1) and the sediment pond has several straw bale dikes in place. Maintenance of this portion of the diversion ditch is crucial to allow the function of these sediment controls.

The applicant is in compliance with this section.

Stipulations

None.

UMC 817.44 Hydrologic Balance: Stream Channel Diversions

Existing Environment and Applicant's Proposal

Specifics of stream channel diversions in the mine plan area can be found in Section 7.2.3.1 of the MRP and the diversion of Mill Fork Creek which can be found in Appendix 8 of Volume II of the MRP.

The following discussion encompasses the applicant's attempt to address the requirements of UMC 817.44(c) and (d)(1)(2)(3) in the MRP. There are two areas involving reclamation of diversions. One is the main yard and portal areas and the other is Mill Fork Creek pumphouse and diversion. Reclamation of the main yard and portal will take place during final reclamation. This will be accomplished by grading the berm

back into the trench. The entire yard will be reclaimed to the extent feasible and planted. Natural drainage will be restored to the extent feasible and planted. The natural drainage through the main mine yard will be restored based on the following study found on page 3-58 of the MRP. "In the spring of 1985, when the area is accessible, cross-sections will be taken above and below the proposed restored drainage, and in a comparable, adjacent drainage. If these cross-sections indicate the proposed restored drainage is not adequate, the design will be adjusted to a size compatible with these drainages." The current proposed restored drainage is discussed on page 3-58A and 3-58B of MRP, but will be potentially altered based on the outcome of the study mentioned above.

Compliance

The applicant has agreed to implement a study to determine what an acceptable reclaimed channel will be for the disturbed ephemeral drainage which flows through the mine yard and portal areas. The applicant has agreed to implement this study based on the fact that the requirements of UMC 817.44(b)(2) dictate that the capacity of the channel itself should be at least equal to the capacity of the unmodified stream channel immediately upstream and downstream of the diversion.

The Mill Fork Creek diversion will be reclaimed in a fashion most environmentally suitable to achieve the minimum amount of disturbance to Mill Fork Creek. This will be achieved by leaving the concrete retaining wall in place and providing an upstream and downstream rock face to blend the structure into the environment, stabilize stream banks and minimize sediment loading.

The applicant will be in compliance with this section when the following stipulation is met.

Stipulation 817.44-(1)-TM

1. The applicant has proposed on page 3-58 of the MRP that, "In the spring of 1985, when the area is accessible, cross-sections will be taken above and below the proposed restored drainage, and in a comparable, adjacent drainage. If these cross-sections indicate the proposed restored drainage is not adequate, the design will be adjusted to a size compatible with this drainage."

   The regulatory authority is willing to waive the requirements of UMC 817.44(B)(2) if the applicant can adequately demonstrate to the regulatory authority that these cross-sections represent a conclusive demonstration of comparable, adjacent drainage. The following parameters will have to be demonstrated in order to assess the comparability of the two watershed systems.

1. Similar drainage area and channel capacity.

2. Similar slopes and aspects.

3. Cross-sections must be located in an area which gives comparable channel configurations.

4. Natural armoring or riprap size must be noted, as well as natural energy dissipators (i.e., large boulders, log jams, drops and eddies, etc.) so they can be engineered into the new designs.

These requirements must be met during the site visit in the spring of 1985 and the applicant must submit within 30 days of this site visit adequate plans for the proposed stream channel reclamation plans. These plans must include the following engineering designs at a minimum:

1. Energy dissipators within the channel at crucial points, namely where flows come onto the upper pad and drop off the cliff area below the upper pad onto the lower pad.

2. A design flow and channel configuration criteria compatible with this stipulation and 817.44(d)(1) (2)(3).

UMC 817.45 Hydrologic Balance: Sediment Control Measures

Existing Environment and Applicant's Proposal

The discussion of Sediment Control Measures can be found in Volume 2, Section 7 (pages 7-1 through 7-96) of the MRP.

Energy dissipators are located at all discharge points from diversion ditches and sedimentation ponds. In addition, energy dissipators are located in the diversions at intervals of not less than 200 feet and include small rock dikes or straw bales for sediment and erosion control. Discharge from the diversion ditches is directed onto a protective surface (i.e., conveyor belting or equivalent) and then into an area of rocks (or riprap) to dissipate the energy prior to allowing the drainage to run naturally. Overflows and channels leading to and from the sedimentation ponds are lined with riprap to the point of final discharge into the ditch above the road (MRP, Section 7.2.3.1, pages 7-81 and 7-83).

Compliance

The applicant is in compliance with this section.

Stipulations

None.

UMC 817.46 Hydrologic Balance: Sedimentation Ponds

Existing Environment and Applicant's Proposal

The discussion of Sediment Ponds can be found in Volume 2, Section 7 (pages 7-1 through 7-96) of the MRP.

The undisturbed and disturbed area of the Huntington #4 Mine is contained within a large, single drainage area. In order to minimize additional sediment loading to Mill Fork Creek, a major portion of this drainage is diverted before it reaches the disturbed area. Runoff from the disturbed area is routed into sedimentation structures located in the canyon bottom above Mill Fork Creek (MRP, Section 7.2.3.1, page 7-62).

The overall drainage of the area, including locations of the sediment structures, is depicted on Plate 7-6. Specifications are given below.

Sediment ponds are located below the coal stockpile loading area (See Plate 7-6.) The applicant states (page 7-63 of the MRP) that this site offers the most effective sedimentation control with the least amount of environmental disturbance.

The applicant has built two smaller ponds in a series to minimize environmental degradation and still obtain adequate storage. The upper pond functions as a holding and settling facility for disturbed area runoff. The lower pond filters, cleans and discharges underground mine water, as well as overflow from the upper pond in the event a storm exceeds the design. Surface drainage from the disturbed area passes into the upper pond and through a 12-inch culvert with an inverted inlet into the lower pond where it is filtered through a dike of coke breeze and slag and discharged to Mill Fork Creek as required by the NPDES permit (MRP, page 7-63).

To comply with requirements of the regulatory authority for the control of sedimentation as listed in the Underground Mining General Performance Standards, the ponds are constructed in a manner to facilitate the holding and settling of contaminated water from the minesite, as well as filtering and discharge of underground mine water. An overflow is provided in the event of a massive inflow of surface water exceeding the capacity of the ponds. The ponds are cleaned as necessary and the waste material placed in an approved disposal site (MRP, pages 7-63, 7-63a).

The construction of the ponds is per specifications of the State Engineer, U. S. Forest Service, Office of Surface Mining and the DOGM.

The following construction specifications (page 7-64 of the MRP) were followed:

1. In areas where any fill material was placed, the natural ground was removed for at least 12 inches below the base of the structure.

2. Compaction of all fill materials was at least 95 percent. Native material was used wherever practical. Fill was placed in lifts not exceeding 12 inches and was compacted prior to placement of the subsequent lift.

3. Riprap was placed on the water side of all outlets to prevent scouring. Inside slopes are 3:1 minimum.

4. Dams were constructed to overflow at least one foot below the top.

5. Overflows have a minimum depth of one foot and a minimum width of three feet. These are constructed (or lined) with at least one foot of riprap on all surfaces and discharge into an energy dissipator to prevent scouring.

6. A filter dike, composed of coke breeze and slag, is provided in the lower pond as a final filter for water prior to discharge.

7. All construction of sediment ponds was performed under the direction of a qualified professional.

Design rainfall of 2.3 inches for the 10-year, 24-hour event was determined from the "Precipitation Frequency Atlas of the Western United States" (NOAA Atlas 2, Volume IV - Utah, 1973) for the location of the Huntington #4 Mine. Corresponding rainfall depth for the 25-year, 24-hour event was estimated to be 2.9 inches. The Fletcher-Farmer rainfall distribution was used to determine the rainfall distribution. Total runoff from the 10-year, 24-hour rainfall is estimated as 1.23 ac-ft. An additional 0.18 ac-ft is retained to provide at least one year sediment storage for sediment yield from disturbed areas as estimated below (MRP, page 7-67).

The sedimentation ponds are inspected after each storm and the sediment is cleaned out as necessary. In no case is sediment allowed to build beyond the point of reducing the pond capacity below 1.23 ac-ft. Removed sediment is disposed of in the C. V. Spur refuse pile or other locations as approved by the regulatory authority (MRP, page 7-66).

The Universal Soil Loss Equation (USLE) was used to estimate sediment yield from disturbed areas. Sediment yield was calculated by estimating the erosion rate from disturbed subdrainage areas. All erosion was assumed to be delivered to and deposited in the pond (MRP, page 7-69).

Total sediment yield from disturbed areas is estimated to be 0.172 ac-ft per year (MRP, Section 7.2.3.2, page 7-72).

Ponds have a capacity of 1.45 ac-ft, sufficient to store the runoff from a 10-year, 24-hour event of 1.23 ac-ft plus one year sediment loss of 0.17 ac-ft. Since the excess capacity is only 0.05 ac-ft, both ponds will require regular maintenance to maintain sediment storage.

Spillways from both ponds are designed to pass the runoff from a 25-year, 24-hour precipitation event. Peak discharge from a 25-year, 24-hour precipitation event from the drainage above the ponds was determined using Sedimot II and the input parameters in Table 7-16. The peak discharge was determined to be 3.11 cfs (MRP, page 7-72).

A cross-section and profile of upper and lower pond spillways is provided in Plate 7-6 (MRP, page 7-73).

Design specifications are provided in Table 7-18. Velocities in both spillways exceed five ft/sec and would be erosive. Median riprap diameter of 15 inches is used to maintain stable spillways. Riprap of this size has a Manning's roughness coefficient of 0.04 and provides adequate protection for velocities in excess of 10 ft/sec (MRP, page 7-73).

Two water monitoring stations have been established at pond inlets and outlets (See water monitoring program for details.) (MRP, Section 7.2.6, page 7-89)

Compliance

The applicant complies with this section.

Stipulations

None.

UMC 817.47 Hydrologic Balance: Discharge Structures

Existing Environment and Applicant's Proposal

The discussion on Discharge Structures can be found in Volume 2, Section 7 (pages 7-1 through 7-96) of the MRP.

The discharges from the diversion structures are onto a protective surface (i.e., conveyor belting or equivalent) and then into an area of rocks (or riprap) to dissipate the energy prior to allowing the drainage to run naturally. At the sedimentation ponds, overflows and channels are lined with riprap (see typical) to the point of final discharge into the ditch above the road (MRP, Section 7.2.3.1, pages 7-81 and 7-83).

Overflows have a minimum depth of one foot and a minimum width of three feet. They are constructed (or lined) with at least one foot of riprap on all surfaces and discharge into an energy dissipator to prevent scouring (MRP, Section 7.2.3.1, page 7-64).

Compliance

The applicant complies with this section.

Stipulations

None.

UMC 817.49 Hydrologic Balance: Permanent and Temporary Impoundments

Existing Environment and Applicant's Proposal

Temporary impoundments on the Huntington #4 minesite include the two sediment ponds. These are covered in Section UMC 817.46 of this document. There are no permanent impoundments proposed at the Huntington #4 Mine.

Compliance

The applicant complies with this section.

Stipulations

None.

UMC 817.50 Hydrologic Balance: Underground Mine Entry and Access Discharges

Existing Environment and Applicant's Proposal

The applicant notes on page 7-16 of the MRP regarding the Blind Canyon Seam that the mine has encountered "small amounts of water from sandstones in the roof" and that "occasionally, damp to wet floor conditions exist."

The Hiawatha Seam lies approximately 100 feet below the elevation of the Blind Canyon seam (MRP, Section 7.1.5) and was accessed via rock slopes from the Blind Canyon portal. (Plate 3-6 of the MRP).

Page 3-56 of the MRP contains the details of the permanent portal seals to be installed upon final reclamation. The seals are designed to withstand up to 30 psi of pressure to contain any in-mine water accumulation following cessation of mining.

Page 3-56a contains a commitment to monitor any discharge (if it should occur) and provide treatment, if necessary, to satisfy the applicable State and Federal effluent limitations during the permit term.

Compliance

Based on the structure contour map (Plate 6-5), it appears that a portion of the workings in the Blind Canyon Seam would naturally drain from the existing portals. Upon reclamation, portal seals cannot guarantee that gravity discharges from the mine will not flow from other areas of the coal outcrop.

An evaluation of the portion of the workings which might potentially drain towards the portals along with the associated recharge area indicates that the probability of discharges from the workings is quite low. Based on the applicant's monitoring data to date, the only possible water quality concern associated with discharges from this mine would be increased total dissolved solids levels.

The applicant's proposal to monitor and provide treatment, if needed, for the permit term does not comply entirely with the requirements of this section. Any discharges which occur postmining must be sampled to assess if the effluent limitations of UMC 817.42 and all applicable State and Federal water quality standards are met.

Stipulation 817.50-(1)-JW

1. The applicant shall sample on a quarterly basis until bond release any discharges from the underground workings which occur after mining. Sampling will assess if discharges are

in compliance with the effluent standards of UMC 817.42 and all other applicable State and Federal regulations. The applicant will provide treatment, if necessary, of any discharges to achieve compliance with applicable standards during the period of discharge.

UMC 817.52 Hydrologic Balance: Surface and Ground Water Monitoring

Existing Environment and Applicant's Proposal

The proposed surface water monitoring program includes sampling sites above and below the minesite in the Mill Fork Canyon drainage, at the inflow and outflow of the sedimentation pond system, one seep, and one spring site in the Little Bear Canyon drainage north of the Huntington #4 lease area (Plate 7-3 of the MRP).

Figure 7-9 (page 7-86) and Figure 7-10 (page 7-90) of the mine plan show the frequency of sampling for all proposed surface sampling sites. Page 7-91 shows the water quality parameters to be analyzed and field measurements to be taken for surface water monitoring.

The applicant's ground-water monitoring proposal involves sampling the previously noted seep and spring in Little Bear Canyon, north of the Huntington #4 lease area. Additionally, the applicant notes on page 7-21 of the MRP that one exploration drill hole has been drilled into the Star Point Sandstone which lies immediately below the Hiawatha Coal Seam. The Star Point Sandstone and the lower portion of the Blackhawk Formation are considered to be the host rock for the only regional aquifer in the area. Water level data from this exploration hole were obtained over an eight month period. The applicant has also committed to a depth of water study on this aquifer prior to mining the Hiawatha Seam northwest of a line between drill holes DH-9 and MC-4-3 (page 7-23 of the MRP).

Compliance

The applicant's proposal for surface water monitoring adequately addresses the requirements of the regulations. The location of Stations 4-4-W and 4-5-W are favorable for assessing the impacts of reclamation activities at the minesite. The location and frequency of all stations should not be changed for postmining monitoring.

The applicant's ground water monitoring proposal of the seep and spring in Little Bear Canyon is adequate to assess impacts of mining on the only significant ground water resource in the immediate area.

The applicant is in compliance with this section.

Stipulations

None.

UMC 817.53 Hydrologic Balance: Transfer of Wells

Existing Environment and Applicant's Proposal

A listing of all drill holes on the Huntington #4 lease area is contained in Table 6-2, page 6-13 of the MRP. Drill hole MC-4-1 appears to be the only hole presently open. It is utilized for water level measurements and was drilled from within the Blind Canyon Seam workings.

Compliance

Because the only open drill hole will be inaccessible after retreat mining of the Blind Canyon Seam, the applicant could not transfer drill hole MC-4-1 for use as a water well. The applicant complies with this section.

Stipulations

None.

UMC 817.54 Hydrologic Balance: (UCA 40-10-29[2]) Water Rights Replacement

Existing Environment and Applicant's Proposal

Appendix I of the MRP contains an agreement between Huntington City and Swisher Coal Company, Beaver Creek Coal Company's predecessor. The agreement commits the Company to replace the water supply from Little Bear Spring, an important municipal water supply, if mining activities impact the spring.

Page 3-27 of the mine plan notes that the coal company would replace water impacted by mining with its shares of water in Huntington Creek.

Appendix 4 contains a stock certificate for 800 shares of water in the Huntington Cleveland Irrigation Company. The certificate is issued to Hardy Coal Company. Table 7-8 of the MRP lists filed water rights in and around the Huntington #4 minesite. Plate 7-7 shows the locations of the water rights listed in Table 7-8.

Compliance

The applicant has permanently terminated all mining activities in both the Blind Canyon and Hiawatha coal seams. Plates 3-5 and 3-6 indicate the mining in the Blind Canyon seam stopped well short of the fault system which may feed the Little Bear Spring and the mining in the Hiawatha seam never developed beyond the initial entries. The following analysis was developed prior to permanent abandonment and is still applicable insofar as postmining may result in possible, though not probable ground-water impacts.

The North Emery Water Users Association has expressed concern that mining activities at the Huntington #4 Mine may impact one of three springs located in Rilda Canyon, due south of the Huntington #4 lease area. These springs are an important culinary water supply for North Emery County. The West Appa Rilda Canyon Mine Permit Application contains information using Very Low Frequency Electromagnetic Analysis (VLFEM) which was used to identify a north-south trending lineament intersecting the North Spring area. This is thought to be a fracture system acting as a supply conduit for the North Spring in Rilda Canyon.

The VLFEM analysis is limited in that only two transects were run in Rilda Canyon. Further, the Hiawawtha Seam outcrops in Mill Fork Canyon. If the north-south trending lineament was hydrologically active directly under the Hiawatha Seam, the effects of the lineament in acting as a flow conduit would be apparent in Mill Fork Canyon. No effects of the north-south trending lineament are apparent in Mill Fork Canyon. Therefore, until further data reveals more conclusively that the north-south lineament in Rilda Canyon is hydrologically active up into the Huntington #4 lease area, no mitigation measures are recommended.

The applicant has provided a list of filed water rights for the Huntington #4 Mine area. Those rights which may be potentially impacted by mining are shown on Table 7-8 (page 7-20 of the MRP) with the acre-foot allotment. Using the information from Table 7-8, the 800 shares of Huntington-Cleveland Irrigation Company owned by Beaver Creek Coal Company and the average discharge rate for Little Bear Spring shown on page 7-34 of the MRP, the following analysis was generated:

Total water rights which could be impacted:

12.99 ac-ft (Table 7-8 of the MRP)
477.82 ac-ft (Little Bear Spring)
490.81 ac-ft

Less water rights held by Beaver Creek Coal Company for replacement:

264.00 ac-ft
226.81 ac-ft = Net Deficit

The applicant's proposal to replace water rights impacted by mining with 800 shares of Huntington-Cleveland Irrigation Company water rights will address approximately 54 percent of the total existing rights which could be impacted. It is unlikely that 100 percent of the existing water rights would be impacted. Ninety-seven percent (97%) of the existing water rights are composed of the flow from Little Bear Spring (477.8 ac-ft of 490.8 ac-ft total). Should Little Bear Spring be totally diminished by mining activities, the existing 800 shares of Huntington-Cleveland Irrigation Company water would not be enough to replace the flow from Little Bear Spring. However, the written agreement (Appendix 1) binds the coal company to replacement of water for Little Bear Spring even if the spring was totally interrupted.

To assure that the replacement water is without legal complication as to ownership, the applicant must show that the 800 shares of Huntington-Cleveland Irrigation Company issued to Hardy Coal Company have been legally transferred or assigned to Beaver Creek Coal Company.

Stipulation 817.54-(1)-JW

1. The applicant shall provide, within 60 days of permit approval, documentation of assignment or transfer of 800 shares in the Huntington-Cleveland Irrigation Company from the Hardy Coal Company to Beaver Creek Coal Company.

UMC 817.55 Hydrologic Balance: Discharge of Water into an Underground Mine

Existing Environment and Applicant's Proposal

The applicant does not propose to route drainage into any of the portal entries. The drainage control plan for the upper pad depicted on Plate 7-4 of the MRP shows that surface drainage will be conveyed away from portal entries.

Compliance

The applicant complies with this section.

Stipulations

None.

UMC 817.56 Hydrologic Balance: Postmining Rehabilitation of Sedimentation Ponds, Diversions, Impoundments and Treatment Facilities

Existing Environment and Applicant's Proposal

The applicant notes (MRP, Section 3.5.2.3, page 3-58) that sedimentation ponds, dams and diversions will be disposed of during reclamation. No permanent hydrologic structures are planned for the Huntington #4 Mine.

Compliance

The applicant has not provided a specific timetable for removal of these temporary structures during reclamation. The ponds will be left in place until the reclaimed surface facility area is revegetated.

The applicant complies with this section.

Stipulations

None.

UMC 817.57 Hydrologic Balance: Stream Buffer Zones

Existing Environment and Applicant's Proposal

Page 3-28 of the MRP notes that a buffer zone is established between the northern portion of the haul road near the sediment ponds and the Mill Fork stream channel. Road maintenance and snow removal operations were the primary activities which occur within this zone. The applicant commits to blading snow to the north of the road (away from the stream) and to conducting all road maintenance activities in a manner that directs material away from the stream side. On page 3-28a (MRP), the applicant commits to remove snow or other accumulations of material bladed to the north of the road in the buffer zone to an approved storage or disposal area as soon as practicable. The approved storage locations are shown on Plate 3-1a. Sediment control for the storage areas will be straw bale dikes.

The applicant has also agreed to conduct monthly analysis of total suspended solids levels at Stations 4-4-W and 4-5-W to determine the adequacy of the sediment control measures that have been proposed (page 7-91, MRP).

Compliance

The applicant's establishment of a stream buffer zone is somewhat inconsistent in that a 100 foot zone is not actually in place. Mining activities are within 100 feet of Mill Fork Creek.

Based on benthic invertebrate data in the U. S. Geological Survey Open File Report 81-539, a biological community as defined in UMC 817.57(c) is present in Mill Fork Creek.

The sediment contributions from the haul road which enter the Mill Fork stream are a significant environmental concern. Site visits in the early spring of 1983 showed that snow removal operations generate large amounts of earth material which is frequently placed in or just adjacent to the stream channel.

An analysis of total suspended solids (TSS) for the period March 1982 through July 1983 shows a pattern of significant sharp increases in total suspended sediments between Stations 4-4-W and 4-5-W (both on Mill Fork Creek). This concurs with on-site observations of sediment loading from snow removal operations.

The applicant's proposal for snow removal and road maintenance activities within the stream buffer zone is adequate to address this concern. The on-going evaluation of the total suspended solid levels at Stations 4-4-W and 4-5-W to be made by the applicant on a monthly basis will determine if the measures proposed are working adequately. If TSS levels between Stations 4-4-W and 4-5-W show increases of greater than 200 mg/l which can most likely be attributed to mining activities, then additional sediment control measures will be proposed, approved and implemented by the applicant (page 7-91, MRP).

The Division, pursuant to UMC 817.57(a)(1) and (2) approves the applicant's proposal to conduct underground coal mining activities within 100 feet of Mill Fork Creek. However, with the initiation of reclamation activities in 1985, little road use or snow removal is anticipated.

The applicant is in compliance with this section based on the applicant's commitment on page 7-91 of the MRP.

Stipulations

None.

UMC 817.59 Coal Recovery

Existing Environment and Applicant's Proposal

The Huntington #4 Mine produced coal from the Blind Canyon Seam and the Hiawatha Seam using room-and-pillar methods that were consistent with the best technology currently available. Recovery within the room-and-pillar panels was approximately 75 percent to 78 percent, with an overall recovery factor (including barriers) estimated at 50 percent, (page 3-15 of the MRP).

Compliance

The applicant complies with this section.

Stipulations

None.

UMC 817.61-.68 Use of Explosives

Existing Environment and Applicant's Proposal

No blasting is employed at this site as outlined in Section 3.3.5.4 of the MRP.

Compliance

The applicant complies with this section.

Stipulations

None.

UMC 817.71-.74 Disposal of Excess Spoil and Underground Development Waste: General Requirements; Valley Fills; Head-of-Hollow Fills; Durable Rock Fills

Existing Environment and Applicant's Proposal

All development waste was disposed of in underground "gob" areas which consist of entries and cross-cuts no longer needed for the operation of the mine. No development waste was stored on the surface at this operation as stated in Section 3.3 of the MRP.

Compliance

The applicant complies with this section.

Stipulations

None.

UMC 817.81-.88 Coal Processing Waste: Banks

Existing Environment and Applicant's Proposal

There were no coal processing facilities planned for use at the Huntington #4 Mine. All raw coal will be hauled from the site as stated in Section 3.3 of the MRP.

Compliance

The applicant complies with this section.

Stipulations

None.

UMC 817.89 Disposal of Noncoal Waste

Existing Environment and Applicant's Proposal

Noncoal waste is temporarily stored in steel dumpsters and hauled, by contractor, to the approved Carbon County Landfill on an as-needed basis (MRP Section 3.3).

Compliance

The applicant complies with this section.

Stipulations

None.

UMC 817.91-.93 Coal Processing Waste: Dams and Embankments

Existing Environment and Applicant's Proposal

The applicant did not construct any dams or embankments constructed of coal processing waste or to impound coal processing waste. The coal was transported to Beaver Creek Coal Company's C. V. Spur Preparation Plant 35 miles away (MRP, Section 3.3).

Compliance

The applicant complies with this section.

Stipulations

None.

UMC 817.95 Air Resources Protection

Existing Environment and Applicant's Proposal

Fugitive dust emissions from traffic over unpaved road surfaces are controlled through water sprays, chemical suppressants and reduced vehicular speed (25 mph in Mill Creek Canyon). Neither the Utah Bureau of Air Quality nor the Environmental Protection Agency has established any air quality monitoring requirements for the area of the Huntington #4 Mine and no air quality monitoring by the applicant is planned (MRP Sections 3.4.7.2 and 11.2.2).

Compliance

The applicant complies with this section.

Stipulations

None.

UMC 817.97 Fish, Wildlife and Other Related Environmental Values

Existing Environment and Applicant's Proposal

The Fish and Wildlife Resource Information for the Huntington #4 Mine area is discussed in Chapter 10 of the MRP.

A wide variety of wildlife species utilize the highly variable habitats within and adjacent to the permit area. Economically important and high interest species which potentially inhabit the area include mule deer, elk, moose, beaver, bobcat, coyote, mountain lion, snowshoe hare, fox and flying squirrel. Twenty-nine species of birds, including gamebirds and raptors, are listed as being of high State interest.

Seven species of raptors have been observed on the permit area and nesting areas for red-tailed hawks, sharp-shinned hawks, American kestrels, great horned owls and golden eagles have been located on-site (MRP, Section 10.3.2.4). Gamebirds include blue grouse, ruffed grouse and mourning doves.

Of the 22 species of migratory birds of high Federal interest listed by the U. S. Fish & Wildlife Service (USFWS) for the Uintah-Southwestern Utah Coal Production Region, nine are actually or potentially present on the permit area. These are the bald eagle, golden eagle, peregrine falcon, band-tailed pigeon, Cooper's hawk, flammulated owl, prairie falcon, Williamson's sapsucker, black swift and western bluebird. One active golden eagle nest has been found on the permit area (letter from USFWS to OSM dated September 30, 1983).

The major aquatic habitats within the permit area are Mill Fork and Little Bear Creeks. All surface facilities are within Mill Fork Canyon. Based on benthic macroinvertebrate and aquatic habitat surveys conducted by the operator as well as data provided by the Utah Division of Wildlife Resources (UDWR), neither creek supports game or nongame fish and both lack sufficient flow in most years to provide spawning sites (MRP, Section 10.3.2.1). However, these streams probably contribute some invertebrate food items and a small amount of surface flow to Huntington Creek, an important fishery in the region.

The most important aspect of these streams is their contribution to riparian habitat for wildlife. Approximately 1.4 acres of riparian vegetation exists on the lease area (MRP, Table 9-1). Of this, .03 acres have been disturbed (Appendix 8, page 1). This habitat type is listed by UDWR as high priority due to availability of water and compositional diversity of the plant community. Other high priority areas include seeps and springs, as well as cliffs which afford nesting sites for many species of raptorial birds.

Habitats in and around the Huntington #4 permit area include areas of high priority summer range and crucial-critical winter range for both deer and elk (MRP, Figure 10-6, 10-7). No specific elk calving or deer fawning areas have been identified in the study area. A portion of the study area provides moose winter range, but field studies indicate that preferred habitat is quite limited (MRP, Section 10.3.3.1).

Listed threatened and endangered species potentially present in the study area are the American peregrine falcon, arctic peregrine falcon and the bald eagle. None of these species have been observed on the area and are not likely to occur because habitats in the area are marginal (MRP, Section 10.3.3.1).

Beaver Creek Coal Company has committed to avoiding important habitats such as riparian areas, and has committed to not using persistent pesticides and to preventing fires (MRP, Sections 10.5.1

and 3.3.5). Also, employee awareness programs inform mine personnel of sensitive periods or habitats, such as deer fawning seasons and areas, critical winter ranges, etc., to minimize impacts to wildlife (MRP, Section 10.5.5.1).

Fencing will be designed to allow passage of wildlife without entanglement or disturbance to migratory patterns, and mule deer roadkills along the Mill Creek access road and the Huntington Canyon road are monitored by Beaver Creek personnel (MRP, Section 10.5.5.1).

The operator has committed to reporting any observations of threatened and endangered species not previously reported on the permit area to the regulatory authority, UDWR and the USFWS. Active nests and nest trees, if located, will not be disturbed (MRP, Sections 10.5.1.2 and 10.7).

Habitat loss or deterioration of the Mill Fork aquatic ecosystem has been limited by the establishment of a 100 foot buffer zone adjacent to the stream where possible (see TA, Section UMC 817.57) and constructing sediment ponds to protect the stream from an increased sediment load from the mine-affected areas. In addition, monthly inspections of sediment load in Mill Fork are conducted (MRP, Section 10.7).

During the first suitable planting season following mining, the applicant will implement permanent revegetation methods designed to restore and enhance wildlife habitat on disturbed areas. The revegetation planting mixture includes herbaceous and woody species that are adapted to on-site conditions and are of known value to wildlife for cover, forage or both (MRP, Section 3.5; Appendix 8, Attachment A).

Beaver Creek Coal Company will conduct a wildlife monitoring program throughout the operational life of the Huntington Canyon #4 Mine. The monitoring program will utilize the services of a full-time environmental specialist and, as necessary, professional consultants to evaluate the ongoing success of operational mitigation measures, ensure that threatened or endangered species and sensitive or critical use areas remain undisturbed by future activities, deal with any unforeseen difficulties which might arise, and participate in reclamation efforts upon completion of the project (MRP, Section 10.7).

Compliance

The Huntington #4 Mine has been in operation since 1977. The surface disturbance and associated loss of wildlife habitat has already occurred. No additional surface disturbances are planned.

Therefore, the mitigation and management plans focus on minimizing impacts related to continued mining activities and returning the site to suitable habitat after cessation of mining (MRP, Section 10.5).

In an effort to characterize the fish and wildlife resources and assess potential impacts, the applicant has conducted numerous surveys on the permit area as well as a thorough literature search of the UDWR files and other publications on the distribution and status of vertebrates in the study region.

Surveys to determine the presence of any critical habitat of a threatened or endangered species, any plant or animal listed as threatened or endangered or any bald or golden eagle have been conducted. Three golden eagle nests have been located on the permit area (letter from USFWS to OSM dated September 30, 1983). Two nests are old and one was active in 1982 (MRP, Figure 10-8a). The company has committed to mitigate impacts to nests from subsidence by replacing the nests, establishment of alternative nest sites or other site-specific measures agreed upon between the USFWS and Beaver Creek Coal Company (MRP, page 10-67a).

A commitment to report any threatened and endangered species observed on the permit area during operations has been made.

The potential raptor electrocution hazard posed by existing powerline pole configurations on-site has been determined by USFWS to not require corrective modification as long as raptor mortality continues not to occur (letter from USFWS to DOGM dated October 9, 1981) and no additional powerlines are proposed for construction (MRP, Section 3.2.13); instead, powerlines will be removed during reclamation.

The applicant has committed to protect and avoid habitats of high value for fish and wildlife including riparian areas, seeps and springs, fawning areas, critical winter areas, etc. (MRP, Section 3.4.6.2). If seeps and springs are adversely impacted by subsidence, efforts to restore or replace lost water will be made. This will be accomplished by attempting to reopen the previous flow area or by dedicating water rights to develop an alternative source (MRP, Section 10.5.1.1).

If monitoring indicates that mule deer roadkills are a problem, the company has committed to consult with UDWR for mitigation measures (Section 10.7). Adequate plans for permanent revegetation of the site have been provided (MRP, Section 3.5; Appendix 8) and determined adequate (see TA, Section UMC 817.111-.117). Species to be used for revegetation have been selected based on nutritional value and cover for fish and wildlife and ability to support and enhance fish and wildlife habitat after bond release. Plants will be grouped in a manner which optimizes edge effect.

Stipulations

None.

UMC 817.99 Slides and Other Damage

Existing Environment and Applicant's Proposal

The applicant has committed to notify the Division at any time a slide occurs which may have a potential adverse affect on public property, health, safety and environment in Section 3.3.2.5 of the MRP and abide by appropriate mitigation measures as required by the Division.

Compliance

Applicant complies with this section.

Stipulations

None.

UMC 817.100 Contemporaneous Reclamation

Existing Environment and Applicant's Proposal

The applicant has committed to contemporaneous reclamation of disturbed areas as they become available (MRP, Section 3.5.1). Areas will be backfilled, graded, topsoiled and revegetated to acceptable reclamation standards established by environmental baseline studies (see TA, Section UMC 817.111-.117).

Compliance

The applicant complies with this section.

Stipulations

None.

UMC 817.101 Backfilling and Grading: General Requirements

Existing Environment and Applicant's Proposal

The yards, roads, and portal areas were dozed out of very steep rocky canyon walls in the 1940's. The area will be smoothed and contoured to be compatible with postmining land uses (as described in UMC 817.133 of the TA), and available topsoil will be respread

over the area to ensure the success of the revegetation. This is outlined in Section 3.5.3 of the MRP, with the time schedule found in Section 3.5.6.1.

In general, the backfilling and regrading will proceed as follows:

a. After sealing of the portals and removal of all structures, a backhoe (Cat 235 or larger) will be brought to the upper portal.

b. The backhoe will reach down over the fill bank, retrieve material, and place it on the terrace.

c. A cat (D-7 or larger) will work with the backhoe, taking the retrieved material and spreading and compacting it from the highwall outward to reach the configuration as shown on Plate 3-8, Postmining Topography. Compaction of 90 percent or greater will be accomplished by spreading the material in lifts not to exceed 15 inches and tracking over it with a dozer.

d. The upper pad will be sloped to drain to the center. A rock-lined natural drainage will be restored in this area since all diversions will have been removed during the backfilling and regrading.

e. The procedure will continue down the upper road with the backhoe and cat operating in conjunction to reclaim this area to the property line.

f. From the coal storage area to the lower pad (including the lower road) and drainfield area, a similar method of reclamation will be employed.

Plate 3-8 locates proposed "retained" highwalls on the south-facing slope of the canyons. Cliffs and rock exposures are common on the south-facing slopes in this area. The "retained" highwalls are compatible in height and length to existing cliffs in the area and have a Static Safety Factor (SSF) of 3.00 for dry conditions and 2.73 for saturated conditions (MRP, page 3-64b). The structural composition is consistent with pre-existing cliffs in the surrounding terrain, the cliff units in the coal bearing Blackhawk Formation.

Final graded areas will have a safety factor of 2.20 for dry conditions and 1.65 for saturated conditions (page 3-64e of the MRP). The embankment material will be placed in maximum 36-inch lifts and compacted to 90 percent.

Compliance

The applicant complies with this section.

Stipulations

None.

UMC 817.103 Backfilling and Grading: Covering Coal and Acid and Toxic-Forming Materials.

Existing Environment and Applicant's Proposal

All exposed coal outcrops will be covered with incombustible material during the backfilling and grading operation as outlined in Section 3.5.3 of the MRP.

This is not a processing facility and, therefore, toxic-forming materials or acid-producing materials are not produced or require disposal. All clean-up will be done before soil placement as stated in Section 3.5.6.1 (time schedule for reclamation).

Compliance

The applicant complies with this section.

Stipulations

None.

UMC 817.106 Regrading and Stabilizing of Rills and Gullies

Existing Environment and Applicant's Proposal

Rills or gullies deeper than nine inches in regraded areas will be filled, graded or otherwise stabilized and reseeded. Rills and gullies less than nine inches deep as specified by the regulatory authority will be stabilized and the area reseeded and replanted if the rills or gullies are disruptive to the approved postmining land-use. This final configuration is shown on Plate 3-8 of the MRP. Rills and gullies are described in Section 3.5.3.2 of the MRP.

Compliance

The applicant complies with this section.

Stipulations

None.

UMC 817.111-.117 Revegetation

Existing Environment and Applicant's Proposal

The Huntington Canyon #4 Mine lease area is generally located within the pinyon-juniper vegetation zone as described by Cronquist, et al (1972). The elevation ranges from approximately 7,200 feet to 9,580 feet. Precipitation varies with elevation and ranges from approximately 15 to 20 inches annually, with 60 to 70 percent occurring as snow during the months of October through May.

Eight vegetation types are delineated on the permit area (MRP, Plate 9-1). These include aspen woodland, mixed coniferous forest, burned mixed coniferous forest, pinyon-juniper-curlleaf mountain mahogany woodland, manzanita shrubland, big sagebrush shrubland, riparian and mountain grassland. The pinyon-juniper-curlleaf mountain mahogany woodland and riparian communities occur in the area of disturbance.

No threatened or endangered plant species were encountered during floristic surveys of the permit area. According to the USFWS, only one species of concern (Hedysarum occidentalis var. canone) may occur on the permit area (USFWS memorandum to OSM, Denver, October 21, 1983). It is under review for possible listing in the future.

As described in Section 9.2.3 of the MRP, a pinyon-juniper-mountain mahogany reference area was selected and permanently marked. It was selected as representative of the topography, soils, aspect and species composition of the majority of the disturbed area. The reference area is one hectare in area and is located within the permit area on a site which will not be disturbed during the life of the mine. The Soil Conservation Service (SCS) has determined that the established reference area is in good condition. If this condition deteriorates to a poor classification, the applicant will implement management techniques to attain at least fair conditions. Management plans will be developed in consultation with the U. S. Forest Service (USFS) and SCS.

The reference area was sampled for total vegetation cover, cover by bare soil, cover by litter and rock, cover by species, productivity and tree and shrub density. Sample adequacy or minimum sample size was attained for all parameters (Table 9-6, page 9-22 of the MRP).

The applicant has proposed to use the riparian area 100 m upstream and downstream of the disturbance as a reference comparison area (MRP, Appendix 8). This is acceptable due to the small amount of disturbance associated with the mining operation (.03 acre) and the limited amount of surrounding riparian vegetation.

Compliance

The applicant has presented a revegetation plan in Section 9.7 of the MRP which describes procedures and planting mixtures for reclamation of temporarily disturbed areas and those pinyon-juniper-curlleaf mountain mahogany areas disturbed for the life of the mine. Seeding of grasses and forbs as well as planting of shrub seedlings will occur during the first desirable planting season after final grading, either during the spring (March 15-June 15) or fall (September 15-November 15).

The planting mixture for final revegetation of the pinyon-juniper-curlleaf mountain mahogany vegetation type consists primarily of native grasses, forbs and shrubs (Tables 3-1 and 3-2 of the MRP). Fairway crested wheatgrass (included at the request of the land managing agency; letter from Reed Christensen, Forest Supervisor, U. S. Forest Service, to the Division dated October 30, 1981) and cicer milkvetch are the only introduced species included. The seed mixtures will be spread either by hand or machine, depending on site conditions.

A variety of synthetic and organic mulches will be used, dependent on site conditions. Organic mulches will be applied at a rate ranging from 1,500 - 2,500 pounds per acre. Synthetic devices will be installed according to the manufacturer's recommendations (Section 3.5.4.3 of the MRP).

A complete revegetation plan for the riparian area which includes a suitable seed mixture, dates of planting, methods of mulching and plans for monitoring is presented in Appendix 8 of the MRP.

Final reclaimed areas will be monitored at least every two years following plant establishment until bond release. A detailed monitoring plan which includes revegetation success standards is presented in Section 3.5.5 of the MRP.

The final reclaimed area, the reference area and the riparian comparison area will be sampled for cover, woody plant density and species composition during each monitoring period. Production will be sampled and compared on the pinyon-juniper reclaimed and reference areas. Sampling techniques are discussed in Section 3.5.5 of the MRP. Since comparison of production is not necessary on areas to be developed for fish and wildlife management (UMC 817.116 [b][3][iv]), no production sampling will be implemented on the riparian area.

The Huntington #4 minesite receives approximately 15 to 20 inches of precipitation annually. This amount is sufficient for the establishment of many of the species native to the area. The introduced species, Fairway crested wheatgrass and cicer milkvetch, applied in the rates provided, are valuable to control erosion, and as wildlife forage. One plant species, Hedysarum occidentalis var. canone, under review for possible listing as threatened or endangered, may be present on the permit area according to USFWS. However, no populations have been identified (MRP, Table 9-7).

The applicant complies with this section.

Stipulations 817.111-.117-(1, 2, 3)-SC

1. Within 15 days of permit approval, the operator must revise the permanent seed mixture for the riparian area by including at least two forb species. The species must meet all the requirements of this section and UMC 817.97.

2. Within 15 days of permit approval, the operator must revise the tree seedling stocking rate for the pinyon-juniper-mountain mahogany vegetation type (Table 3-2) by replacing the pinyon and juniper seedlings with an equal number of seedlings of woody shrub species native to the area. The species must meet all the requirements of this section and UMC 817.97.

3. Before any site redisturbance occurs, the permittee must conduct a survey, under the supervision of the regulatory authority, of the areas to be redisturbed. The survey shall identify and record locations of individuals and populations of Hedysarum occidentale var. canone (canyon sweetvetch). If canyon sweetvetch is found in portions of the permit area to be redisturbed, the permittee must develop and submit a mitigation plan for regulatory authority approval and after approval implement this plan before redisturbance occurs.

UMC 817.121-.126 Subsidence Control

Existing Environment and Applicant's Proposal

As discussed on page 3-44 of the MRP, there are no man-made structures above the mine, either currently in use or of historical significance and, therefore, in need of protection from subsidence. Due to the steep topography, lack of water and poor access, the U. S. Forest Service (USFS) has classified most of the land under their jurisdiction above the mine as nonrange. The only significant ground water resource, the Star Point Sandstone, is located

stratigraphically below the coal seams being mined. Yearly surface inspections since 1979 have disclosed no surface manifestations of subsidence.

Beaver Creek Coal Company is presently following a monitoring plan established under an August 27, 1979 Cooperative Agreement with the Manti-LaSal National Forest, USFS, U. S. Department of Agriculture (see MRP, Figure 3-5). A photogrammetric monitoring program, as opposed to a subsidence monitoring survey net, was initiated at the insistence of the USFS to minimize the surface disturbance associated with subsidence monitoring. This includes an on-the-ground visual inspection which will be performed twice each year and will assess the condition of the surface above all underground mine workings and areas that may be affected by subsidence.

Compliance

The extraction technologies described in Sections 3.3.1 and 3.4.8.2 of the MRP adequately comply with UMC 817.121(a). Further, the operator has complied with certain provisions of UMC 817.121(b) by including a survey of renewable resource lands (Section 3.4.8.1 of the MRP) and discussing estimated subsidence impacts and a subsidence monitoring plan (Sections 3.4.8.2 - 3.4.8.4 of the MRP).

The Huntington #4 MRP addresses public notice of the mining schedule (UMC 817.122) and surface owner protection (UMC 817.124[b]) in Section 3.4.8.3, page 3-47.

The specific content and temporal framework for submittal of an annual subsidence report (UMC 817.121[b]) is discussed in Section 3.4.8.4, page 3.5.

The applicant is in compliance with these sections.

Stipulations

None.

UMC 817.132 Cessation of Operations: Permanent

Existing Environment and Applicant's Proposal

Permanent cessation of operations occurred on November 1, 1984, final reclamation will commence spring 1985. Mine openings will be sealed, all surface equipment, structures and facilities associated with the operation will be removed, and all affected lands reclaimed (MRP, Section 3.5.2). The schedule for permanent reclamation can be found in Section 3.5.6.1.

Compliance

The applicant complies with this section.

Stipulations

None.

UMC 817.133 Postmining Land Use

Existing Environment and Applicant's Proposal

The land on which the #4 Mine is located has long been used for coal mining. This canyon has supported three (3) underground operations in the past with the present surface facilities located in exactly the same area as one of these, the old Leamaster Mine, which operated nearly 25 years ago. Other than coal mining, this area has been used for deer hunting, sightseeing and hiking. There are no developed campgrounds within the area and none planned for the future (Section 4.4.2 of the MRP).

The USFS presently administers the lands in this area for livestock forage, wildlife habitat, watershed, dispersed recreation and coal mining. The USFS has, however, determined that the majority of the acreage on the lease tract is classified as nonrange and is not used for grazing because of slope, accessibility, rock outcrops, timber, scarcity of grazeable vegetation and lack of water. There are no range improvements within the permit area (Section 4.4.2 of the MRP).

The postmining uses of the land will be the same as the premining and present uses described above (Section 4.5 of the MRP). Mining operations have ceased, and the disturbed areas will be reclaimed and the land will once again support its principle premining uses (i.e., deer habitat, hunting, sightseeing, watershed and hiking).

Restoration of the area will be achieved by regrading the yards, reclaiming the roads and portal areas to a practical degree, planting all disturbed areas and monitoring the revegetation effort to achieve success standards, as discussed under UMC 817.111-.117 of this document.

Compliance

The applicant complies with this section.

Stipulations

None.

UMC 817.150-.157 Roads: Class I

Existing Environment and Applicant's Proposal

The coal haul road is approximately 900 feet inside the permit boundary and connects to the U. S. Forest Service (USFS) road in Mill Fork Canyon. The Mill Fork Road is controlled by the USFS and Beaver Creek Coal operates on this road under a Road Use Permit with the USFS. This lower haul road is sloped to the inside ditch (24" X 12" minimum) and is equipped with a guardrail, rather than a berm, on the outside to maintain adequate road width for haul trucks. Road drainage is passed through a culvert and directed to the sedimentation pond. (See MRP Plates 3-2a and 7-5 for the road cross-section and ditch details.)

Design of drainage controls along this road were specified by the USFS engineers in 1976 and this road has been constructed and maintained in accordance with their specifications. Details on the design, maintenance and use of this road are provided in the MRP, Appendix 6 - Road Use Permit/ Specifications on Mill Fork Road. The road is gravel surfaced and watered as necessary for dust control.

Compliance

The Division concurs that the coal haul road is a public road as outlined in "The Public Roads Criteria for Coal Haulage and Access Roads" memorandum as approved February 24, 1984 by Division Director, Dianne R. Nielson. The applicant complies with this section.

Stipulations

None.

UMC 817.160 Roads: Class II

Applicant's Proposal and Existing Environment

The mine access road was used for men and materials access to the minesite. The road is approximately 4,800 feet long. This road was built in the 1940's and upgraded in 1976-1977 to bring it to its present grade and alignment. The majority of the road lies above the massive Star Point Sandstone, and ongoing inspections of the road fill slopes have indicated no instability. There has been no evidence of creep, slippage or other failures due to instability. This road is gravel-surfaced and maintained regularly to provide safe access of men and materials to the minesite. This road has restricted access due to a gate. Plate 3-2A of the MRP outlines the typical road width and gradient.

Compliance

The applicant complies with this section.

Stipulations

None.

UMC 817.180 Other Transportation Facilities

Existing Environment and Applicant's Proposal

Transportation facilities at the Huntington #4 Mine included a covered surface conveyor (page 3-9 of the MRP). The coal was transported from the mine via the covered conveyor where it was transferred into a chute and dropped into the coal storage area. From there, it was loaded by a front-end loader into trucks and hauled 35 miles to the preparation plant at C. V. Spur. The conveyor profiles are shown on Plate 3-2b and chute profiles are shown on Plate 3-2a of the MRP.

The maintenance of the chute and conveyor, as outlined in Section 3.2.3.1 of the MRP, included keeping the covers intact, cleaning up spills and build-up beneath return idlers, drainage controls to sediment ponds and normal lubrication, cleaning and replacement of parts.

Compliance

The maintenance and reclamation procedures utilize the best available technology and were designed to control and minimize diminution or degradation of the environment, damage to fish and wildlife and to prevent additional contributions of suspended solids to stream flow or runoff outside the permit area. The applicant complies with this section.

Stipulations

None.

UMC 817.181 Support Facilities and Utility Installations

Existing Environment and Applicant's Proposal

The applicant's existing facilities are shown on Plate 3-1 of the MRP, Surface Facilities Map. The major facilities associated with this operation were: three portals; a fan; the conveyor/chute; the mine building; supply trailer; substation; water tank; culinary water treatment plant; four bathhouses; and a guard trailer. The substation supplies power to the mine operation and is fenced and maintained per MSHA regulations. The pumphouse and catch basin area are included on Plate 3-1A in the Special Use Permit area.

BOND

Beaver Creek Coal Company
Huntington #4 Mine
ACT/015/004, Emery County, Utah

February 5, 1985

Reclamation Summary

A.	Seal Portals	$ 10,500.00
B.	Remove Structures	33,738.66
C.	Soil Placement	98,224.80
D.	Seedbed Material Handling	5,642.16
E.	Reseeding & Fertilizing (not including containerized stock)	8,850.00
F.	Mulching	4,375.00
G.	Protective Fencing	18,300.00
H.	Restoration of Natural Drainage	12,247.80
I.	Sedimentation Pond Site	7,024.20
J.	Maintenance & Monitoring	11,840.00
K.	Foreman Supervising	25,080.00
	SUBTOTAL	$235,822.62
	10% Contingency	23,582.26
		$259,404.88
		(1985 dollars)

1986 - $276,992
1987 - $295,773
1988 - $315,826
1989 - $337,239
1990 - $360,104

Cost of Equipment

1. Loader - 950B (2 1/2 cy bucket) = $ 75.50/hr + $15.80 OP cost/hr = $91.30/hr x 1.1 = $100.43
   Operator = $ 28.45/hr
   $128.88/hr = $1,031/day

2. Crane - Groves RT-580
   20 T = $ 69.08/hr + $13.60 OP cost/hr = $82.68
   x 1.1 = $90.95
   Operator = $ 29.10/hr
   $120.05/hr = $960.40/day

3. Truck and Operator - $66.82 (including OP cost + 1.1 factor) + $22.45/hr = $89.27/hr = $714/day

4. Cat D-7G = $ 905.00/day + $170.40 (OP cost) = $1,075.40 x 1.1 = $1,182.94
   Operator = $ 227.60/day
   $1,410.54/day

5. Backhoe (Cat 235) = $1,440.00/day + $263.60/day (OP cost) = $1,703.60 x 1.1 = $1,873.96
   Operator = $ 227.60/day
   $2,101.56/day

6. Operator Equipment (medium) = $28.45/hr = $227.60/day
   Average Helper = $21.75/hr = $174/day
   Foreman = $31.35/hr = $250.80/day
   Crane Equipment Operator = $29.10/hr = $232.80/day

Cost of chain link from Means is $6.10/lf (page 100 - 1985 Site Work Cost Index).

Detailed Timetable for Completion of Major Reclamation Processes

The following schedule of reclamation will be initiated within 90 days (weather permitting) of final abandonment of the mining operation:

	Cumulative Time
1. Seal Portals - 1 week	1 week
2. Remove Structures - 5 weeks	6 weeks
3. Soil Placement (Backfilling & Grading)	
A. Upper Pad - 2 weeks	8 weeks
B. Upper Road - 4 weeks	12 weeks
C. Coal Storage Pad, Lower Pad & Drainfield - 1 week	13 weeks
4. Seedbed Material Handling - 1 week	14 weeks
5. Reseeding & Fertilizing - 1 week	15 weeks
6. Mulching - 2 weeks	17 weeks
7. Protective Fencing - 2 weeks	19 weeks
8. Restoration of Natural Drainage - 1 week	20 weeks

The above reclamation tasks will therefore be completed within 20 weeks following the start of reclamation activities.

Removal and reclamation of sediment ponds will occur after revegetation is established on the reclaimed lands above the ponds. Regrading of the pond areas will take approximately two days.

Reclamation Cost Estimate

A. Seal Portals

3 seals x $3,500/seal (AMR costs) =	$10,500.00	
TOTAL		$10,500.00

B. Remove Structures

Fan

Labor - 2 men x $174/day x 2 days =	$ 696.00
Equipment (hauling)-1 truck + operator x 4 hrs x $89.27/hr =	357.08
Crane - RT-580 20T Crane + operator at $120.05/hr. x 2 hrs =	240.10
SUBTOTAL	$1,293.18

Block Building & Tank

Labor - 2 men x $174/day x 3 days =	$1,044.00
Equipment (hauling) - 1 truck + operator x 8 hrs x $89.27/hr =	714.16
Loader + operator @ 4 hrs x $128.88/hr =	515.52
SUBTOTAL	$2,273.68

Chute and Conveyor

3 men x $174/day x 4 days =	$2,088.00
Equipment (hauling) - 1 truck + operator x 32 hrs x $89.27/hr =	2,856.64
1 loader + operator x 16 hrs x $128.88/hr =	2,062.08
SUBTOTAL	$7,006.72

Sub-Station

*(includes powerline removal)

Labor - 2 men x $174/day x 4 days =	$1,392.00
Hauling - 1 truck + operator x 16 hrs x $89.27/hr =	1,428.32
Loader + operator x 4 hr x $128.88 =	515.52
SUBTOTAL	$3,335.84

Bathhouses

Labor - 2 men x $174/day x 3 days =	$1,044.00
Equipment (Hauling) - 1 truck + operator x 12 hrs x $89.27/hr =	1,071.24
Loader - 4 hrs x $128.88/hr + operator =	515.52
SUB TOTAL	$2,630.76

Lower Water Tank & House

Labor - 2 men x $174/day x 2 days =	696.00
Equipment (Hauling) - 1 truck + operator x 8 hrs x $89.27/hr =	714.16
Loader - 4 hrs x $128.88/hr + operator =	515.52
SUBTOTAL	$1,925.68

Creek Water System (includes pumphouse removal)

Labor - 2 men x $174/day x 1 day =	$348.00
Equipment (Hauling) - 1 truck + operator x 4 hrs x $89.27/hr =	357.08
SUBTOTAL	$705.08

*Powerline consists of four poles and wire between upper and lower substations. Incoming lines and poles belong to Utah Power & Light Company.

B.H. Water Tank & Water System

Labor - 2 men x $174/day x 3 days =	$1,044.00
Equipment (Hauling) - 1 truck + operator x 16 hrs x $89.27/hr =	1,428.32
Loader - 4 hrs x $128.88/hr + operator =	515.52
SUBTOTAL	$2,987.84

Upper Pad Bridge

Labor - 2 men x $174/day x 1 day =	$ 348.00
Equipment (Hauling) - 1 truck + operator x 4 hrs x $89.27/hr =	$ 357.08
Loader - 4 hrs x $128.88/hr + operator =	$ 515.52
SUBTOTAL	$1,220.60

Sewer System

Labor - 2 men x $174/day x 2 days =	$ 696.00
Backhoe + operator - $2,101.56/day x 2 days =	$4,203.12
Equipment (Hauling) - 1 truck + operator x 8 hrs x $89.27/hr =	$ 714.16
SUBTOTAL	$5,613.28

Trailers (2)

Labor - 2 men x $174/day x 2 days =	$ 696.00
Equipment (Hauling) - 1 truck + operator x 16 hrs x $89.27/hr =	$1,428.32
SUBTOTAL	$2,124.32

Clean-up

Labor - 2 men x $174/day x 4 days =	$1,392.00	
Equipment (Hauling) - 1 truck + operator x 8 hrs x $89.27/hr =	714.16	
Loader - 4 hrs x $128.88/hr + operator =	515.52	
SUBTOTAL	$2,621.68	
TOTAL		$33,738.66

C. Soil Placement (Backfilling & Grading)

Upper Pad & Diversions (5.35 ac)

Backhoe + operator x $2,101.56/day x 10 days =	$21,015.60	
Cat + operator x $1,410.54/days x 10 days =	14,105.40	
SUBTOTAL	$35,121.00	

Upper Road (2.58 ac.)

Backhoe + operator x $2,101.56/day x 20 days =	$42,031.20	

Coal Storage Pad (2.47 ac)

Backhoe + operator x $2,101.56/day x 3 days =	$ 6,304.68	
Cat + operator x $1,410.54/days x 3 days =	4,231.62	
SUBTOTAL	$10,536.30	

Lower Pad (1.37 ac)

Backhoe + operator x $2,101.56/day x 2 days =	$4,203.12	
Cat + operator x $1,410.54/days x 2 days =	2,821.08	
SUBTOTAL	$7,024.20	

Drainfield Pad (.052 ac)

Backhoe + operator x $2,101.56/day x 1 day =	$2,101.56	
Cat + operator x $1,410.54/days x 1 day =	1,410.54	
SUBTOTAL	$3,512.10	
TOTAL		$98,224.80

D. Seedbed Material Handling (12.5 ac)

Cat/Ripper + operator x $1,410.54/day x 2 days =	$2,821.08	
Cat/Disk + operator x $1,410.54/day x 2 days =	2,821.08	
TOTAL		$5,642.16

E. Reseeding & Fertilizing (12.5 ac)

Hydroseeder, Operator & Driver - $700/ac x 12.5 ac = $8,850.00

Seed =	$569.75/acre
Labor =	100.00/acre
Fertilizer =	30.00/acre
	$699.75

Cuttings for Riparian habitat - (labor and cuttings) = $100.00

F. Mulching (12.5 ac)

Hydromulcher, Operator & Driver - $350/ac x 12.5 ac = $4,375.00

G. Protective Fencing (12.5 ac)

6 feet high x 3,000 linear feet x $6.10/linear foot installed = $18,300.00

H. Restoration of Natural Drainage (includes Creek Pump area)

Equipment - Backhoe + operator x $2,101.56/day x 5 days =	$10,507.80	
Labor - 2 men x $174/day x 5 days =	1,740.00	
TOTAL		$12,247.80

I. Sedimentation Pond Site (0.22 ac)

Backhoe + operator x $2,101.56/day x 2 days =	$4,203.12	
Cat + operator x $1,410.54/day x 2 days =	2,821.08	
TOTAL		$7,024.20

J. Maintenance Monitoring

$11,840/yr (including vegetative, hydrologic, and rills and gullies)	$11,840.00

K. Foreman Supervising

$1,254/week for 20 weeks	$25,080.00

1. Labor rates are from the 1984 Means Construction Cost Data.

2. Operating costs are from the Rental Rate Bluebook.

3. Seed costs are from Native Plants Incorporated.

4. Inflate at 6.8 percent annually. Used preceding three years of Means Historical Cost Index.

5.* Machine productivity:

   A. Backhoe - .75 acres/day on pads.
   B. Backhoe - 240 feet/day on roads.
   C. Cat - .75 acres/day on pads.

6. Reclamation costs and 12.4 acre reseeding area includes USFS Special Use Permit areas at the Creek Pump and Sediment Ponds.

7. Machine cycle time is not considered since cut/fill work is in same area. (No haulage required.)

	Pounds of PLS/ac (Broadcast or Hydroseed) Permanent	Cost/lb PLS	Cost
Grass and Forb Species			
Fairway crested wheatgrass (Agropyron cristatum)	1	$ 1.00	$ 1.00
Bluebunch wheatgrass (A. spicatum)	5	$ 7.50	$ 37.50
Streambank wheatgrass (A. riparium)	4		
Slender wheatgrass (A. trachycaulum)	4	$ 2.55	$ 10.20
Indian ricegrass (Oryzopsis hymenoides)	2	$ 8.15	$ 16.30
Mountain brome (Bromus marginatus)	3	$ 3.50	$ 10.50
Cicer Milkvetch (Astragalus cicer)	4	$ 4.20	$ 16.80
Palmer penstemon (Penstemon palmerii)	3	$35.00	$105.00
Silky lupine (Lupinus sericeus)	2	$70.00	$140.00
TOTAL	28		$337.30

STRATIFIED SHRUBS	Pounds of PLS/ac (Broadcast or Hydroseed) Permanent	Cost/lb PLS	Cost
Curl-leaf mountain mahogany (Cercocarpus ledifolius)	.5	$40.00	$ 20.00
Utah serviceberry (Amelanchier [utahensis] alnifolia)	.5	$62.85	$ 31.42
Rubber rabbitbrush (Chrysothamnus nauseosus var. albicaulis)	.5	$68.00	$ 34.00
Oregon grape (Mahonia repens)	.5	$78.50	$ 39.25
TOTAL	2.0		$124.67
Relatively Low-Growing Shrubs			
Rubber rabbitbrush (Chrysothamnus nauseosus var. albicaulis)	.5	$68.00	$ 34.00
Snowberry (Symphoricarpos oreophilus)	.5	$55.00	$ 27.50
Antelope bitterbrush (Purshia tridentata)	.5	$14.00	$ 7.00
Oregon grape (Mahonia repens)	.5	$78.50	$ 39.25
TOTAL	2.0		$107.75

Grasses and Forbs	$337.30
Stratified Shrubs	$124.67
Relatively Low Growing Shrubs	$107.75
TOTAL	$569.72

RIPARIAN AREA

Grasses (seed)

Agropyron trachycaulum	Kentucky Bluegrass	$2.90/lb	11 lbs PLS	= $62.76

Scientific Name	Common Name	PLS	Lbs/Acre	
Agropyron smithii	Western wheatgrass	$ 2.90/lb	3	= $ 8.70
Agropyron trachycaulum	Slender wheatgrass	$ 3.35/lb	2	= $ 6.70
Bromus carinatur	Mountain brome	$ 3.00/lb	2	= $ 6.00
Carex spp.	Sedge	$20.00/lb	2	= $40.00
Poa pratensis	Kentucky bluegrass	$ .68/lb	2	= $ 1.36
			11# PLS	$62.76

Trees and Shrubs

Mohonia repens	Creeping Oregon Grape	$78.50/lb	.25	=
Rosa woodii	Woods rose	$22.00/lb	.5	=
Rubus idaeus sachalinensis	American red raspberry	NA	.25	=
Salix rigida	Yellow (Watson) Willow	NA	.25	=

(Cuttings on three foot centers along channel and pond)

1.25# PLS

TOTAL SEED $12.25# PLS per acre

U.S. DEPARTMENT OF THE INTERIOR
OFFICE OF SURFACE MINING
RECLAMATION AND ENFORCEMENT
NOTICE OF A DECISION AND AVAILABILITY
OF BOTH A TECHNICAL ANALYSIS AND AN
ENVIRONMENTAL ASSESSMENT FOR
BEAVER CREEK COAL COMPANY
PERMANENT PROGRAM PERMIT
HUNTINGTON CANYON NO. 4 MINE
EMERY COUNTY, UTAH

The United States Department of the Interior, Office of Surface Mining Reclamation and Enforcement (OSM) and the State of Utah, Division of Oil, Gas and Mining (DOGM), has approved, with conditions, a 5-year permit for Beaver Creek Coal Company to conduct reclamation activities at its Huntington Canyon No. 4 Mine.

The Huntington Canyon No. 4 Mine underground coal mine is located in Emery County, Utah, approximately 12 miles northwest of Huntington, Utah. The mine began mining operations in 1977, and permanently ceased mining operations on November 1, 1984. The proposed permit area includes approximately 1,320 acres, of which approximately 12.5 acres have been disturbed to date. No future mining is planned at the Huntington Canyon No. 4 Mine. Mine production was 3.9 million tons of coal over 8 years.

Any person with an interest which is or may be adversely affected by this Federal permit approval action may request an adjudicatory hearing on the final decision within 30 days after publication of this notice, in accordance with Section 514(c) of the Surface Mining Control and Reclamation Act (SMCRA). Any hearing will be governed by provisions of 5 U.S.C. Section 554. A petition for review of the OSM decision should be submitted to:

Hearings Division
Office of Hearings and Appeals
U.S. Department of the Interior
4015 Wilson Boulevard
Arlington, Virginia 22203

Pursuant to 40 C.F.R. Sections 1501.4(c) and 1506.6, notice is hereby given that DOGM has completed a technical analysis (TA) for the mining and reclamation plan for the Huntington Canyon No. 4 Mine, Emery County, Utah. OSM has supplemented this TA with its own environmental assessment (EA). OSM's recommendation to approve Beaver Creek Coal Company permit application with conditions is in accordance with Sections 510 and 523 of SMCRA. OSM's analysis is that no significant environmental impacts would result from such approval. For information or clarification concerning the approval of the Huntington Canyon No. 4 Permit Application, please contact Mark Humphrey or Walter Swain at (303) 844-5656, Office of Surface Mining, Denver, Colorado.

Both the TA and the EA are available for public review at the following locations:

Office of Surface Mining Reclamation and Enforcement
Western Technical Center
1020 15th Street
Denver, Colorado 80202

Office of Surface Mining Reclamation and Enforcement
Albuquerque Field Office
219 Central Avenue, N.W.
Albuquerque, New Mexico 87102

Utah Division of Oil, Gas and Mining
355 West North Temple
3 Triad Center, Suite 350
Salt Lake City, Utah 84114-1203

AFFIDAVIT OF PUBLICATION

STATE OF UTAH }
County of Emery, } ss.

I, Dan Stockburger, on oath, say that I am the General Manager of The Emery County Progress, a weekly newspaper of general circulation, published at Castle Dale, State and County aforesaid, and that a certain notice, a true copy of which is hereto attached, was published in the full issue of such newspaper for Four (4) consecutive issues, and that the first publication was on the th day of January, 19 84 and that the last publication of such notice was in the issue of such newspaper dated the 25th day of January, 19 84

Dan Stockburger

Subscribed and sworn to before me this 25th day of January, 19 84

Holly Jo Baker
Notary Public.

My Commission expires My Commission Expires October 22, 1986 19 .....

Residing at Price, Utah

Publication fee, $ 129.60

PUBLIC NOTICE
Huntington Canyon No. 4 Mine
BEAVER CREEK COAL CO.
P.O. Box 1378
Price, Utah 84501
Determination of Completeness

The Utah Division of Oil, Gas and Mining (Division) has completed a review of the Mining and Reclamation Plan (MRP) and amendments submitted by Beaver Creek Coal Company for the Huntington Canyon #4 Mine. The Division has determined the plan to be apparently complete. In compliance with Section UMC 786.11(a) of the Utah Coal Mining Reclamation Act (UMC, Section 40-10-1 et seq.), notice is hereby given to the general public that a complete plan is available for public review for this proposed operation.

The Huntington Canyon #4 Mine is located in Mill Fork Canyon, approximately 35 road miles southwest of Price, Utah. The following are the legal descriptions of the permit area:

Township 16 South, Range 7 East, SLBM, Utah
Sec. 8: SW¼, S½ SE¼.
Sec. 9: S½ SW¼, SW¼ SE¼.
Sec. 16: All of Section.
Sec. 17: E½.

The permit area is located on the Rilda Canyon, Utah, U.S. Geological Survey 15 minute quadrangle map.

Federal Coal Leases are #U-33454 and #SL-064903.

The Division will now prepare a Technical Analysis (TA) to determine whether the proposed plan meets all the criteria of the Permanent Program Performance Standards according to the requirements of UCA, Section 40-10-1 et seq.

Upon completion of the TA for said plan, a decision will be made as to approval or disapproval of the permit application. This plan is available for public review at: Division of Oil, Gas and Mining, 4241 State Office Building, Salt Lake City, Utah 84114, and at the Emery County Courthouse, Castle Dale, Utah 84513.

Comments on the proposed MRP may be addressed to the Director of the Division: Dr. Dianne Nielson, Director, Division of Oil, Gas and Mining, 4241 State Office Building, Salt Lake City, Utah 84114. Attention: Mr. James W. Smith, Jr.

Published in the Emery County Progress January 4, 11, 18 and 25, 1984.