



0018
STATE OF UTAH
NATURAL RESOURCES
Oil, Gas & Mining

Scott M. Matheson, Governor
Temple A. Reynolds, Executive Director
Dr. G. A. (Jim) Shirazi, Division Director

4241 State Office Building • Salt Lake City, UT 84114 • 801-533-5771

January 24, 1984

Mr. Dan Guy, Manager
Permitting and Compliance
Beaver Creek Coal Company
P. O. Box AU
Price, Utah 84501

RE: Draft Technical Analysis and
Decision Document
Huntington #4 Mine
ACT/015/004, Folder No. 2
Emery County, Utah

Dear Mr. Guy:

Enclosed please find a copy of the Division's Draft Technical Analysis (TA) and Decision Document for Beaver Creek Coal Company's Huntington #4 Mine. As you will note in your review of the TA, there are several items which will require your company's submission of additional technical information, as have been outlined in the Draft Stipulations. Most of these stipulations must be dealt with before the Division can proceed into the Final Technical Analysis phase of the review process. The Division therefore requests that Beaver Creek Coal company promptly review these documents and contact the Division to set up a meeting with our technical staff to clarify any outstanding requirements within two weeks of receipt of the enclosed.

Should you have any questions regarding the Draft TA, please contact Mary Boucek or Steve Cox of my staff.

Sincerely,

James W. Smith, Jr.
Coordinator of Mined
Land Development

JWS/MB:btb

cc: Allen Klein, OSM
Lou Hamm, OSM
M. Boucek, DOGM
S. Cox, DOGM

MINE PLAN INFORMATION

Mine Name Huntington Canyon #4 Mine State ID: ACT/015/004
 Operator Beaver Creek Coal Company County Emery
 Controlled By J. Herickhoff, President
 Contact Person(s) Dan Guy/Scott Raymond Position Permits Mgr/Envir. Coordinator
 Telephone: (801) 637-5050

New/Existing Existing Mining Method U.G. - Continuous Miner

Fed. Lease No.(s) See Attached Sheets
 Legal Description(s) _____

State Lease No.(s) N/A
 Legal Descriptions(s) _____

Other Leases (identify) See Attached Sheets
 Legal Descriptions _____

Ownership Data:

<u>Surface Resources(acres)</u>	<u>Existing Permit Area</u>	<u>Proposed Permit Area</u>	<u>Total Life of Mine Area</u>
Federal	<u>600.0</u>	<u>600.0</u>	<u>600.0</u>
State (State Road Comm.)	<u>2.5</u>	<u>2.5</u>	<u>2.5</u>
Private	<u>717.5</u>	<u>717.5</u>	<u>717.5</u>
Other	<u>--</u>	<u>--</u>	<u>--</u>
TOTAL	<u>1320.0</u>	<u>1320.0</u>	<u>1320.0</u>

Coal Ownership(Acres)

Federal	<u>600.0</u>	<u>600.0</u>	<u>600.0</u>
State	<u>2.5</u>	<u>2.5</u>	<u>2.5</u>
Private	<u>717.5</u>	<u>717.5</u>	<u>717.5</u>
Other	<u>--</u>	<u>--</u>	<u>--</u>
TOTAL	<u>1320.0</u>	<u>1320.0</u>	<u>1320.0</u>

Huntington Canyon No. 4 Mine - Lease Descriptions

Federal Leases

1. Federal Coal Lease #U-33454

Township 16 South, Range 7 East, SLBM

Section 8: S $\frac{1}{2}$ SE $\frac{1}{4}$ '

Section 16: NW $\frac{1}{4}$ NE $\frac{1}{4}$, N $\frac{1}{2}$ NW $\frac{1}{4}$, SW $\frac{1}{4}$, NW $\frac{1}{4}$, SW $\frac{1}{4}$;

Section 17: NE $\frac{1}{4}$

2. Federal Coal Lease #064903

Township 16 South, Range 7 East, SLBM

Section 16: NE $\frac{1}{4}$ SW $\frac{1}{4}$, NW $\frac{1}{4}$ SE $\frac{1}{4}$, SE $\frac{1}{4}$ NW $\frac{1}{4}$, SW $\frac{1}{4}$ NE $\frac{1}{4}$.

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: SW $\frac{1}{4}$ SE $\frac{1}{4}$, SE $\frac{1}{4}$ SW $\frac{1}{4}$, SW $\frac{1}{4}$ SW $\frac{1}{4}$

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: W $\frac{1}{2}$ SE $\frac{1}{4}$

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FINDINGS DOCUMENT

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

January 24, 1984

1. The plan and the permit application will be accurate and complete and all requirements of the Surface Mining Control and Reclamation Act (the "Act"), and the approved Utah State Program will be complied with (786.19[a]) after stipulations as outlined in the Draft Technical Analysis have been adequately addressed.
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 Utah Division of Oil, Gas and Mining (DOG M) staff has determined that reclamation, as required by the Act, can be feasibly accomplished under the Mining and Reclamation Plan (MRP) (see Technical Analysis [TA], Section UMC 817.111-.117) (UMC 786.19[b]).
3. The assessment of the probable cumulative impacts of all anticipated coal mining in the general area on the hydrologic balance has been made by the regulatory authority. The mining operation proposed under the application has been designed to prevent damage to the hydrologic balance in the permit area and in the associated off-site areas (UMC 786.19[c]). (See Cumulative Hydrologic Impact Analysis (CHIA) Section, attached to this Findings Document.) (Note: the CHIA is not available at this time.)
4. The proposed permit area is:
 - A. Not included within an area designated unsuitable for underground coal mining operations.
 - B. Not within an area under study for designated lands unsuitable for underground coal mining operations.
 - 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).
 - 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).
 - E. Not within 300 feet of any occupied dwelling (UMC 786.19[d]).

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 20, 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 (see Permit Application, Section 4.3.4) (UMC 786.19[f]).
7. The applicant has shown that prior violations of applicable law and regulations have been corrected (MRP, Section 2.3.3, Table 2-3) (UMC 786.19[g]).
8. Beaver Creek Coal Company is not delinquent in payment of fees for the Abandoned Mine Reclamation Fund for its active mining operation (UMC 786.19[h]) (personal communication, John Sender, OSM, Albuquerque, January 12, 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).
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]). The Crandall Canyon Mine Mine lies immediately north of the Huntington #4 leases and the proposed Rilda Canyon Mine is situated to the south.
11. A detailed analysis of the proposed bond had been made. The bond estimate is attached to the TA. 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. The bond shall be posted (UMC 786.19[k]) with the regulatory authority prior to final permit issuance. A preliminary 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 (MRP, Section 8.4, Figure 8-1; Section 7.27) (UMC 786.19[l]).
13. The proposed postmining land-use of the permit area has been approved by the regulatory authority (see TA, Section UMC 817.133) (UMC 786.19[n]).
14. The regulatory authority has made all specific approvals required by the Act, and the approved State Program (UMC 786.19[n]).

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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 (MRP, Section 9.4, Section 10.3.3.1; see attached U. S. Fish & Wildlife Service [USFWS] letter dated September 30, 1983) (UMC 786.19[o]).
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.

Mary M Boucek

DOGM Lead Reviewer

Coordinator of Mined Land Development

File
ACT/015/004 SLC
Folder No. 2

copy to
Tom N
Steve

RECEIVED
OCT 10 1983

(ES)

September 30, 1983

DIVISION OF
GAS & MINING

JIM
OCT 04 1983

MEMORANDUM

TO: Acting Deputy Administrator
Office of Surface Mining
Denver, Colorado
ATTN: Lou Hamm

FROM: Acting Field Supervisor
Ecological Services
Salt Lake City, Utah

SUBJECT: Completeness Review of Mining and Reclamation Plan -
Huntington Canyon No. 4 Mine, Beaver Creek Coal Company,
Utah 0004

This response constitutes the results of our review of the Mining and Reclamation Plan (MRP) for the Huntington Canyon No. 4 Mine, Beaver Creek Coal Company.

The Fish and Wildlife Service (FWS) was unable to survey the golden eagle nests that occur on the tract or immediately adjacent to the tract during the 1983 field season. We cannot predict with certainty when or if we will have the funding to complete breeding surveys in the future. In consideration of the above statements, the MRP should be changed at 10.3.2.4, 10.7 and 3.4.6.3 to reflect the survey data (attachment) and that the FWS will not be responsible for completing future raptor surveys unless funding for helicopter surveys is provided.

The MRP should show how these cliffs, specifically where golden eagle nests occur, are protected from subsidence.

The MRP should be modified at 10.5.1.2. The last sentence should be modified by adding, "as long as raptor mortality continues to not occur".

The Company should commit to replacement of springs and seeps interrupted due to mining of the tract at 10.5.1.1 and 7.2.5 and indicate at 3.4.3.3 (last paragraph, last sentence) that wildlife use is a beneficial use.

TECHNICAL ANALYSIS

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

January 24, 1984

Introduction

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 approximately 12 road miles northwest of Huntington, Emery County, Utah, Township 16 South, Range 7 East. The mine began production in early 1977 on areas disturbed by mining operations in the 1940's. The mine started production in early 1977, was temporarily inactive in October 1978 and resumed full-time operation in March 1980.

An application for a mining permit was received by the regulatory authority 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 then prepared a Determination of Completeness and Technical Deficiency Document which was sent to the applicant August 1, 1983. Beaver Creek Coal Company responded to the latter on November 2, 1983 thus enabling the regulatory authority to determine the plan complete on December 20, 1983.

Existing surface facility sites and roads have resulted in 12.5 acres of disturbance. If scree/fill slopes are included in the calculation of disturbed acres, this acreage will increase to 78 acres of disturbance. Currently, Beaver Creek Coal Company intends to perform reclamation upon the 12.5 acres of disturbed lands used in the operation of the #4 Mine.

The Huntington #4 Mine is located in the Blind Canyon Seam. This is the upper seam in this area, with one lower seam (Hiawatha Seam) some 80 to 100 feet below. All mining will be done by the room and pillar method. Present production is approximately 1,500 tons per day.

The surface 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, will employ about 53 people. Currently, the mine employs approximately 30-35 persons.

Description of Existing 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, 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 characterized by snowmelt which constitutes about 65 percent of the annual discharge (Danielson 1981). The snowmelt season typically occurs from April through July.

Mill Fork Canyon lies in primarily an east-west direction with the stream running in an easterly direction into Huntington Creek. The stream is characterized as perennial in some reaches, but dry in other areas during base flow (Danielson 1981). The canyon is 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 south face is more hydrologically responsive to high intensity summer precipitation events due to the reduced vegetative cover on the dryer south side.

The ground water system in the general area of the Huntington #4 Mine is characterized by what appears to be perched conditions in the Blackhawk Formation (the 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 that this aquifer extends up into the lower sections of the Blackhawk Formation and refers to it as the Star Point - Blackhawk Aquifer (page 22, U. S. Geological Survey Open File Report 81-539).

Ground water recharge appears to be 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 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.

Reference

Hydrology of the Coal Resource Areas in the Upper Drainages of Huntington and Cottonwood Creeks, Central Utah by Terrence W. Danielson, Michael D. ReMillond and Richard H. Fuller. USGS Open File Report 81-539 - 1981.

UMC 785.19 Alluvial Valley Floors

Existing Environment and Applicant's Proposal

The applicant has not identified any Alluvial Valley Floors (AVF) that are either on or adjacent to the lease area for the Huntington #4 Mine.

Compliance

Based on the information supplied by the applicant and an on-site review by representatives of the regulatory authority, the regulatory authority has determined, pursuant to UMC 785.19(c)(3)(ii), that no AVF's exist. The rugged mountainous terrain of the mine permit site has resulted in drainages still in a youthful stage of development. The streams are confined in narrow, steep-sided, V-shaped valleys with generally steep channel gradients. Meanders and terraces normally associated with AVF development are absent. The valleys are too steep and narrow along their entire reach to support agricultural development. Thus, pursuant to UMC 785.19(c)(3)(ii), requirements of paragraph (d) and (e) of UMC 785.19 and Section 822 are waived.

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. The one existing topsoil stockpile has been adequately marked. No explosives are used incident to surface activities; underground blasting is in compliance with appropriate State and Federal regulations (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 drill holes within the permit boundary have been identified as to location, elevation at the collar, extent of casing if any and type of plug. All holes have either been cemented entirely or cased with a cement plug at the surface except for certain holes drilled during 1974-1976 for which no casing or completion information was recorded. Upon reinspection of the old drill sites in 1981, the holes that were located appeared to have been covered or naturally plugged. Table 6-2 gives the detailed information for drills holes on the Huntington #4 Mine lease.

Upon final abandonment of the Mine entries, a permanent block seal will be placed 20 to 50 feet in by the portal. The area outby the seals will be backfilled, the portal structures will be removed and all the exposed coal, including the portal areas, will be covered during reclamation of the upper pad and highwall areas.

Figure 3-6, page 3-57, shows cross-sectional views of typical portal seals to be used at the time of final abandonment.

Compliance

The applicant will comply with sections UMC 817.13 - .15 when the following stipulation is met.

Stipulation 817.13-.15-(1)-(CY)

1. The applicant has not addressed the potential for impoundment of water behind the portal seals and if, in fact, such seals should be hydrologic seals. This should be addressed in the mine plan under section 3.5.2.1

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 60 to 120. Mean annual temperature is 38° to 45° F.

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 ranges 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 lodgepole pine.

Approximately 15 acres of land has 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 analysis conducted. Based on evaluation of these results (Table 8-2 and 8-3), the soil material was found to be 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 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. After redistribution of the soil, material 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.

Compliance

The applicant is in compliance with this section.

Stipulations

None.

UMC 817.41 Hydrologic Balance: General Requirements

Existing Environment and Applicant's Proposal

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 monitoring program of effluent from the lower pond.

Undisturbed drainage is routed around the minesite by a series of ditches and culverts to prevent mixing of undisturbed and disturbed drainage.

Mine water is occasionally discharged from underground workings and is routed into the sedimentation pond system before entering Mill Fork Creek.

The applicant has established a buffer zone between Mill Fork Creek and the northern portion of the haul road. The Mining and Reclamation Plan (MRP) notes on page 3-28 that snow removal is directed to the north side of the haul road to eliminate sediment loading of Mill Fork Creek.

The applicant also commits to temporary revegetation of areas on the minesite to reduce erosion and subsequent contribution of suspended solids to runoff.

Ground Water. The applicant proposes to mine two coal seams in the lease area. The Blind Canyon Seam, the upper seam, is currently being mined. The MRP notes on page 7-5 that only perched water zones have been noted in the Blackhawk Formation. Water encountered while mining the Blind Canyon Seam will be utilized in the mine for dust suppression. Only occasional mine water discharges are anticipated by the applicant. These discharges are routed to the sedimentation ponds.

The Hiawatha Seam is the lower coal seam to be mined. The Star Point Sandstone, an important regional aquifer, is directly overlain by the Hiawatha Coal Seam. The Little Bear Spring, an important municipal water supply drawing from the Star Point Sandstone Aquifer, lies directly north of the lease area.

The applicant has entered into an agreement with the City of Huntington to replace any water from Little Bear Spring which is impacted by mining activities. Further, the applicant has depth of water observations from one drill hole into the Star Point Sandstone. The depth of water data are proposed to demonstrate that mining activities in the Hiawatha Seam will not encounter or impact the Star Point Sandstone Aquifer.

Compliance

The applicant's proposal for surface water meets the general requirements for this section with the exception of the buffer zone area established adjacent to the lower sedimentation pond, haul road and Mill Fork Creek. Water quality data above and below this site indicate a problem area exists. The section under UMC 817.57 Stream Buffer Zones addresses this concern.

The applicant's ground water proposal raises several questions. In reviewing the available literature on ground water in this area, as well as requests from two different consultants contracted by Beaver Creek Coal Company, one important question appears to be whether faults in the area act as conduits for ground water or are in fact aquitards preventing horizontal movement of ground water. The conclusion from the consultant report compiled by Hydrosiences (page 6, 1980 report) is that faults are self-sealing and thus do not act as conduits. A closer examination appears to discount this conclusion based on the stratigraphy and structural contour of the Hiawatha Seam as it conformably overlies the Star Point Sandstone. Plates 6-6 and 6-2 in the MRP provide a portrayal of the geology in the area of the Star Point Sandstone Aquifer which indicates that mining in the Hiawatha Seam may very well intercept water from the Star Point. Without drill hole data and depth of water data for the graben between drill holes HCD-2 and HC-5, the impacts of mining on the Star Point Aquifer are impossible to predict.

Stipulation 817.41-(1-2)-JW

1. See Section UMC 817.54 Water Rights Replacement, and UMC 817.52 Surface and Ground Water Monitoring, for ground water concerns.
2. See Section UMC 817.57 Stream Buffer Zones, for surface water concerns.

UMC 817.42 Hydrologic Balance: Water Quality Standards and Effluent Limitations

Existing Environment and Applicant's Proposal

The applicant proposes to meet water quality effluent standards by routing all surface drainage from the disturbed area into the series of two sedimentation ponds. Mine water discharges are also to be routed into the sedimentation ponds.

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.

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 information presented in the MRP does not adequately demonstrate that the sedimentation pond system will produce effluent which meets the water quality limitations imposed by the regulations.

The volume of mine water which will be discharged is an unknown entity and has in the past occupied a substantial volume of the pond system. In the fall of 1982, mine water discharge and sediment filled the pond system to the extent that effluent limits were exceeded when additional runoff filled the ponds to discharge levels.

The applicant has committed to undertaking additional measures to assure that effluent limits are met if monitoring data and other observations indicate the present pond configuration produced discharges that do not meet effluent requirements. These measures may include enlarging the pond size and/or use of flocculents.

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

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.

The construction of the diversion ditches was under the direction of a certified engineer. Any fill placed was in lifts of not greater than 12 inches and compaction was at least 95 percent. Outlets from the structures were riprapped in such a manner as to act as energy dissipators.

The structures have the combined capacity to adequately divert the runoff from a 10-year, 24-hour precipitation event.

The diversion structures are maintained and cleaned as needed. Any sediment removed from the structures is stored with that from the sedimentation ponds and disposed of in the same manner.

The diversion structures will be removed during final reclamation of the mine site. This will be accomplished 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.

The diversions were designed to convey the peak discharge resulting from the 10-year, 24-hour storm. Mike Thompson, an engineering geologist employed by the Utah Division of Oil, Gas and Mining, determined a peak discharge of 8.4 cfs for the watershed above the diversions. Thompson used a computer program developed by the Utah State University Foundation. The program uses the Soil Conservation Service (SCS) Triangular Unit Hydrograph method and the Farmer-Fletcher storm distribution to compute a composite hydrograph.

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 feet 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.

Energy dissipators are located at all discharge points from the diversion structures 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 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.

Conclusion: The diversion channels are adequate to divert the expected runoff from a 10-year, 24-hour precipitation event at a nonerosive velocity (less than five feet per second).

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. Road drainage flows through culverts located and designed by the U. S. Forest Service. Disturbed area drainage is directed to the sedimentation ponds by various culverts and ditches. These design characteristics and peak discharges are presented in Tables 7-20 and 7-21 on pages 7-83a and 7-83b of the permit application.

Compliance

The applicant has presented a feasible plan of 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. These calculations were cross checked by the regulatory authority and the following table shows the results.

Regulatory Authority Peak Discharges Sedimot 10-yr, 24-hr Farmer Fletcher Distribution		Peak Discharges Beaver Creek Coal Company 10-yr, 24-hr	
UD-1A	6.11	UD-1A	2.53
UD-1B	5.36	UD-1B	2.53
UD-2	4.04	UD-2	1.41
D-1	.33	D-1	.143
D-2	.19	D-2	.045
D-3	.19	D-3	.056
D-4	.30	D-4	.076
D-5	2.39	D-5	.853

Based on the model used by the regulatory authority, Beaver Creek Coal's peak discharge calculations were 23 percent to 47 percent lower than ones calculated by the regulatory authority. Using the peak flows calculated by the regulatory authority, the culverts and diversion ditches were checked to see if they could adequately pass these larger flows. No problem areas were found although diversions existing in the lower yard area have not been shown to adequately handle the design flows they were constructed to handle. Appropriate sediment control measures and design flows for these diversions must be included in the permit application. This also applies to diversions existing in the parking area below the lower yard and any other ditches or culverts not previously included in the permit application.

The applicant must demonstrate the accuracy of the 10-year, 24-hour storm precipitation value of 2.1 inches they have decided to use. The regulatory authority has determined 2.4 inches as a more appropriate value based on mine location and NOAA precipitation atlas values.

The applicant has not adequately presented calculations for the size of riprap needed to handle expected velocities. A blanket statement has been made regarding riprap locations, but this does not adequately show the expected velocities or adequate riprap size.

Stipulation 817.43-(1-3)-TM

1. The applicant must demonstrate that the diversions and culverts existing in the lower yard, and parking lots are adequately sized to handle expected velocities and flows. Cross-sections and riprap sizing calculations must also be included in these calculations.
2. The applicant will show the sizing calculations for all riprap located within the permit area when velocities exceed five fps and the location and size of any alternative energy dissipator (rock gabions, straw bales, detention basins or roughness structures) within the entire disturbed area. It is not adequate to state that they exist and not provide location and sizing requirements.
3. The applicant must demonstrate that their 10-year, 24-hour storm precipitation value is accurate based on mine location and available NOAA atlas information.

UMC 817.44 Hydrologic Balance: Stream Channel Diversions

Existing Environment and Applicant's Proposal

Beaver Creek Coal Company obtains their water supply from Mill Fork Creek. A concrete cutoff wall across the creek forces subsurface flow to the surface. The water is then diverted to a pumping cistern for distribution. This system is somewhat susceptible to flood flows from Mill Fork Canyon. The risk posed to this system by flooding is, however, very low because of the

existing good watershed conditions in Mill Fork Canyon. The only depleted watershed units are located at the head of Mill Fork Canyon and thus peak flows are attenuated before they reach the mine vicinity. This stable condition is borne out by the good to excellent channel conditions in lower Mill Fork Creek. Furthermore, the wide range of slopes, aspects and elevations also help attenuate peak discharges from rainfall and snowmelt events.

Compliance

The applicant's proposal to divert water for use in mining operations has not been adequately shown within the permit application. Design plans, sizing calculations, sediment control, detention basins, pumping systems and reclamation procedures must be included in the permit application. If the system is permanent in nature, it must be sized for the 100-year, 24-hour flood event.

Stipulation 817.44-(1-2)-TM

1. The applicant shall show that the stream channel diversion of Mill Fork Creek has been designed, constructed and adequately protected to meet the criteria of UMC 817.44. This information will include adequate cross-sections of Mill Fork Creek in the area of the diversion, sediment control protection measures and reclamation plans.
2. A statement by the applicant will demonstrate that this structure is permanent or temporary and has been adequately permitted to reflect this determination according to UMC 817.44(s)(c)(d).

UMC 817.45 Hydrologic Balance: Sediment Control Measures

Existing Environment and Applicant's Proposal

Energy dissipators are located at all discharge points from the diversion structures 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 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.

Snow removal storage areas have been identified on Plate 3-1A in the MRP. Additionally, on page 3-28 of the MRP, the applicant notes that snow removal operations are directed to the north of the haul road to eliminate sediment loading of the stream.

Compliance

The snow removal operations at the Huntington #4 Minesite and access/haul road appear to be a likely source of additional sediment contributions to Mill Fork Creek (see discussion under UMC 817.52). A review of the file shows that a Notice of Area of Concern was forwarded to Beaver Creek Coal Company on May 24, 1983 requesting that snow removal storage locations and sediment control measures for those locations be incorporated into the MRP. A review of the MRP does not disclose any sediment control measures for the designated snow storage locations.

Sediment control features must be located on a plate, such as Plate 3-1, to adequately show the location of riprap, check dams and other measures that reduce overland flow velocity, reduce runoff volume or trap sediment.

The applicant must also show how they will treat mine drainage in underground sumps, etc.

Stipulation 817.45-(1-3)-JW and TM

1. See stipulation under UMC 817.57.
2. The applicant must incorporate locations of riprap, check dams and other measures that reduce overland flow velocity, reduce runoff volume or trap sediment on the appropriate plate.
3. The applicant must show how they treat the discharge from the newly constructed underground sump to prevent additional contributions of sediment, oil and grease.

UMC 817.46 Hydrologic Balance: Sedimentation PondsExisting Environment and Applicant's Proposal

The disturbed area of the #4 Mine is contained within a large, single drainage area which collects immediately below the lower facility yard and dumps into Mill Fork Creek (Plate 7-6). In order to minimize additional sediment loading to the stream from this disturbed area, a major portion of this drainage is diverted before it reaches the disturbed area. The runoff from the disturbed area is routed into sedimentation structures located in the canyon bottom above Mill Fork Creek.

An overall drainage of the area, including locations of the proposed structures, is shown in Plate 7-6. Listed below are specifications.

The dam locations are in the existing drainage directly below the coal stockpile loading area (see Plate 7-6). This site offers the most effective sedimentation control with the least amount of environmental disturbance.

In an effort to minimize environmental destruction and still obtain adequate storage, the applicant has built two smaller ponds in a series. The upper pond functions as a holding, settling facility for disturbed area runoff. The lower pond filters, cleans and discharges underground mine water as well as any overflow from the upper pond in the event of a storm exceeding the design. Mine water passes into the upper pond and through a 12 inch culvert with inverted inlet into the lower pond. Here it is filtered through a dike of coke breeze and slag and discharged to Mill Fork Creek as per the NPDES permit.

To comply with requirements of the regulatory authority for the control of sedimentation as listed under 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.

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

The following construction specifications 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.

The structure has a capacity adequate to store the runoff and sediment load from a 10-year, 24-hour precipitation event, with an overflow capacity in excess of that for a 6-hour, 25-year event. The second or overflow pond is utilized as a holding and filtering structure for the mine water discharge. The ponds have a capacity of approximately .68 acre feet. This is a decrease of .17 acre feet from the original design. The decrease in volume is due to the use of the lower pond (.14 acre foot) and a small portion of the upper pond (.03 acre foot) for mine water cleaning. The pond volume is still adequate for a 10-year, 24-hour storm event.

The structure is regularly inspected by a licensed individual as required by law. The ponds are cleaned as necessary and any weakness or defects in the structure will be immediately corrected.

Two water monitoring stations have been established at the inlet and outlet of the ponds (see water monitoring program for details).

The sediment 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 .68 acre foot. Sediment removed is disposed of in the C. V. Spur refuse pile or other locations approved by the regulatory authority.

Compliance

The regulatory authority reviewed the sediment pond sizing calculations in the permit application. After digitizing disturbed, undisturbed drainage areas and pond surface areas, the regulatory authority found some obvious discrepancies which must be cleared up before further calculations can be cross checked. The following table is meant to point out some of these discrepancies.

	Regulatory Authority*	Beaver Creek Coal Company
Upper Pond*	.096 ac	Total ac--.119 ac
Lower Cell 1*	.055 ac	
Lower Cell 2*	+.044 ac	
TOTAL ac	.0195 ac	

*Measurements taken from Plate 7-6, scale 1" = 10'.

	Regulatory Authority*	Beaver Creek Coal Company
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Disturbed Area*	21.03 ac	15.0 ac
Undisturbed Area*	81.3 ac	78.08 ac
		Combined total from Table 7-20 of area UD-1A and UD-1B.

*Measurements taken from Plate 7-8, scale 1" = 200'.

The following acreage discrepancies were found to exist in the division of disturbed area acreages and Curve Number (CN) analysis. Beaver Creek Coal uses calculations put together by Mike Thompson, an engineering geologist previously employed by the regulatory authority. In these calculations, 15 acres was considered disturbed area with 14.08 acres declared as undisturbed (CN of 75) and .92 acre declared as undisturbed (CN of 90). The applicant has also determined the size of disturbed area on the upper pad (areas D-1 through D-5) page 7-83a, as .00997 square miles or 5.38 acres which is considerably larger than the .92 acres given in the plan. This does not include the lower pad and parking area and its associated disturbed area. These numbers (.92 acres and 6.38 acres) are considerably different and do not include the correct portion of disturbed area which flows directly into the pond. The applicant needs to correctly outline disturbed areas, determine accurate acreages, etc. These changes must be reflected in revised runoff volumes, sediment volumes, etc.

Stipulation 817.46-(1-2)-TM

1. The applicant must revise disturbed and undisturbed acreage calculations to accurately reflect these areas shown on Plates 7-6, Plate 7-8 and Plate 3-1.
2. The applicant must revise sediment pond sizing calculations to reflect these new corrected acreages and make the appropriate changes in the permit application.

UMC 817.47 Hydrologic Balance: Discharge Structures

Existing Environment and Applicant's Proposal

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.

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.

Compliance

The applicant has stated that at the sedimentation ponds, overflow and channels are lined with riprap to the point of final discharge into the ditch above the road. The explanation given by the applicant is not adequate to determine specific riprap sizes, or energy dissipator design. A cross-section should be supplied to adequately show the dimensions of the discharge structure.

Stipulation 817.47-(1)-TM

1. The applicant must supply adequate detailed information to show riprap sizes and energy dissipator design. A cross-section should also be supplied to adequately show the dimension of the discharge structure.

UMC 817.49 Hydrologic Balance: Permanent and Temporary Impoundments

Existing Environment and Applicant's Proposal

The applicant is utilizing a temporary impoundment of Mill Fork Creek to divert water for the water supply system for the mine. The two sediment ponds are covered in UMC 817.46.

Compliance

No formal proposal is contained in the MRP addressing the requirements of this section.

Stipulation 817.49-(1)-JW

1. The applicant shall submit information, plans and maps (if needed) to address the requirements of this section. This submittal shall be in a format whereby it can be incorporated into the MRP.

UMC 817.50 Hydrologic Balance: Underground Mine Entry and Access Discharges

Existing Environment and Applicant's Proposal

The applicant notes on page 7-16 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." Additionally, page 3-30 of the MRP notes that occasional discharges of mine water do occur.

DRAFT

The Hiawatha Seam (the second seam to be mined) lies approximately 100 feet below the elevation of the portals and will be accessed via rock slopes which should prevent any gravity discharges via the existing portals.

Compliance

The applicant has discharged mine water via pumping on several occasions based on observations by regulatory authority inspectors. Discharges are presently routed to the sedimentation pond. 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 out the existing portals. Upon reclamation, portal seals cannot guarantee that gravity discharges from the mine will not flow from other areas of coal outcrops.

Stipulation 817.50-(1)-JW

1. The applicant must make a definite commitment to treat all discharges which may originate from the portals after reclamation in order to meet effluent limitations or submit complete documentation to substantiate that gravity discharges from the portals will meet the water quality effluent limitations of UMC 817.42.

UMC 817.52 Hydrologic Balance: Surface and Ground Water Monitoring

Existing Environment and Applicant's Proposal

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

Figure 7-9 (page 7-86) and Figure 7-10 (page 7-90) of the mine plan shows the frequency of sampling for all proposed sites except Station 4-4-W. Page 7-91 shows the water quality parameters to be analyzed and field measurements to be taken.

The applicant's ground water monitoring proposal, in essence, involves sampling the previously noted seep and spring in Little Bear Canyon which resides 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 along with the lower portion of the Blackhawk Formation is the only significant regional aquifer in the area. Water level data from this exploration hole over an eight month period were obtained.

No in-mine ground water monitoring is presently taking place, although on page 7-23 of the MRP the applicant notes that "should enough water enter the mine that surface discharge is necessary it will be monitored for flow and quality."

Compliance

The frequency that water quality analysis will be done for Station 4-4-W needs to be specified. At present only flow measurement frequency is indicated (page 7-90).

The MRP on page 7-85 notes that Station 4-5-W has been deleted. This appears to be inappropriate in light of an analysis of Total Suspended Solids (TSS). Data from Station 4-5-W reveal a potential problem area. This station must not be deleted.

The chemical parameters listed on page 7-91 are inadequate. At a minimum, the major ions should be analyzed. This will involve adding carbonates, bicarbonates, calcium, magnesium, sodium and potassium to the list of parameters on page 7-91.

The ground water monitoring plan is highly deficient. This is especially significant in light of the important municipal water supply emanating from Little Bear Spring in Little Bear Canyon. The applicant has attempted to show that mining will have no impact on the spring based on analysis from a single drill hole and reports from two consulting firms. A closer analysis of the situation shows that mining impacts to the aquifer utilized for the municipal water supply are possible. Ground water levels in the Star Point-Blackhawk Aquifer need to be identified, especially near the fault system which runs southwest to northeast towards the Little Bear Spring.

Additionally, an in-mine monitoring program needs to be implemented in order to characterize the origin, flow volume, water quality and use of water intercepted in the mine.

Stipulation 817.52-(1-5)-JW

The applicant shall:

1. Include the frequency that water quality analysis will be performed for Station 4-4-W.
2. Include sample site 4-5-W in the regular sampling schedule showing frequency, etc., on Figure 7-10 (page 7-90).
3. Include carbonates, bicarbonates, calcium, magnesium, sodium and potassium in the list of water quality constituents to be analyzed in the sampling program.

DRAFT

4. Propose a ground water level monitoring plan for assessing the depth of water in the aquifer supplying Little Bear Spring which will indicate the impacts of mining on the northwest side of the fault system running southwest to northeast toward Little Bear Spring, or post a bond for the cost of laying a pipeline down Mill Fork Canyon to intercept the Huntington culinary water line and providing full culinary treatment to the water should mine workings intercept the water supply to Little Bear Spring.

5. Develop an underground water monitoring program designed to characterize inflows, discharges and consumption of water within the mine. Measurable inflows (one gpm or larger) which are sustained flows for over a one month duration shall be sampled on a monthly basis for water quality (field and laboratory analysis) and quantity. The applicant shall submit to the Division a quarterly report of the results of the monitoring program which shall include: a map of underground workings showing the locations of all points sampled; a symbol indicating the type of source (e.g., roof, floor, fault, sandstone, channel, etc); quantity and quality data for all points sampled; a table showing water imported, discharged and consumed in the mine. A narrative discussion of the water balance within the mine shall accompany the quarterly report.

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 on 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.

Compliance

The applicant does not indicate any drill holes will be transferred for use as a water well. The applicant complies with this section.

Stipulations

None.

UMC 817.54 Hydrologic Balance: 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 outlines the conditions under which the coal company will replace the water supply from Little Bear Spring if mining activities impact the spring. Little Bear Spring is an important municipal water supply.

DRAFT

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 the area in and around the Huntington #4 Minesite. Plate 7-7 shows the locations of the water rights listed on Table 7-8.

Compliance

The applicant's proposal raises several questions which must be addressed before a determination that compliance will be achieved can be made.

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. Projection of the fracture system north clear into Mill Fork Canyon and the Huntington #4 lease area appears to be conjectural at this time without additional data. Further, the geologic information in the Huntington #4 permit application package shows no evidence of the north-south lineament projected up from Rilda Canyon. Therefore, until further data reveals more conclusively that the north-south lineament in Rilda Canyon extends up into the Huntington #4 lease area, no mitigation measures will be recommended.

The contractual agreement between Swisher Coal Company and the City of Huntington must be shown to be binding on Beaver Creek Coal Company. Similarly, it must be documented that the water rights stock certificate for 800 shares of Huntington Cleveland Irrigation Company water issued to Hardy Coal Company has been legally assigned or transferred to Beaver Creek Coal Company.

An accounting of the filed water rights claims which potentially may be affected by mining activities and the 800 shares of Huntington Cleveland Irrigation water is needed. It is impossible to assess if the applicant's proposal to replace existing water rights with shares from the Huntington Cleveland Irrigation shares is valid unless the flows, volumes and seasons of use are delineated. From Plate 7-7, it appears that claim numbers 192, 193, 195, 196, 197, 259, 260, 1411 and 254 need to be considered in this analysis (claims 116 and 194 may also be included; these are not shown on Plate 7-7).

Claim numbers 116 and 194 are not shown on Plate 7-7. The location of the claims is needed to complete this analysis.

DRAFT

Stipulation 817.54-(1-4)-JW

The applicant shall provide:

1. Documentation of contractual assignment to Beaver Creek Coal Company of Swisher Coal Company's obligations in the agreement between Huntington City and Swisher Coal regarding water replacement.
2. Documentation of assignment or transfer of 800 shares in the Huntington Cleveland Irrigation Company from the Hardy Coal Company to Beaver Creek Coal Company.
3. A flow and total volume use accounting of filed water rights numbers 192, 193, 195, 196, 197, 259, 260, 1411, 254, 116 and 194 and the flow and volume allowed by the 800 shares of Huntington Cleveland Irrigation Company.
4. An updated version of Plate 7-7 which includes the location of water rights numbers 116 and 194.

(See also Stipulation #3 under UMC 817.52.)

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 shown on Plate 7-4 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 on 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 complies with this section.

DRAFT

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 are the primary activities which occur within this zone. The MRP notes that snow removal operations are directed to the north of the road to avoid sediment loading in the Mill Fork stream.

Compliance

The sediment contributions from the access road to 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 4-4W and 4-5-W (both on Mill Fork Creek). This concurs with on-site observations of sediment loading from snow removal operations.

The applicant notes on page 7-85 that Station 4-5-W has been deleted based on a re-evaluation of the applicant's monitoring program. This is not acceptable in light of the TSS problem described in the previous paragraph. Station 4-5-W must be retained (see Stipulations under UMC 817.52).

It is evident that the surface mining activities, primarily the haul road, being conducted within the 100 foot buffer zone are not able to comply with this section unless additional drainage controls are implemented. A catch basin with a filtering device at the outflow and an appropriately sized berm along the south edge of the haul road would be one option. The applicant will have to submit plans to address this problem.

Stipulation 817.57-(1)-JW

1. The applicant shall submit plans to be included in the MRP to address the water quality impacts being generated by surface mining activities within the 100 foot buffer zone of Mill Fork Creek. This must include sediment control measures for snow removal operations including specific sediment control measures for snow removal storage areas.

DRAFT

UMC 817.59 Coal Recovery

Existing Environment and Applicant's Proposal

The Huntington #4 mine is extracting coal from the Blind Canyon Seam and the Hiawatha seam. All mining is done with a continuous miner/shuttle car haulage. In second mining, a standard room-and-pillar method is used to maximize coal recovery. Recovery within the room-and-pillar panels is approximately 75 percent to 78 percent with an overall recovery factor (including barriers) estimated at 50 percent.

Compliance

The applicant complies with this section.

Stipulations

None.

UMC 817.61-.68 Use of Explosives

Existing Environment and Applicant's Proposal

No surface blasting is employed at this site.

Compliance

The applicant is in compliance with UMC 817.61-.68.

Stipulations

None.

UMC 817.71-.73 Disposal of Underground Development Waste and Excess Spoil and Nonacid and Nontoxic-forming Coal Processing: General Requirements

Existing Environment and Applicant's Proposal

All development waste is 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 is stored on the surface at this operation.

Compliance

The applicant complies with this section.

Stipulations

None.

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UMC 817.81-.88 Coal Processing Waste: Banks

Existing Environment and Applicant's Proposal

There are no coal processing facilities planned for use at the Huntington #4 Mine. All raw coal will be hauled from the site.

Compliance

The applicant is in compliance with UMC 817.81-.88.

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 does not propose any dams or embankments constructed of coal processing waste or to impound coal processing waste.

Compliance

The applicant complies with this section.

Stipulations

None.

DRAFT

UMC 817.95 Air Resources Protection

Existing Environment and Applicant's Proposal

Due to coal moisture content, dust suppression sprays utilized underground, covered conveyors and chutes and limited drop distances to haul trucks, fugitive emissions are minimized. Fugitive dust emissions from coal haulage 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 have 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

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 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 and great horned owls have been located on-site. 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. No active nests for these species have been found on or adjacent to the permit area.

UDRAFT

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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 aquatic 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 permit area includes 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.

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 are likely to occur because habitats in the area are marginal.

No additional surface disturbances are presently planned. Therefore, mitigation and management plans focus on minimizing impacts related to continued mining activities and facilitating rapid return of the site to suitable habitat after decommissioning.

Beaver Creek Coal Company has committed to avoiding 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.

Powerlines are designed to be raptor protected, 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.

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 will not be disturbed.

DRAFT

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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 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.

Following mining, the applicant will implement 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.

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.

Compliance

The applicant has submitted mitigation and management plans which adequately address protection of fish and wildlife for the most part. This section will comply when the following stipulations are addressed.

Stipulation UMC 817.97-(1-6)-SC

1. The applicant has committed to using the results of USFWS raptor surveys as part of their wildlife monitoring program. However, USFWS cannot assure that these surveys can be conducted without proper funding. The applicant shall change statements made in Sections 10.3.2.4, 10.7 and 3.4.6.3 to reflect this.
2. The applicant has initiated a mule deer roadkill monitoring plan for coal haul roads. A commitment shall be made to consult with the UDWR for mitigation if monitoring shows that roadkills are becoming a problem.
3. The applicant shall commit to the use of all reclamation and revegetation practices listed in Section 10.5.1 of the plan to ensure that wildlife habitat will be enhanced.
4. The applicant shall explain how cliffs on the permit area, especially those where golden eagle nests occur, will be protected from subsidence.
5. The applicant shall modify the last sentence in Section 10.5.1.2 by adding the words "as long as raptor mortality continues not to occur" in order to clarify the situation.

6. The applicant shall commit to replacement of springs and seeps interrupted due to mining of the tract at 10.5.1.1 and 7.2.5 and indicate in Section 3.4.8.3 that wildlife use is a beneficial use.

UMC 817.99 Slides and Other Damage

Existing Environment and Applicant's Proposal

The applicant has committed to immediately notify the Division at any time a slide occurs which may have a potential adverse affect on public property, health, safety and environment.

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, and available topsoil will be respread over the area to ensure the success of the revegetation.

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. The Cat (D-7 larger) will work with the backhoe, taking the retrieved material and spreading and compacting it from the highwall outward.
- 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 down to the property line.
- f. The procedure will continue down the upper road with the backhoe and cat operation in conjunction to reclaim this area down to the property line.

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- g. On the lower level, from the Coal storage area to the lower pad (including the lower road) and drainfield area the same reclamation techniques will take place.

Complete rock highwalls will be left in some areas to lessen the probability of erosion on the backfilled materials.

Compliance

The plans submitted by the applicant contain a practical solution for reclaiming the mine portal and yard areas. In reviewing the backfilling and grading plans, the regulatory authority discovered some deficiencies.

The applicant will comply with this section when more detailed information is submitted as outlined in the stipulated section.

Stipulation 817.101-(1-4)-PGL

The applicant shall supply more information about the following:

1. How the grading equipment will provide adequate compaction of the backfilled material.
2. The calculations must be provided to determine that the retained highwalls will meet a static safety factor of 1.5 (817.101[b][1]).
3. The final grading of the areas must achieve a minimum static safety of 1.3. The applicant must clarify and quantify how final grading will "minimize instability".
4. Plate 3-8 must clearly show final configuration. This is not easily seen for the backfilling and grading. The exposed coal outcrops to be left should be labelled.

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.

Compliance

The applicant complies with this section.

Stipulations

None.

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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.

Compliance

The plan does not contain a statement about mitigation of lesser rills and gullies during reclamation. The applicant will comply with this section when the following stipulation is met.

Stipulation 817.106-(1)-PGL

1. The applicant must provide a statement that rills and gullies of a lesser size than nine inches as specified by the regulatory authority must be stabilized and the area reseeded or replanted if the rills or gullies are disruptive to the approved post mining land use or may result in additional erosion and sedimentation.

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, with 60 to 70 percent occurring as snow during the months of October through May.

Eight vegetation types are delineated on the permit area (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. Only the pinyon-juniper curlleaf mountain mahogany woodland community occurs in the area of disturbance.

One reference area was selected and permanently marked. It was selected as representative of the topography, soils, aspect and species composition 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 poor, 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.

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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.

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. It is under review for possible listing in the future. Since no further disturbance is planned on the permit area, there should be no effects on this species.

The applicant has presented a revegetation plan which describes procedures and planting mixtures for reclamation of temporarily disturbed areas and those 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 consists primarily of native grasses, forbs and shrubs. Fairway crested wheatgrass and cicer milkvetch are the only introduced species included. These species, in the rates provided, are valuable to control erosion and as wildlife forage. The suitability of these species will be assessed as part of the temporary reclamation on the minesite. 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.

Final reclaimed areas will be monitored at least every two years following plant establishment until bond release.

Both the final reclaimed area and reference area will be sampled for cover, woody plant density, species composition and production during each monitoring period. Sampling methodology and sample adequacy will meet all applicable regulatory guidelines.

Feasibility of Reclamation

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 applicant has committed to using areas temporarily planted with native and introduced species to evaluate the suitability of each species for final reclamation. This section will comply when the following stipulations are addressed.

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

1. The applicant shall submit a revegetation monitoring plan which includes not only qualitative assessment, but quantitative sampling techniques to evaluate the feasibility of the proposed final revegetation plan.
2. The applicant shall submit stocking rates for shrubs to be used as part of final reclamation. Plans shall also discuss how these shrubs will be planted and grouped to ensure that "edge effect" will be created for wildlife.

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. Areas will be backfilled, graded, topsoiled and revegetated to acceptable reclamation standards.

Compliance

The applicant complies with this section.

Stipulations

None.

UMC 817.121-.126 Subsidence Control

Existing Environment and Applicant's Proposal

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 their land 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, when mining commenced, 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 Service, U. S. Department of Agriculture (see 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.

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Compliance

The plan has not addressed what mitigation measures will be taken should subsidence cause material damage to the surface above the mine workings.

Stipulation 817.121-.126-(1)-CY

1. The applicant should provide mitigation measures which will be taken on federal surface lands and on private surface lands.

UMC 817.131 Cessation of Operations: Temporary

Existing Environment and Applicant's Proposal

The applicant has not addressed this section.

Compliance

The applicant will comply with this section when a commitment is made, in writing, to adhere to the requirements of this section.

Stipulation 817.131-(1)-MB

1. The applicant shall submit to the regulatory authority a written commitment to adhere to the requirements of this section. (It is suggested that the applicant follow the same procedure and format as was utilized to satisfy this requirement for the Gordon Creek #2 MRP, Section 3.3.6.4.)

UMC 817.132 Cessation of Operations: Permanent

Existing Environment and Applicant's Proposal

Upon permanent cessation of operations, permanent reclamation will commence. 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.

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UMC 817.133 Postmining Land Use

Existing Environment and Applicant's Proposal

The land on which #4 Mine is located has long been used for coal mining. This canyon has supported three (3) underground operations in the past and the present surface facilities are 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.

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 non-range 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.

The postmining uses of the land will be the same as the premining and present uses described above. Once mining has ceased, the disturbed areas will be reclaimed and the land will once again support its principle premining uses, i.e., deer forage, hunting, sightseeing, watershed and hiking.

The 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 the satisfaction of the USFS and the regulatory authority.

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 Special Use Permit with USFS. This lower haul road is sloped to the inside ditch (24" X 12" minimum), and this road is equipped with a guardrail rather than a berm on the outside, to maintain adequate road width for haul trucks.

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Compliance

The coal haul road was designed and built pre-Act. However, the description of the road and the standards are lacking quantification. The applicant will comply with this section when the following stipulations are met.

Stipulation 817.150-.157-(1-4)-PGL

1. The applicant states that the road was built with the approval of the USFS. The road specifications should be submitted along with the approval.
2. The type of road surface shall be stated in the mine plan.
3. The maintenance of the road must be included in the permit application so that approved design standards are met throughout the life of the entire transportation facility including surface, shoulders, parking and side areas and erosion control devices. This shall include revegetating, brush removal, watering for dust control, watering for dust control and minor reconstruction of road segments as necessary.
4. The culverts and spacing should be delineated more clearly on the map to meet UMC 817.153 on the entire haul road.

UMC 817.160 Roads: Class II

The mine access road is used for men and material access to the mine site. The road is approximately 4800 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 starpoint Sandstone, and ongoing inspections of the road fill slopes have indicated no instability. There has been no evidence of creep, slipping or other failures due to instability.

Compliance

The mine access road is a pre-existing structure. This road has restricted access due to a gate. There are certain conditions of the road that need to be quantified and qualified. The applicant will comply with this section when the following stipulation is met.

Stipulation 817.160-(1)-PGL

1. The applicant shall describe how the road shall be surfaced. The maintenance of the road shall be maintained in such a manner that all of the required criteria are met throughout the life of the facility, including surface and shoulders.

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UMC 817.180 Other Transportation Facilities

Existing Environment and Applicant's Proposal

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

Compliance

The applicant described the facility but did not address the maintenance required. This section will comply when the following stipulation is met.

Stipulation 817.180-(1)-PGL

1. The applicant shall describe how the conveyor and chute will be maintained and the area restored so as to prevent, to the extent possible using the best technology available, damage to fish, wildlife and related environmental values; control and minimize diminution or degradation of water quality and quantity; control and minimize erosion and siltation; control and minimize pollution; prevent damage to public and private property; and prevent additional contributions of suspended solids to stream flow or runoff outside the permit area.

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, The Surface Facilities Map. There are no plans for additional structures or facilities. The major facilities associated with this operation are: 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.

Compliance

The applicant describes the support facilities at Huntington #4. The maintenance and use is not clearly stated so as to prevent damage to fish, wildlife and related environmental values. This section will comply when the following stipulation is met.

Stipulation 817.181-(1)-PGL

1. The applicant shall describe how the support facilities will be maintained to prevent damage to fish, wildlife and related environmental values as well as prevent additional contributions of suspended solids to stream flow or runoff outside the permit area.

UMC 805.11 Determination of Bond Amount

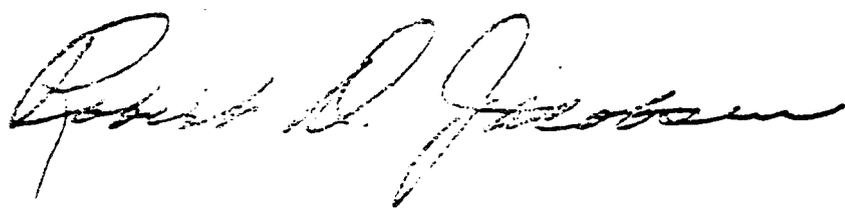
(a)(2) It is necessary that bond estimates reflect costs to the regulatory authority with respect to equipment delivery to the site, i.e., a mobilization cost. Please include this in the calculations.

The applicant must provide documentation substantiating how the number of shifts required to complete various tasks in the bond estimate were determined. Information as to how equipment productivity was determined and what haul distance was used to determine cycle time must be provided.

The applicant must provide the cost associated with riprapping the stream channel to include an estimate of the quantity of riprap required and the cost to install it.

This completes our review of the MRP for completeness. Please don't hesitate to contact us if clarification is required or changes in the MRP require additional review. When the Company has appropriately addressed these issues, we would recommend issuance of the mining permit.

Attachment



cc: DWR, Price, Utah
DWR, Salt Lake City, Utah
RO (HR), Denver, Colorado
DOGM, Salt Lake City, Utah



SOUTH WATSON
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

July 15, 1983

James W. Smith, Jr.
Coordinator
Mined Land Development
Division of Oil, Gas & Mining
4241 State Office Building
Salt Lake City, Utah 84114

*File ACT/015/004
Folder No. 2
copy to Tom U.*

Attn: Tom Munson

JUL 20 1983

RE: Apparent Completeness Review Response, Huntington #4 Mine,
ACT/015/004, Folder No. 2, Emery County, Utah

Dear Mr. Munson:

The Utah Preservation staff has received for consideration your letter of June 22, 1983, transmitting the apparent completeness review response on the Huntington #4 Mine.

After review of the material concerning cultural resources, our office would advise the Division of Oil, Gas & Mining that the material is adequate to submit to the Office of Surface Mining. No structures were identified in the project survey areas.

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

JLD:jrc:E410/6612c

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BOND

COST OF EQUIPMENT:

Backhoe (Cat 235) + Operator =	\$1560/day
Cat (D-7) + operator =	\$1025/day
Loader (950 B) + operator =	\$90.50/hr
2 1/2 cubic yard bucket	
Crane (20T Grove RT580) =	\$77.50/hr
+ operator	

Reclamation Summary

a. Seal Portals	\$ 1,500.00
b. Remove structures	15,895.00
c. Soil placement	72,560.00
d. seedbed Material Handling	4,100.00
e. Reseeding & fertilizing (not including containerized stock)	8,750.00
f. Mulching	4,375.00
g. Protective fencing	6,000.00
h. Restoration of Natural Drainage	8,800.00
i. Sedimentation Pond Site	5,170.00
j. Maintenance & Monitoring	11,840.00
k. Foreman supervising	12,000.00

SUBTOTAL

\$150,990.00
15,099.00
\$166,089.00

1984 - \$182,698.00
1985 - 200,968.00
1986 - 221,064.00
1987 - 243,171.00
1988 - 267,488.00

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:

	<u>Cumulative Time</u>
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 regrading of the pond areas will take approximately two days.

Reclamation Cost Estimate

a. Seal Portals

Labor -	
2 men X \$100/man-day X 4 days	\$ 800.00
Materials -	
200 blocks/seal x 3 seals x \$1.00/block	600.00
Mortar, sand, etc.	<u>100.00</u>
Sub-total	\$1,500.00

b. Remove Structures

<u>Fan</u>	
Labor -	
2 men x \$100/day x 2 days	\$ 400.00
Equipment (hauling)-1 truck + operator x 4 hrs. x \$65/hr.	260.00
Crane - RT-580 20T Crane + operator at 77.50/hr. x 2 hrs.	<u>155.00</u>
Sub-Total	815.00

Block Building & Tank

Labor -	\$ 600.00
2 men x \$100/day x 3 days	
Equipment (hauling) - 1 truck	
+ operator x 8 hours x \$65/hr	520.00
Loader + operator @ 4 hours x	
\$90.50/hr.	<u>362.00</u>
SUB TOTAL	\$1,482.00

Chute and Conveyor

3 men x \$100/day x 4 days	\$1,200.00
Equipment (hauling) - 1 truck	
+ operator x 32 hrs. x \$65/hr.	2,080.00
1 loader + operator X 16 hrs. x	
\$90.50/hr.	<u>1,448.00</u>
SUB TOTAL	\$4,728.00

Sub-Station

Labor -	
2 men x \$100/day x 2 days	400.00
Hauling - 1 truck + operator	
x 16 hrs. x \$65/hr.	1,040.00
Loader + operator X 4 hr. x 90.50	<u>362.00</u>
SUB TOTAL	\$1,802.00

Bath Houses

Labor -	
2 men x \$100/day x 3 days	600.00
Equipment (Hauling) - 1 truck	
+ operator x 12 hrs. x \$65/hr.	780.00
Loader - 4 hrs x \$90.50/hr.	
+ operator	<u>362.00</u>
SUB TOTAL	\$1,742.00

Lower Water Tank & House

Labor -	
2 men x \$100/day x 2 days	400.00
Equipment (Hauling) - 1 truck	
+ operator x 8 hrs. x \$65/hr.	520.00

Loader - 4 hrs x \$90.50/hr.	
+ operator	362.00
SUB TOTAL	<u>\$1,282.00</u>

Creek Water System

Labor -	
2 men x \$100/day x 1 days	200.00
Equipment (Hauling) - 1 truck	
+ operator x 4 hrs. x \$65/hr.	<u>260.00</u>
SUB TOTAL	\$ 460.00

B.H. Water Tank & Water System

Labor -	
2 men x \$100/day x 3 days	\$ 600.00
Equipment (Hauling) - 1 truck	
+ operator x 16 hrs. x \$65/hr.	1,050.00
Loader - 4 hrs x \$90.50/hr.	
+ operator	362.00
SUB TOTAL	<u>\$2,002.00</u>

Clean-up

Labor -	
2 men x \$100/day x 4 days	\$ 800.00
Equipment (Hauling) - 1 truck	
+ operator x 8 hrs. x \$65/hr.	520.00
Loader - 4 hrs x \$90.50/hr.	
+ operator	362.00
SUB TOTAL	<u>\$1,582.00</u>

TOTAL	\$15,895.00
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c. Soil Placement (Backfilling & Grading)Upper Pad & Diversions (5.35 ac.)

Backhoe + operator x \$1560/day	
x 10 days	\$15,600.00
Cat + operator x \$1025/days	
x 10 days	<u>10,250.00</u>
SUB TOTAL	<u>\$25,850.00</u>

Upper Road (2.58 ac.)

Backhoe + operator x \$1560/day x 20 days	\$31,200.00	
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Coal Storage Pad (2.47 ac.)

Backhoe + operator x \$1560/day x 3 days	\$ 4,680.00	
Cat + operator x \$1025/days x 3 days	3,075.00	
SUB TOTAL	<u>\$ 7,755.00</u>	

Lower Pad (1.37 ac.)

Backhoe + operator x \$1560/day x 2 days	\$ 3,120.00	
Cat + operator x \$1025/days x 2 days	2,050.00	
SUB TOTAL	<u>\$ 5,170.00</u>	

Drainfield Pad (.052 ac.)

Backhoe + operator x \$1560/day x 1 days	\$ 1,560.00	
Cat + operator x \$1025/days x 1 days	1,025.00	
SUB TOTAL	<u>\$ 2,585.00</u>	\$72,560.00

d. Seedbed Material Handling (12.5 ac.)

Cat/Ripper + operator x \$1025/day x 2 days	\$2,050.00	
Cat/Disk + operator x \$1025/day x 2 days	2,050.00	
SUB TOTAL	<u>\$4,100.00</u>	\$ 4,100.00

e. Reseeding & Fertilizing (12.5 ac.)

Hydroseeder, Operator & Driver - \$700/ac. x 12.5 ac.	\$8,750.00	\$ 8,750.00
Seed = \$569.75/acre		
Labor = 100.00/acre		
Fertilizer = 30.00/acre		
	<u>\$669.75</u>	

f. Mulching (12.5 ac.)

Hydromulcher, Operator & Driver - \$350/ac. X 12.5 ac.	\$ 4,375.00	
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g.	<u>Protective Fencing (12.5 ac.)</u>		
	6' high x 3000 linear feet x \$2.00/feet installed	\$ 6,000.00	\$ 6,000.00
h.	<u>Restoration of Natural Drainage</u>		
	Equipment - Backhoe + operator x \$1560/day x 5 days	\$ 7,800.00	
	Labor - 2 men x \$100/day x 5 days	1,000.00	
		<u>\$ 8,800.00</u>	
i.	<u>Sedimentation Pond Site (0.22 ac.)</u>		
	Backhoe + operator x \$1560/day x 2 days	\$ 3,120.00	
	Cat + operator x \$1025/day x 2 days	2,050.00	
		<u>\$ 5,170.00</u>	\$ 5,170.00
	SUB TOTAL		
j.	<u>Maintenance Monitoring</u>		
	\$11,840/yr (including vegetative, hydrologic, and rills and gullies)	\$11,840.00	
k.	<u>Foreman Supervising</u>		
	\$600.00/week for 20 weeks	\$12,000.00	

	Pounds of PLS/ac (Broadcast or Hydroseed)		Cost/lb PLS	Cost
	Temporary	Permanent		
<hr/>				
<u>Grass and Forb Species</u>				
Fairway crested wheatgrass (<u>Agropyron cristatum</u>)	1	1	\$ 1.00	\$ 1.00
Bluebunch wheatgrass (<u>A. spicatum</u>)	3	5	\$ 7.50	\$ 37.50
Streambank wheatgrass (<u>A. riparium</u>)	3	4		
Slender wheatgrass (<u>A. trachycaulum</u>)	3	4	\$ 2.55	\$ 10.20
Indian ricegrass (<u>Oryzopsis hymenoides</u>)	2	2	\$ 8.15	\$ 16.30
Mountain brome (<u>Bromus marginatus</u>)	1	3	\$ 3.50	\$ 10.50
Cicer Milkvetch (<u>Astragalus cicer</u>)	2	4	\$ 4.20	\$ 16.80
Palmer penstemon (<u>Penstemon palmeri</u>)	2	3	\$35.00	\$105.00
Silky lupine (<u>Lupinus sericeus</u>)	<u>2</u>	<u>2</u>	<u>\$70.00</u>	<u>\$140.00</u>
TOTAL	19	28		\$337.30

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