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

State of Utah

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

355 West North Temple
3 Triad Center, Suite 350
Salt Lake City, Utah 84180-1203
801-538-5340

August 26, 1988

Mr. Glen Zumwalt, Mine Manager
Utah Fuel Company
P. O. Box 719
Helper, Utah 84526

Dear Mr. Zumwalt:

Re: Deficiency Review, PAP Amendment, South Fork Breakout, Utah
Fuel Company, Skyline Mine, ACT/007/005-88(B), Folder #2,
Carbon County, Utah

The Division has completed review of your company's submittal received July 19, 1988. The plans were reviewed by the Division's technical staff. Please resolve the following deficiencies as outlined in the attached memos by September 20, 1988.

If you have any questions, please call Randy Harden or me.

Sincerely,

A handwritten signature in cursive script that reads "Susan C. Linner".

Susan C. Linner
Reclamation Biologist/
Permit Supervisor

cl
cc: J. Helfrich
R. Harden
T. Mc Dougall, Manti-LaSal N.F.
WPOB45/13



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355 West North Temple
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August 22, 1988

TO: File

FROM: Mike DeWeese, Reclamation Hydrologist
Rick Summers, Reclamation Hydrologist

RE: M&RP Permit Amendment, South Fork Eccles Creek Breakout,
Utah Fuel Company, Skyline Mine #1, ACT/007/005-88B,
Folder #2, Carbon County, Utah.

SYNOPSIS OF PROPOSAL

The South Fork Eccles Creek Amendment, received July 19, 1988, has been reviewed regarding hydrology related issues. This submittal lacks sufficient detailed information or fails to address areas necessary for approval by the Division.

ANALYSIS

The proposed design storm peak flows are acceptable. Areas of the submittal which are deficient or not properly addressed are as follows:

UMC 783.23 (b) (12) Operation Plan: Maps And Plans - MD

The operator proposes to sample the creek above and below the disturbed site during construction on a weekly basis. The exact location of these monitoring sites must be included on an appropriate map of the area. The Division recommends that these sites be located no further than 100 feet from the disturbed area.

UMC 784.24 (a) Transportation Facilities - MD

The plan requires construction of a new road section across the upper drainage. The plan presents adequate calculations for culvert sizing in this section but contains no designs for inlet protection or outlet structures. The application must include plans for inlet protection and designs for an adequate energy dissipator for the South Fork culvert outlet.

Additionally, due to the culvert length and impact to the existing channel, the Division requests that the following information be included in the submittal:

1. Plans to bed the culvert in washed gravel in order to minimize contributions of sediment to the stream during installation and removal.
2. A detailed reclamation plan for the channel crossing. This information should include a survey of the existing stream channel, plans to meet the requirements of UMC 817.44 subsections (b) and (d), plans demonstrating the restored channel will have a capacity at least equal to the upstream and downstream sections (i.e. channel cross-sections), plans to restore the channel with a channel slope approximating the pre-disturbance condition. The calculations presented in the submittal utilize the incorrect formula for the hydraulic radius. It appears the formula was used for a triangular channel to approximate the channel. The formula used was:

$$R = z d / 2 (z + 1)^{0.5}$$

The correct formula is:

$$R = z d^2 / 2 (z + 1)^{0.5}$$

However, the Division recommends using a trapezoidal type channel for the channel reconstruction.

The slope used in the calculations for the riprap size is not defined. Is this the existing natural channel slope or the culvert slope? The channel should be designed using the slope of the natural channel. A filter blanket should be designed and proposed for the crossing and a riprap gradation curve should be submitted.

The applicant states in the plan that 18 inch diameter temporary culverts will be installed in the existing road where it crosses two side drainages. However, the submitted calculations use a 12 inch diameter design at these areas. The applicant must correct this discrepancy and commit to one design size for these culverts.

UMC 817.11 Signs and Markers

(e) The application should commit to installation of buffer zone signs between the edge of the disturbance and the South Fork of Eccles Creek.

UMC 817.45 Hydrologic Balance: Sediment Control Measures - MD

Page 4-26a of the plan states that after road construction, straw bales and silt fences will be installed to treat runoff until adequate vegetative cover is established. The plan should include proposed locations (either on a map or in narrative) for these controls. There are no provisions in the plan for sediment control during construction of the facility (including culvert installation). The operator must submit an effective runoff treatment plan for the construction and reclamation phases of the project. These plans should include installation of straw bale dikes downstream of the culvert installation and a silt fence or straw bales between any construction disturbance and the stream channel.

UMC 817.52 Hydrologic Balance: Surface and Ground Water Monitoring

The application should include a monitoring plan (with appropriate revised location map) for the South Fork of Eccles Creek. Due to the expected mining beneath the stream and the relatively low cover in the area, the data will be necessary to monitor potential impacts to the stream. An extensive data set exists for sample site CS-1, however changes in stream yield cannot be performed using double-mass analysis techniques unless annual yield has been measured and established. Therefore, the upstream-downstream monitoring is our only option to adequately monitor the system. The data will also be useful in classifying the stream reach as losing or gaining. Baseline data should be collected for stations located upstream and downstream of any surface and underground mining activity. The quality samples should be collected as per the Division's Water Monitoring Guidelines baseline parameter list quarterly with flow and field parameters taken monthly. Flows should be measured using a meter or established flumes.

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M&RP Permit Amendment

RECOMMENDATIONS

Request the aforementioned deficiencies for continued review. The Division can not approve the submittal for the South Fork Eccles Creek Breakout until the above deficiencies are adequately addressed.

cc: B Team

WPOBTEAM47/6-9



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355 West North Temple
3 Triad Center, Suite 350
Salt Lake City, Utah 84180-1203
801-538-5340

August 24, 1988

TO: FILE

FROM: Randy Harden, Reclamation Engineer *RH*

RE: South Fork Portal Breakout, Skyline Mine, Southern Utah Fuel Company, ACT/007/005/88B, Folder #2, Carbon County, Utah

The following review comments are made with regard to Skyline's second submittal for the South Fork breakout:

UMC 817.13 - .15 Casing and Sealing of Exposed Underground Openings - JRH

The operator has not addressed the requirements of these sections. A commitment must be included in the reclamation plan for the temporary and permanent closure of the portal openings.

The operator must describe the methodology to be used in closure of the mine openings. The description is to include the method for installing bulkheads in the portals, backfilling, and highwall reduction of the face up for the portals. The reclamation plan section should also address the hydrologic balance requirements of this section, particularly treatment and discussion of drainage into or from the mine openings.

UMC 784.13 Backfilling and Grading - JRH

The operator has indicated that coal materials excavated from the portal breakout development will be removed from the site. Consequently, there may be a shortage of fill material available during reclamation. The operator shall commit to surveying the site upon completion of construction of the breakout facilities in order to determine if there is a shortage of fill material required for reclamation. Regrading of the site should call for the total elimination of the highwall caused by the portal face up.

Page 2.
ACT/007/004
August 24, 1988

Delineation of the disturbed area has not been made on the drawings. The surface disturbed area boundaries and acreage shall be shown on the drawings. This disturbed area must include those areas to be disturbed during the construction, operation and reclamation of the site including topsoil storage and borrow areas and areas which may have to be disturbed during reclamation work which may not have been disturbed during construction of the facilities.

UMC 800 Bonding - JRH

Bonding information provided by the operator is not considered to be adequate. Similarly, the general bonding and cost estimations provided for the entire mining and reclamation permit are not considered to be adequate. Since the addition of the portal breakout area is only a small percentage of the total bond amount, detailed calculations and cost estimates for bonding for South Fork will be deferred to the bonding and cost estimate information required for the entire permit as part of the permit renewal process rather than be required as part of this revision to the plan. Additionally, details for reclamation work required on the portal site will be more specific and accurate based on the facility as constructed rather than as proposed.

cc: B TEAM
WPOBTEAM:ID11/pp 38-39



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355 West North Temple
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Salt Lake City, Utah 84180-1203
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August 28, 1988

TO: File

FROM: David W. Darby, Geologist 

RE: Technical Deficiencies Review-South Fork Canyon Breakout,
Skyline Mine, ACT/007/005-88-B, Utah Fuel Company, Folder #2,
Carbon County, Utah

Synopsis

A technical review of Utah Fuel Company's South Fork amendment has been conducted for ground water and subsidence issues. The South Fork Breakout proposed for ventilation purposes was originally submitted on April 27, 1988. As with their most recent proposal of July 18, 1988, Utah Fuel Company has failed to address locations and discharge volume of springs in the area.

The amount of subsidence that will occur in the vicinity of the Breakout is a concern because of the low overburden in the area. Utah Fuel Company has presented plans to conduct subsidence surveys using the photogrametric method.

There is good potential that multiple seam and maximum extraction mining can cause caving fractures adjacent to the breakout area which may intercept ground water storage in perched aquifers of the Blackhawk Formation and interrupt baseflow to springs. Baseline information for springs and subsidence is important in determining the hydrologic effects in the vicinity of South Fork Canyon, also for gaining an insite of the effects mining will have on areas similar in design in adjacent areas of the permit.

Summary of Permit Review

The Division was not able to conduct an evaluation of the potential mining effects to ground water for the South Fork Breakout with the submission of new information detailing the proposed mining sequence. Findings show that subsidence effects for this time period will not result in transbasin diversion of ground water.

Subsidence effects will be minimized for next 5-year mine permit term except where mining is planned under the South Fork of Eccles Canyon during 1990 to 1992.

Full extraction mining (mining height of ten to thirteen feet from longwall mining) will take place where overburden ranges from 200 feet at the coal outcrop barrier to 800 feet at the watershed divide. Mining in this area is expected to subside the land surface and intercept ground water supply to springs.

A report from Randy Harden, DOGM, who visited the site indicated that springs exist on the road where Utah Fuel Company plans to place the topsoil stockpile.

Total effects to the springs have not be summarized at this time. Plate 5 shows nine springs in the vicinity of the South Fork of Eccles Creek that were monitored during the fall of 1978. For the most part the discharges from these springs appear small, however, current data should be submitted to verify a total discharge volume.

Conclusion

To ensure minimal impacts for the next 5-year permit and life of mine the operator will be required to provide the following information.

UMC 817.41 and UMC 817.52

The operator will be required to conduct a complete inventory of springs in the South Fork of Eccles Canyon where mining will take place and establish the flow (at least one year) of the tributary fed by the springs prior to conducting mining operations.

UMC 817.121 and UMC 817.124

The operator will be required to establish baseline subsidence information for the South Fork Area prior to conducting underground mining operations. This information will essentially consist of premining surface elevations obtained by either aerial photographs or transit surveys.

dwd

cc.

S. Linner
R. Harden

1299R-44



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355 West North Temple
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August 10, 1988

TO: Susan Linner, Permit Supervisor

FROM: James Leatherwood, Reclamation Soils Specialist 

RE: Second South Fork Breakout Proposal, Utah Fuel Company, Skyline Mine, ACT/007/005-88G, Folder #2, Carbon County, Utah

The proposed breakout in the South Fork of Eccles Creek, Mine #1, received July 19, 1988, has been reviewed and found not to be complete or technically adequate. The following concerns must be addressed prior to final approval.

UMC 783.27 Prime Farmland Investigation - JSL

In accordance with part (a) of this section the operation must conduct an investigation to determine if the proposed area could be prime farmland. If the proposed area does not contain prime farmland then the applicant shall request for a negative determination based on the criteria outlined in part (b) of this section.

UMC 817.23 Topsoil: Storage - JSL

The applicant must commit to revegetate the topsoil stockpile to insure topsoil protection and viability.

JSL/cl
cc: R. Harden
WPP51/4



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801-538-5340

File

July 27, 1988

TO: Sue Linner, Permit Supervisor
FROM: Lynn Kunzler, Reclamation Biologist *ly K.*
RE: Skyline Breakout, Utah Fuel Company, Skyline Mine,
ACT/007/008 - 88B, Folder #2, Carbon County, Utah
005

Summary

The Above referenced amendment received July 19, 1988 has been reviewed for the biological resources information and planning. While the amendment has addressed most of the biological requirements, plans for temporary (interim) stabilization are lacking.

Analysis

Construction has been timed to avoid conflict with special wildlife use periods and is acceptable. Plans to screen the entries to prevent wildlife access is appropriate.

Plans for final revegetation of the site and for interim stabilization of the topsoil pile and forest service road are acceptable. However, the proposed amendment does not discuss temporary (interim) stabilization of the remaining disturbed area between the construction period and final reclamation. Plans to vegetate or otherwise stabilize disturbed areas not actively needed for mining needs to be addressed.

Recommendations

The referenced amendment could be approved when this issue has been adequately addressed.

cc: R. Harden
1414R/35