



STATE OF UTAH  
NATURAL RESOURCES  
Oil, Gas & Mining

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July 29, 1987

Mr. Glen A. Zumwalt  
Vice-President/General Manager  
Utah Fuel Company  
P.O. Box 719  
Helper, Utah 84526

Dear Mr. Zumwalt:

Re: Conditional Approval of PAP Amendment, Enlargement of Portal Area Sediment Pond/Decant Modification, Utah Fuel Company, Skyline Mine, ACT/007/005-87A, Folder #3, Carbon County, Utah

On March 31, 1987, Utah Fuel Company submitted a proposal to modify (elevate) the decant structure (primary spillway) on the existing portal area sedimentation pond at the Skyline Mine in order to increase the storage capacity. Division hydrologists, Rick Summers and Kent Wheeler have evaluated the proposal and found the proposal to be approvable with conditions. Please refer to the attached technical file memo for a discussion of the review.

As an additional condition to final approval, the Division requests ten (10) copies of the approved plans, formatted, numbered and dated for direct insertion into the approved PAP application on file with the appropriate regulatory agencies. If possible, please provide these copies within 90 days of receipt of this letter, or by October 30, 1987.

Thank you for your cooperation and patience in completing the permitting activity. Please contact me, Rick Summers or Kent Wheeler should you have any questions or require additional information regarding this conditional approval.

Sincerely,

D. Wayne Hedberg  
Data Management Coordinator

jvb  
Attachment  
cc: R. Christensen L. Braxton  
R. Hagen S. Linner  
D. Parker R. Summers  
P. Rutledge K. Wheeler  
P.F.O.

8992R-24

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July 6, 1987

TO: Technical File   
FROM: Kent Wheeler, Reclamation Hydrologist  
RE: Sediment Pond Decant Modification (Dated 3-31-87), Utah Fuel Company, Skyline Mine, ACT/007/005, Folder No. 2, Carbon County, Utah

SUMMARY:

The above applicant proposes raising the height of the decant structure (primary spillway) 1.6 ft. to increase the capacity of the sedimentation pond. This increase in storage is needed to adequately control increased discharges from the mine. This report found that after modification the structure will be able to pass the 100-yr, 24-hr storm event and still provide the necessary free board (1 ft). The modification should be approved with the conditions stated below.

BODY:

This proposal was reviewed on July 6, 1987. The review consisted of constructing a Stage - Discharge Curve for the sedimentation pond. The decant structure consists of a metal culvert (riser) 4 ft (48 in ) in diameter and 11.75 ft high. It is connected to a 24 in culvert, which discharges into a 72 in culvert diverting the undisturbed drainage under the mine site.

The procedure followed the steps outlined in Barfield, Warner and Haan (1985) for constructing a Stage - Discharge Curve. The size of the culvert made necessary only the calculation of weir flow and orifice flow (see attached documents).

The height of the primary spillway was assumed to be 8579.6 ft. msl; although, the submitted calculations incorrectly showed this elevation to be 89578.75 ft. msl. Using the corrected spillway elevation the decant structure passed the 100-yr, 24-hr storm event (77 cfs) as calculated by the Division (R.S. 11-15-85) with 1.5 ft of available free board (elevation of top pond is 8582.75 ft.).

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Memo to File  
ACT/007/005  
July 8, 1987

RECOMMENDATIONS:

This modification to the decant system should be approved after the following conditions are met.

- 1) A complete and adequate Stage Discharge Curve is resubmitted to the Division within 90 days. This report should include the calculations of weir flow and pipe flow. The graphical relationship between Stage and Discharge should be submitted showing both the 10yr - 24hr and the 100yr - 24hr storm events being conveyed by the decant devise. The data showing the elevations of the decant system should be checked and corrected. Furthermore, the peak flows for the 100-yr, 24-hr storm event should be referenced.
- 2) Map 3.21-2 needs a corrected water elevation for the 100-yr, 24-hr storm after recalculating the Stage - Discharge Curve. Map 3.21-2a needs the elevation of the junction between the riser and the 24 inch culvert. Finally, Map 3.21-2b needs the elevation of the principle spillway shown on it. These corrections should be completed and returned with the resubmitted Stage - Discharge Curves required in Condition Number 1.

cc: W. Hedberg  
S. Linner  
R. Summers  
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