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 DIVISION OF OIL, GAS AND MINING

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November 22, 1993

TO: File

THRU: Daron Haddock, Permit Supervisor

FROM: Sharon Falvey, Senior Reclamation Hydrologist *SKF*

RE: N93-39-5-3#2 Abatement-Mine Site Sediment Pond November 15, 1993, Utah Fuel Company, Skyline Mine, ACT/007/005-93I, Folder #2, Carbon County, Utah

SUMMARY

In November of 1991 TDN #X-91-0-244-9 and TDL #91-02-224-6 were issued for the lack of an emergency spillway on the Mine Site Sedimentation Pond (see memo from Rick Summers, November 29, 1991). As a result of the federal enforcement actions, the operator was granted approval to place a 12 inch CMP culvert near the inflow point to discharge at the north west corner of the pond. The Division approved installation of the spillway on November 26, 1991, with the condition that as-built drawings and descriptions of the spillway be submitted to the Division. Since no drawings and design for the spillway were included in the plan, the operator was cited with violation N93-39-5-3#2. On November 24, 1993 the NOV was modified to include designs for the waste rock sedimentation pond. The abatement measures for those designs were not included in this submittal.

An amendment addressing abatement of the emergency spillway for the Mine Site Pond was received on October 4, 1993. A deficiency memo was written on October 15, 1993. This technical review addresses the second submittal, received on November 15, 1993, to respond to the deficiency memo.

The original approval was based on the primary spillway's capability to safely pass a 100-year 24-hour peak flow. It should be noted that the present submittal provided by the operator, demonstrates that the combination of primary and emergency spillways will safely pass a peak flow greater than the 25-year 6-hour event.

**Deficiency Response Analysis:
 R645-301-742**

1. *The operator must provide designs which demonstrate treatment or containment of the 10 year 24 hour event.*



Analysis:

The operator has retained the existing calculations on page 1/6 submitted in January of 1990. Based on the operators submittal, the outlet of the primary spillway will handle 69.09 cfs at the 8581.28 foot elevation without discharging through the emergency spillway. As shown on page 5/7 revised on January 29, 1990 the total peak flow for a 10 year-24 hr event is 64.36 cfs with the added 1.58 cfs of minewater inflow the operator is still able to retain the 10-year 24-hour event in the pond. This analysis assumes, the calculations and values presented are accurate.

Deficiency:

None.

2. *If the operator wants to pursue the proposed change in sediment storage volume a demonstration that the newly proposed volume is adequate will be required. The required demonstration would include a record summarizing the pond volume and dates of clean out for all years previous, as well as a design calculation showing how the sediment volume/year was determined. Consideration of snow removal storage and other sediment loading created from operations within the site should be accounted for. Note: The previous value for pond sediment capacity presented in cu. ft. was incorrectly calculated.*

Analysis:

The operator has retained the existing calculations on page 1/6 submitted in January of 1990. The error in calculation of the sediment capacity referred to in my deficiency analysis was actually from the June 1989 submittal. Assuming the disturbed area and values used by the operator is correct the 1990 submittal is not in error.

Deficiency:

None.

3. *The operator must justify the basis for the proposed mine water discharge capacity.*

Analysis:

The operator has indicated the original calculation was a typographical error and should have been 0.998 cfs. The operator is proposing to increase the mine water discharge

to 1.58 cfs. This was based on actual measurements, according to the operator. The basis for this value was not reviewed at this time. The operator should be aware that exceedence of the proposed rate of mine water inflow would be considered a violation of the approved plan.

Deficiency:

None.

4. *A discussion as to why the disturbed area to the pond has changed was not indicated. No map reference was provided for determining the watershed area contributing to the pond. With the increase in capacity required for the additional drainage area the operator decreased the design capacity of a 100 year 24 hr event to a 25 year - 6 hour event.*

Analysis:

The operator has retained the original area used to determine sediment pond and spillway capacities. This area was not verified at this time and is assumed to be correct. The pond, as it is currently used, is generally full and discharging due to the mine water inflow. Based on the operators submittal, the outlet of the primary spillway will handle 69.09 cfs at the 8581.28 foot elevation without discharging to the emergency spillway. The 12" emergency spillway is located at 8581.3 feet and will handle an additional 7.89 cfs assuming the emergency spillway flows full. The operator has shown the peak event for the 25-year 6-hour event plus the proposed minewater discharge to be 46.63 cfs (again calculations and assumptions were accepted without detailed review).

Deficiency:

None.

RECOMMENDATION

The operators presented information is adequate to abate the portion of N93-39-5-3 #2 in regard to the Mine Site Emergency Spillway requirements. However, the NOV can not be abated until the operator has addressed the requirements for the Refuse Site Pond. The operator should now be asked to provide an appropriate number of copies for insertion into existing MRPs.