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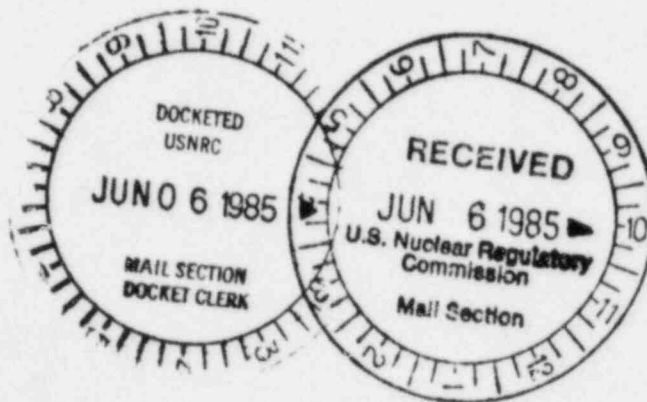
40-8084

La Sal Route
MOAB, UTAH 84532

RETURN ORIGINAL TO PDR, HQ.
Phone: (801) 259-5904

May 31, 1985

Mr. R. Dale Smith, Director
Uranium Recovery Field Office, Region IV
U. S. Nuclear Regulatory Commission
P. O. Box 25325
Denver, Colorado 80225



Docket No. 40-8084
Source Material License No. SUA-1119

Re: License Condition No. 45E

Dear Mr. Smith:

As required by License Condition No. 45E, a copy of our annual technical evaluation report for the upper and lower tailings embankments and the Bisco Lake embankment is attached for your review and approval.

We see no areas of concern with any of these three structures. If you have any questions or require further information, please call.

Yours sincerely,

R. S. Pattison
Plant Superintendent

RSP:pa

Enclosures

Cc: File

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DESIGNATED ORIGINAL

Certified By Mary C. Hook

FEE EXEMPT

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ANNUAL TECHNICAL EVALUATION

UPPER AND LOWER TAILINGS AND BISCO LAKE EMBANKMENTS

Inspection of Embankments and Foundations

The embankment, abutments, and downstream toes of both tailings dams were inspected daily. No unusual or abnormal developments were reported such as cracking, slumping or movement. In addition, no other abnormalities were reported on the daily inspections such as clogging of the overflow structure in the upper tailings embankment, detrimental slurry discharge line leaks, or wind-wave damage of the embankments.

A more thorough quarterly inspection of the tailings embankments and the Bisco Lake embankment is conducted by the maintenance department. Downstream faces of abutments, embankment slopes and toes, embankment structure contacts, and downstream valley areas are inspected and examined carefully for signs of seepage; no evidence of seepage was detected. Embankment slopes are also examined for evidence of erosion-formed gullies and wave-formed notches and benches. The lower tailings embankment and Bisco Lake embankment have remained in excellent condition--primarily because of good vegetative cover, but the downstream slope of the upper embankment has remained a problem insofar as erosion-formed gullies is concerned. The gullies are formed on the upper embankment mainly because of a protective barrier that MSHA (Mines Safety and Health Administration) inspectors forced RAMC to install on the downstream edge of the crest; the 4" diameter posts of the barrier prevent the crest from being properly graded for precipitation runoff, thus causing runoff concentrations at many points along the length of the crest. However, none of the gullies has been permitted to erode more than a foot in depth before hand (to protect vegetation) filling and compacting is undertaken, thus their effect on embankment strength-loss is trivial.

On 12 December 1984, four small "sinkholes" were observed along the strike of the toe of the lower tailings embankment where the sand blanket is exposed. Subsequent investigation revealed the problem to be caused by rodents and only surficial damage at the outcrop occurred. NRC's URFO was notified of the corrective measures taken: the rodents were poisoned, the sand blanket repaired and covered with 6" of topsoil to promote vegetation growth, and the area was seeded. Quarterly inspections were increased to weekly inspections to assure the effectiveness of remedial action.

In addition to the foregoing, bi-weekly inspections of the mine-water treatment ponds, pipelines, and structures was conducted. These systems lie upstream from our tailings impoundments and, in a flood condition, could impact areas downstream. No unusual conditions which could lead to increased downstream problems were observed.

Operation of Impoundments

On 10 August 1984 NRC granted approval to reduce the freeboard of the upper tailings embankment from 5.0 feet to 2.75 feet. This action permitted RAMC to fill the upper impoundment to final reclamation slope contours (the tailings beaches) and, at the same time, to permit the PMF runoff to pass through the outflow structure. Although additional tailings may be deposited in this impoundment again in the future, regular tailings deposits into it ceased 27 January 1985. Deposition of tailings has been to the lower impoundment since that time and the lower pond elevation gradually increased back to 6630 ft. elevation (from a low of 6627.5 ft) during the first five weeks of tailings deposition. The required 100 ft. beach to protect the upstream face of the lower embankment was completed on 18 April 1985. The lower pond elevation is expected to increase to 6655 ft. elevation by end-1985 and the 100 ft. beach will be maintained at all times.

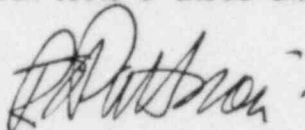
No rapid filling or drawdown of water in any of the three impoundments occurred. Bisco impoundment is the only embankment of concern here because of the low maximum ponded volumes of liquids in the tailings impoundments: 7 acre-feet for the lower and 2 acre-feet for the upper impoundments. The discharge pumps at Bisco Lake are on automatic control and maintain 6725 ± 1 ft. constant water level.

Phreatic Surfaces

Embankment seepage has remained almost constant and minimal since before 1984: piezometer readings in both the upper and lower tailings embankments indicate dry conditions, and readings taken in Bisco Lake embankment indicate an almost dry cross section (B11, B12, and B13) and relatively constant phreatic surface cross-section (B6, B9, B7, B10, and B8). Actual embankment phreatic surfaces are much lower than design levels in each embankment. Original embankment design factors of safety are high--the low phreatic surface levels will improve those factors. There is, therefore, no reason for concern regarding slope failure due to pore pressure.

Conclusion

No areas of concern exist with RAMC's three embankments.



R. S. Pattison
Plant Superintendent

RSP:pa