UNITED STATES

NUCLEAR REGULATORY COMMISSION

REGION IV

URANIUM RECOVERY FIELD OFFICE
BOX 25325
DENVER, COLORADO 80225

NOV 28 1989

URFO:DLJ
Docket No. 40-8681
SUA-1358, Amendment No. 17
04008681300R

MEMORANDUM FOR: Docket File No. 40-8681

FROM: D. L. Jacoby
Project Manager

SUBJECT: AMENDMENT NO. 17 TO SOURCE MATERIAL LICENSE SUA-1358: CHANGE ON FREEBOARD REQUIREMENTS IN THE DISPOSAL AREA

By letter dated November 16, 1989, Umetco Minerals Corporation (Umetco) requested to reduce their freeboard requirements in Cell 1-I and Cell 3. Due to the delayed approval of Cell 4A, Umetco is approaching their maximum operating levels in both of their disposal cells. They therefore requested some relief in order to continue operating.

Background

During the review and approval process for the new Cell 4A currently under construction, several discrepancies in the current operating plan were discovered. The approval of Cell 4A plans included a review of the storm routing through the entire disposal area. It originally appeared that the one existing diversion ditch was adequate; however, during the course of the 1989 routine inspection, it was discovered that the Cell 4A plans contained elevations based on a different datum than the elevations that were being used for field surveys. Therefore, the calculated freeboards were no longer adequate. Upon this realization, Umetco immediately constructed two additional diversion ditches. The approval of Cell 4A, however, has been substantially delayed due to these events.

Discussion

To provide the required relief, Umetco has requested that the freeboard requirements for Cell 1-I and Cell 3 be temporarily reduced. The justification for the temporary reduction is that the design storm, the PMF, is a summer phenomenon, and it is extremely unlikely that it will occur during the winter months.

It was therefore necessary to determine the maximum amount of rainfall that could reasonably be expected to occur during the winter. To do this, Hydrometeorological Report No. 53 (HMR-53) which has monthly PMP estimates was utilized. The information in this HMR does not extend far enough west to cover the White Mesa site, but it does provide some indication of the annual variability of PMP. When used together with HMR-49, which does provide PMP values for the site, it is possible to estimate the winter PMP. Using HMR-53, it was determined that the maximum monthly rainfall during the winter months of October-April is about 50 percent of the PMP. The 6-hour PMP for the site, from HMR-49, is about 10 inches. Therefore, 50 percent of this (5 inches) was used to estimate the freeboard required during the winter months.

Based on the reduced rainfall and previously submitted wind and wave runup calculations, the following maximum operation elevations were found to be acceptable.

Cell	Maximum Operating Level
Cell 1-I	5616.1 feet
Cell 3	5605.4 feet

Umetco was given verbal approval to use these elevations immediately during a November 17, 1989 telephone conversation between Don Sparling of Umetco and Ramon Hall.

Conclusion

Based on review of the licensee's November 16, 1989 submittal, it is recommended that Source Material License SUA-1358 be amended by adding License Condition No. 51 as follows:

51. Notwithstanding previous submittals, until March 1, 1990 or approval of Cell 4A, whichever occurs first, the following operating conditions shall be maintained in the disposal area.

    A. The maximum operating level of Cell 1-I shall be 5616.1 feet, with a crest elevation of 5618.2 feet.

    B. Cell 2 shall hold no liquids.

    C. The maximum operating level of Cell 3 shall be 5605.4 feet, with a crest elevation of 5608.0 feet.

D. J. Jacoby
Project Manager

Approved by:

Ramon E. Hall
Director

Case Closed: 04008681300R

8681/300R/DLJ/89/11/24/M

DISTRIBUTION

Docket File 40-8681
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CONCURRENCE:		DATE:
DJacoby/URFO/lv	dlj	11/28/89
RGonzales/URFO		11/28/89
EHawkins/URFO		11/28/89
REHall/URFO		11/28/89

48. The licensee shall implement a ground-water detection monitoring program to ensure compliance to 10 CFR Part 40, Appendix A. The detection monitoring program shall be in accordance with the licensee's August 1, 1989 submittal and include the following:

    A. The leak detection system for all ponds will be checked weekly If liquid is present, it shall be analyzed for chloride, sulfate, selenium and pH. The samples will be statistically analyzed to determine if significant linear trends exist and the results will be submitted to the NRC, Uranium Recovery Field Office for review.

    B. If a significant trend is indicated, the licensee will submit a proposed corrective action for review and approval to the NRC, Uranium Recovery Field Office. The corrective action shall include a discussion on delineation of the areal extent and concentration of hazardous constituents.

    C. The licensee shall submit to the NRC, Uranium Recovery Field Office, in the form of a request for license modification, a procedure for determining whether increases in the pond 2 system are from tailings seepage or from fly ash pond seepage. This shall be submitted by November 1, 1989.

    D. The licensee shall sample monitoring wells 5, 11, 12, 14 and 15 for potential hazardous constituents and submit this data to the NRC, Uranium Recovery Field Office, so that background can be established and ground-water protection standards set.

49. The licensee is authorized to receive, process, and dispose of byproduct material from Mobil's Crownpoint in-situ uranium recovery facility in accordance with letters from Landmark Reclamation dated June 9, 1987, April 25 and April 28, 1988.

50. A. The operation of the ion-exchange column at the Velvet Mine shall be in accordance with statements, representations and conditions contained in the licensee's submittal dated November 28, 1988.

    B. The licensee is authorized to transport eluate from the Velvet Mine to the White Mesa uranium mill in accordance with the submittal dated November 28, 1988, and Title 10, Code of Federal Regulations, Part 71.

51. Notwithstanding previous submittals, until March 1, 1990 or approval of Cell 4A, whichever occurs first, the following operating conditions shall be maintained in the disposal area.

    A. The maximum operating level of Cell 1-I shall be 5616.1 feet, with a crest elevation of 5618.2 feet.