



UNITED STATES

NUCLEAR REGULATORY COMMISSION

REGION IV

URANIUM RECOVERY FIELD OFFICE  
BOX 25325  
DENVER, COLORADO 80225

OCT 2 1989

URFO: SRG  
Docket No. 40-8681  
SUA-1358, Amendment No. 16  
04008681260R

MEMORANDUM FOR: Docket File No. 40-8681

FROM: Scott R. Grace  
Project Manager

SUBJECT: CHANGES TO THE DETECTION MONITORING PROGRAM AT UMETCO  
WHITE MESA MILLSITE

BACKGROUND

By letter dated August 1, 1989, UMETCO proposed to modify their detection monitoring program. Currently, UMETCO's license has a detection monitoring program with point of compliance wells some distance from the tailings impoundment. Due to the low transmissivities of the uppermost aquifer and the ponds being lined and equipped with leak detection systems, it is appropriate to modify the detection monitoring program.

DISCUSSION

As required by 10 CFR Part 40, Appendix A, Criterion 7A, a detection monitoring program has two purposes. The initial purpose is to detect leakage of hazardous constituents from the disposal area so that the need to set ground-water protection standards is monitored. The second purpose is to generate data and information needed to establish standards under Criterion 5B. UMETCO's proposed program meets both purposes.

UMETCO's tailings impoundments are lined and equipped with leak detection systems. UMETCO's detection monitoring program will include: (1) inspecting leak detection systems weekly to detect the presence of liquids. Any liquid present will be sampled, and (2) determination of significant leakage (results of increased sampling will be statistically analyzed using a linear regression test to determine if significant linear trends exist for chloride, sulfate, arsenic, selenium and pH) will trigger compliance monitoring in wells 5, 11 and 12.

When seepage is confirmed, the Appendix A requirements include (1) establishing background water quality and ground-water protection standards. Due to the low

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transmissivity and varying spatial chemical variability, UMETCO is proposing to collect data for background water quality from the current point of compliance wells locations in the near future. Since there is no current leakage, the point of compliance wells 5, 11, 12, 14 and 15 could be used to establish background. Waiting until leakage is confirmed would preclude a meaningful background due to the natural upgradient oriented decrease in chemical concentrations. Therefore, UMETCO will be proposing the potential hazardous constituents for background data collection. The data will be submitted to NRC for the purpose of establishing background. Once background is established, ground-water protection standards can be set at any time.

The leak detection sumps for pond 2 contain fluids from the seepage of the unlined fly ash pond. This pond is immediately upgradient to the northeast in the mill area. UMETCO has reasonably demonstrated that the fluids (less than 5 gallons per week) from this system are not leakage from pond 2 but leakage from the fly ash pond. In order that continued evaluations confirm the difference, UMETCO must propose a method to distinguish between fly ash pond leakage and pond 2 leakage for incorporation into their license.

#### CONCLUSION

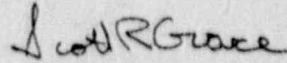
Based upon a review of the licensee's submittal and subsequent discussions with the licensee, the staff recommends that License Condition No. 48 be modified to incorporate the revised detection monitoring program.

Based upon the above discussion, it is recommended that License Condition No. 48 be modified to read as follows:

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.

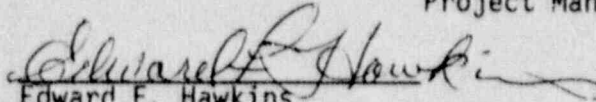
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.. The licensee shall sample monitoring wells 5, 11, 12, 14 and 15 for potential hazardous constituents and submit this data to the NRC, Uranium Recovery Field Office, so that background can be established and ground-water protection standards set.



Scott R. Grace  
Project Manager

Approved by:



Edward F. Hawkins  
Branch Chief

Case Closed: 04008681260R

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CONCURRENCE:

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