

40-8728/SLW/85/06/12/2

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JUN 20 1985

Docket File 8728  
LFMB/DCS/PDR  
DBangart, RIV  
SWastler  
WDEQ (2)  
JHaes, RCPD, WY  
URFO r/f

URFO:SLW  
Docket No. 40-8728  
SUA-1373, Amendment No. 14  
04008728400E

MEMORANDUM FOR: Docket File No. 40-8728

FROM: Sandra L. Wastler, Project Manager  
Licensing Branch 1  
Uranium Recovery Field Office, Region IV

SUBJECT: LABORATORY ANALYSIS OF POND WATER AND SLUDGE

By letter dated May 24, 1985, UNC Teton submitted the results of the laboratory analysis of water and sludge from the north and south evaporation ponds at the Leuenberger site. The NRC staff reviewed the analytical results against the radiological monitoring and worker protection plan discussed in UNC Teton's approved decommissioning plan dated April 30, 1985. As a result of the review, the NRC staff concluded that the decommissioning plan, as approved by License Amendment dated May 13, 1985, provides adequate radiological monitoring and worker protection during decommissioning of the evaporation ponds. However, the NRC discovered that UNC Teton's decommissioning plan, dated April 30, 1985, did not provide for verification soil samples of areas cleaned up during decommissioning. EPA requires the clean up of soil exceeding 5 pCi/g plus background for every 15 cm (6 inches) and exceeding 15 pCi/g plus background for every 15 cm (6 inches) thereafter. In order to verify that EPA standards have been met, the licensee must take final verification soil samples.

#### Recommendations and Conclusions

Based on the above review, I therefore recommend that Source Material License No. SUA-1373 be amended by modification of License Condition No. 37, to read as follows:

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37. The decommissioning plan submitted by UNC Teton on April 30, 1985, is approved with the following modifications:
- (a) The licensee shall remove any contaminated soils exceeding 5 pCi/g Ra-226 above background at the surface or 15 pCi/g Ra-226 above background at 15 centimeter intervals below the surface averaged over 100 square meters, regardless of whether after recontouring the original surface (i.e., pond bottom) is 15 centimeters or greater below the surface.
  - (b) The licensee shall submit for NRC review and approval, the results of pond sludge analysis and any changes to the radiation health safety program resulting from this analysis.
  - (c) The licensee shall calibrate the radiation instruments daily when in use against an appropriate radiation check source.
  - (d) The licensee shall conduct air particulate gross alpha surveys, rather than radon daughter surveys, before and during decommissioning activities within the plant and in the pond area. In the plant area, air particulate gross alpha surveys will consist of at least a 3000 liter sample every 2 weeks. If concentrations of gross alpha exceed 25 percent of  $1 \times 10^{-10}$  pCi/l (or 2.5 uCi/ml), the sampling frequency should increase to weekly. Time weighted exposure records should be kept for all workers. In the pond area, air particulate gross alpha surveys should be taken at the downwind edge of the pond every 2 weeks. Background samples should be taken upwind offsite prior to beginning decommissioning activities.
  - (e) Verification soil samples shall be collected from any area that has been cleaned up, composited per location and

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analyzed for radium-226 concentrations. In any areas where more than 15 cm (6 inches) of soil has been removed, the 15 pCi/g plus background criteria shall apply.

/s/

Sandra L. Wastler, Project Manager  
Licensing Branch 1  
Uranium Recovery Field Office, Region IV

/s/

Approved by:

Edward F. Hawkins, Chief  
Licensing Branch 1  
Uranium Recovery Field Office, Region IV

Case Closed: 04008728400E

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