



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555

MAR 1 1993

Mr. Albert R. Chernoff, Project Manager
Uranium Mill Tailings Remedial Action
Project Office
U.S. Department of Energy
Albuquerque Operations Office
P.O. Box 5400
Albuquerque, New Mexico 87115

Dear Mr. Chernoff:

We have been working with your Project Manager, Sharon Arp, and your contractor, MK-Ferguson Company, in discussions and review of data associated with DOE's further evaluation of the permeability of the base of the disposal cell for the Rifle, Colorado, site. The recent permeability test results from the subgrade testing have caused the Nuclear Regulatory Commission staff some concern regarding the potential for long-term moisture accumulation in the disposal cell. The preliminary results indicate that the more permeable units of the subgrade may exhibit a measured permeability of only about 2×10^{-7} cm/sec, rather than the 1×10^{-6} cm/sec value previously anticipated by the Department of Energy (DOE). As you are aware, the NRC staff generally is not prepared to accept soil cover permeability of less than 1×10^{-7} cm/sec without field verification through test fills. The NRC staff is concerned that there is a realistic likelihood that the cover infiltration flux could ultimately exceed the outflow flux through the bottom of the disposal cell, given the margin of error associated with both the subgrade testing and the future cover construction. This situation could adversely impact the long-term stability of the disposal cell.

The NRC staff is concerned that sufficient conservatism is not incorporated into the design to compensate for the inherent variations that can be experienced during cover construction. We would prefer to have an order of magnitude difference between the two permeabilities to be conservative. However, if the design and construction of the cover is implemented with strict quality control and confirmatory as-built testing, we would be prepared to accept an analysis that demonstrates a permeability difference of one-half an order of magnitude.

This issue, and the NRC staff's present position, should be taken into consideration in DOE's actions at the Rifle site in the immediate future. We will continue to work closely with your staff to reach a satisfactory solution to this problem that provides the level of assurance needed to protect public health and safety and the environment.

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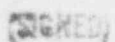
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Albert R. Chernoff

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If you have any questions regarding these comments, please feel free to contact me at FTS 8-301-504-3439 or the NRC Project Manager, Allan Mullins at FTS 8-301-504-2578.

Sincerely,  JOHN J. SURMEIER

John J. Surmeier, Chief
Uranium Recovery Branch
Division of Low-Level Waste Management
and Decommissioning
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and Safeguards

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Sincerely, ~~ALBERT R. CHERNOFF~~ JOHN J. SURMEIER

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