



UNITED STATES  
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

November 27, 1995

Mr. Richard Sena, Acting Director  
Environmental Restoration Division  
Uranium Mill Tailings Remedial  
Action Project  
U.S. Department of Energy  
2155 Louisiana NE, Suite 4000  
Albuquerque, NM 87110

SUBJECT: CONCERNS RAISED REGARDING TAILINGS DISPOSAL CELL DESIGNS FOR  
UMTRA PROJECT SITES

Dear Mr. Sena:

The October 23, 1995, issue of *The Nation* carried an article entitled, "Poison in the Ground Water: Uranium Cleanup Bombs at D.O.E.," by Tamar Stieber. In this article, Ms. Stieber writes that U.S. Department of Energy (DOE) tailings disposal cell designs for Uranium Mill Tailings Remedial Action (UMTRA) Project sites are highly susceptible to biointrusion, and that although DOE management has been aware of this problem since 1986, it has not altered its basic disposal cell design to deal with this concern. Furthermore, the article indicates that, as a result of biointrusion, the UMTRA Project cells are "guaranteed to fail every one of the ... performance objectives as set forth by DOE."

In order for the NRC staff to adequately assess the severity of this concern over biointrusion with respect to tailings disposal at UMTRA Project sites, the NRC staff requests that DOE provide the following information:

- (1) DOE's assessment of the extent of problems related to ongoing biointrusion at UMTRA Project sites;
- (2) DOE's characterization of any impacts to public health and safety resulting from biointrusion, over the short and long term;
- (3) DOE's plans for addressing biointrusion at completed tailings disposal sites, and at sites currently under construction or to be constructed; and
- (4) In light of the above assessment, DOE's basis for why the sites continue, and will continue, to meet the EPA standards.

The NRC is in receipt of your letter of October 31, 1995, to which you attached: (1) *The Nation* article, (2) DOE's letter to Ms. Katrina vanden Heuvel, editor of *The Nation*, responding to issues raised by Ms. Stieber, (3) draft questions culled from the article with accompanying DOE point-by-point discussion, and (4) additional background information. The NRC staff has reviewed DOE's responses and discussion contained in the October 31, 1995,

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letter, and requests that, in responding to this information request, DOE provide a more detailed discussion in addressing the staff's specific concerns.

In addition to these program-wide concerns, Mr. Dennis Wilson of the UMTRA Project has contacted the NRC and raised concerns related to UMTRA Project sites at Tuba City, Arizona, and Lakeview, Oregon. These site-specific concerns can be summarized as follows:

- (1) Serious flaws in the top cover design for the tailings disposal cell at the Tuba City site were contributing to rising levels of groundwater contamination at the site;
- (2) DOE UMTRA Project management had been alerted to these design flaws by various knowledgeable individuals prior to construction of the disposal cell, but had chosen to accept the design due to schedule considerations;
- (3) As a result of these design flaws, which included allowing deep-rooted vegetation to grow on the cell cover, one million gallons of contaminated fluids were draining through the disposal cell and into the groundwater aquifer underlying the Tuba City site, and that such contamination posed an imminent threat to the drinking water supplies for the Navajo and Hopi Indian Tribes;
- (4) Groundwater data collected at the Tuba City site have been falsified to conceal the rising levels of contamination beneath the site; and
- (5) At the Lakeview site, deep-rooted grasses were planted in the top cover, instead of the intended shallow-rooted grasses, and DOE management has taken no steps to remedy the situation.

To support his concerns, Mr. Wilson has provided information to the NRC, which the NRC staff is in the process of reviewing. Depending on the results of this review, additional information may be requested of DOE. In the meantime, the NRC suggests that DOE provide any documentation that has been prepared addressing Mr. Wilson's concerns.

If you have any questions concerning this subject, please contact Mr. James Park of my staff. Mr. Park can be reached at (301) 415-6699.

Sincerely,

(Original signed by)

Daniel M. Gillen, Acting Chief  
High-Level Waste and Uranium Recovery  
Projects Branch  
Division of Waste Management  
Office of Nuclear Material Safety  
and Safeguards

cc: R. Edge, DOE A1b  
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