

December 3, 2009

Ms. Jalena Dayvault
U.S. Department of Energy
Office of Legacy Management
2597 B ³/₄ Road
Grand Junction, CO 81503

SUBJECT: OCTOBER 7, 2009, CONFERENCE CALL – U.S. NUCLEAR REGULATORY
COMMISSION REVIEW OF PROPOSED REDUCTION IN COVER ROCK SIZE
FOR THE LAKEVIEW, OREGON, UMTRA PROJECT SITE

Dear Ms. Dayvault:

By letter dated August 23, 2002, the U.S. Department of Energy (DOE) submitted a request to the U.S. Nuclear Regulatory Commission (NRC) staff to modify the Long-Term Surveillance Plan (LTSP) for the Uranium Mill Tailings Remedial Action Project site at Lakeview, Oregon. In the 2002 submittal, DOE requested that the required D₅₀ rock size for riprap be decreased to 1.8 inches. By letter dated June 10, 2008, DOE submitted a request to further lower the required riprap D₅₀ size to 1.4 inches. In its review of the revised D₅₀, NRC staff identified several issues that must be resolved prior to NRC concurrence. A conference call was held on October 7, 2009, to discuss these issues. The enclosed summary of the conference call documents these issues, the discussion, and future actions. Additionally, the enclosed Technical Evaluation Report (TER) formally documents the NRC staff's review and conclusions. After DOE has reviewed the TER, the staff suggests that a conference call be scheduled to discuss DOE's approach for: 1) analysis of the rock type and class data; 2) rock testing; and 3) use of data for qualitatively estimating future rock degradation and future D₅₀ rock size.

If you have any questions regarding this letter, please contact me at (301) 415-7188, or by e-mail, at Richard.Chang@nrc.gov.

J. Dayvault

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Sincerely,

/RA/

Richard Chang, Project Manager
Special Projects Branch
Decommissioning Uranium and Recovery
Licensing Directorate
Division of Waste Management
and Environmental Protection
Office of Federal and State Materials
and Environmental Management Programs

Docket No.: WM-64

Enclosures:

1. Conference Call Summary
2. Technical Evaluation Report

J. Dayvault

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**MEETING SUMMARY
NRC/DOE PHONE CONFERENCE
LAKEVIEW, OREGON, UMTRA TITLE I PROJECT SITE**

DATE: October 7, 2009

TIME: 1:00 p.m. - 2:00 p.m.

PURPOSE: To discuss the status of U.S. Nuclear Regulatory Commission (NRC) concurrence on the revised long-term surveillance plan and the review of the revised D₅₀ rock size

ATTENDEES: U.S. NRC Headquarters: Richard Chang, Robert L. Johnson, Ted Johnson, and Douglas Mandeville

U.S. Department of Energy (DOE): Jalena Dayvault, Ann Houska, Greg Smith, and Craig Goodknight

Oregon DOE: Dale Engstrom

INTRODUCTION:

The teleconference was held to discuss NRC's review of the revised D₅₀ rock sizing for the Lakeview Title I processing site. Issues discussed typically centered around NRC's conclusions in its draft Technical Evaluation Report (TER). Action items and meeting discussion are summarized below.

DISCUSSION:

Topics discussed during the teleconference included issues on the revised D₅₀ and rate of rock degradation. A summary of the issues identified and subsequent discussion (in italic) is presented below.

1. **Request to reduce D₅₀ rock size to 1.4 inches (NRC Issue 1)** – By letter dated June 10, 2008; DOE submitted a request to lower the required riprap size to 1.4 inches.

NRC stated that DOE's request to reduce the D₅₀ rock size to 1.4 inches appears to be inadequate.

Participants discussed appropriate ways of demonstrating adequate rock sizing. NRC staff reviewed the methodology that DOE used (specifically HMR 58 and the Abt-Johnson method). However, it was discussed that DOE needs to have more conservatism in the flow rates that they calculated. Specifically, NUREG-1623 was discussed and how NUREG-1623 assumes proper rock placement. NRC staff discussed the fact that the rock layer at the site has deteriorated, and that a defined failure of the rock cover is when gullying of the rock layer has occurred. NRC staff

stated that the Abt-Johnson method is not conservative in this case, and DOE would need to use a site-specific flow concentration method. DOE brought up the idea of a transition zone, and NRC staff stated that they would consider and evaluate the appropriateness of this, once it is formally submitted. NRC staff stated that DOE should use their own flow concentration factor and justify its use at the site.

2. **Rate of rock degradation (NRC Issue 2)** - To quantify the rate of riprap degradation, DOE has been measuring median riprap diameter on an annual basis since 1997. This measurement is performed during the annual site inspection and the results are included in the annual report.

NRC staff discussed with DOE staff that the rock durability monitoring conducted in July 2008 should help in qualitatively estimating future rock degradation. NRC staff asked if the rock types and durability class data collected in July was available, and DOE agreed to provide the results to NRC. NRC staff asked if DOE had conducted the rock durability tests and petrographic analysis yet. DOE said they were waiting until NRC provides the final TER.

FUTURE ACTIONS

- DOE will forward their previous analysis of rock size and weight.
- NRC will clarify in the final TER that it has previously approved the D₅₀ field measurement methodology.
- DOE will forward the results of their Summer 2009 rock type evaluation.
- DOE will look at a transition zone.