



## Department of Energy

Washington, DC 20585

DEC 01 2009

The Honorable J. E. Mansfield  
Vice Chairman  
Defense Nuclear Facilities Safety Board  
625 Indiana Avenue, N.W., Suite 700  
Washington, DC 20004-2901

Dear Mr. Vice Chairman:

This letter formally transmits the Department of Energy (DOE) Richland Operations Office (RL) revised K-Basins Sludge Treatment Project (STP) commitment dates contained in the DOE Implementation Plan (IP) for stabilization of the nuclear materials identified in Recommendation 2000-1. DOE has recognized the need to revise the November 2009 date for completion of sludge treatment and packaging since May 2008, and has discussed this with Board members, Board staff and the Hanford Board Site Representatives on several occasions.

Revision of this completion date is due to the STP being returned to a conceptual design status, between Critical Decision-0 (CD-0) and CD-1 (as defined in DOE Order 413.3A), after the results of a technology readiness assessment in July 2007 indicated that the then proposed technologies were not sufficiently mature.

There are three primary sludge waste streams that must be addressed by this project: Engineered Container (EC) sludge stream, the Settler Tube (ST) sludge stream, and the Knock Out Pot (KOP) sludge stream, with most of the volume in the EC stream.

Subsequent to completing an analysis to evaluate different approaches for treating all the sludge, the STP project was reorganized into two phases for the EC and the ST sludge streams. The first phase involves removing the EC and ST sludge from the K West Basin to T-Plant in the Central Plateau for interim storage. The second phase involves the treatment and packaging of these streams on the Central Plateau and shipping them to the Waste Isolation Pilot Plant (WIPP in Carlsbad, NM) or the appropriate facility for final disposal.

The EC and ST sludge is scheduled to be removed from KW basin and stored in T-Plant by December 31, 2015. Currently the DOE is not in a position to propose a new end date for the EC and ST sludge material to be treated and packaged for



shipment to WIPP or other appropriate facility. The DOE is working to establish a CD-2 date which establishes performance baselines (cost and schedule) for the project, and will provide a basis for advising the Board regarding treatment and packaging completion dates. An 18-month Phase II alternatives analysis was initiated this month to identify and develop EC and ST treatment and packaging technologies. Upon completion of this effort in approximately June 2011, the DOE will be in a position to schedule a CD-2 date consistent with DOE Order 413.3A, this will establish for estimating when the EC and ST sludge material will be treated and packaged for shipment. DOE expects to complete a Technical Independent Project Review as required by Order 413.3A by December 31, 2010.

The KOP sludge will be processed in the K West basin to separate the coarse sludge (material size >600 microns) from the finer sludge material, package that fraction into multi-canister overpacks, transfer the overpacks to the onsite Canister Storage Building for interim storage, and eventually dispose of the coarse sludge with other Department high-level waste. Fine KOP material (material size <600 microns) will be captured by the existing fuel washing integrated water treatment system process, and will ultimately be processed in the same manner as the EC and ST sludge streams, discussed above. The KOP material washing, separations, and packaging for storage at the Canister Storage Building will be completed by June 30, 2012.

If you have any further questions on this matter, please contact me, at (202) 586-7709 or Mr. David A. Brockman, Manager, DOE-RL at (509) 376-7395.

Sincerely,



Inés R. Triay  
Assistant Secretary for  
Environmental Management

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