



Department of Energy
National Nuclear Security Administration
Washington, DC 20585

May 18, 2009

OFFICE OF THE ADMINISTRATOR

The Honorable A. J. Eggenberger
Chairman
Defense Nuclear Facilities Safety Board
625 Indiana Avenue, N.W., Suite 700
Washington, D.C. 20004-2901

Dear Mr. Chairman:

This is response to your letter to the Secretary of Energy, dated April 7, 2009, requesting a report describing the compensatory measures and actions taken by the National Nuclear Security Administration (NNSA) and Los Alamos National Laboratory (LANL) personnel to improve the safety posture of non-safety class containers of plutonium-238 (Pu-238) stored in the Plutonium Facility vault water baths. The enclosed report provides the requested information, and also provides the strategy for improving the robustness of containerization of Pu-238.

The NNSA had similar concerns to those discussed in your letter when NNSA reviewed the draft Plutonium Facility Documented Safety Analysis and revised Technical Safety Requirements (TSR). As a result, the NNSA safety evaluation report, issued on December 22, 2008, included direction to LANL to modify the Plutonium Facility TSR to eliminate or minimize uncovering of non-safety class containers of Pu-238 and to identify actions to be taken in the event of failure of the vault water baths.

The essential actions taken include checking vault water bath level daily and correcting the water level when necessary to ensure that it is maintained at least one inch above the tallest non-safety class Pu-238 container. An updated thermal analysis demonstrated that the temperature transient upon loss of cooling is sufficiently slow to justify a daily surveillance. During the week of April 27, 2009, LANL personnel installed a camera to facilitate remote daily inspection of the water level, which is a new TSR that was approved in December 2008 and has been implemented by standing order. By June 2010, NNSA and LANL intend to either disposition, repack, overpack, or analytically demonstrate that all the Pu-238 containers meet safety class pedigree and do not require water cooling. At that time, downgrading the Vault Water Bath Cooling System from safety class may be technically acceptable. The enclosure provides more detailed information on the Plutonium Facility vault water baths and the plan for the non-safety class Pu-238 containers.



If you have any questions, please contact Mr. James McConnell, Director, Office of Safety, at (202) 586-4379.

Sincerely,

A handwritten signature in black ink, appearing to read 'T.P. D'Agostino', with a long horizontal flourish extending to the right.

Thomas P. D'Agostino
Administrator

Enclosure

cc: Mark Whitaker, Jr., HS-1.1
D. Winchell, LASO