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**DEFENSE NUCLEAR FACILITIES
SAFETY BOARD**

Washington, DC 20004-2901



February 4, 2011

The Honorable Thomas P. D'Agostino
Administrator
National Nuclear Security Administration
U.S. Department of Energy
1000 Independence Avenue, SW
Washington, DC 20585-0701

Dear Mr. D'Agostino:

The Defense Nuclear Facilities Safety Board (Board) recently learned of the proposed change to the safety basis for Building 9720-5 at the Y-12 National Security Complex (Y-12). The proposed change would effectively establish an enduring mission for this facility to store non-Material Access Area (MAA) material (e.g., depleted uranium, natural uranium, enriched uranium). The Board seeks to understand the safety issues that were considered and the rationale used to evaluate storage options for non-MAA material during the development of this proposed new mission for Building 9720-5.

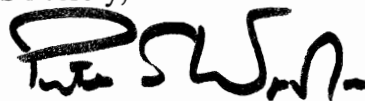
In 2005, the National Nuclear Security Administration (NNSA) informed the Board that Building 9720-5 would be excluded from the scope of the Department of Energy's (DOE) Implementation Plan for Recommendation 2004-2, *Active Confinement Systems*, on the basis that this facility was being replaced by the new Highly Enriched Uranium Materials Facility (HEUMF). In large measure, the justification for HEUMF was based on the movement of nuclear material from less safe storage conditions in Building 9720-5 into HEUMF and the subsequent closure of Building 9720-5. Additionally, in a letter to NNSA dated July 28, 2004, the Y-12 contractor stated that Building 9720-5 would be closed within 6 months of the startup of HEUMF.

The Y-12 contractor recently submitted a revision of its safety basis for Building 9720-5 to NNSA for approval, indicating that it is planning to operate this facility as a Hazard Category 2 nuclear facility for the foreseeable future. These plans include the consolidation of non-MAA material from other storage locations at Y-12 in Building 9720-5. It is unclear to the Board what alternatives were evaluated by the Y-12 contractor for storage of this material and what safety-related criteria were used to determine that Building 9720-5 is the preferred option. It is also unclear how NNSA will evaluate the safety impact of alternatives for the non-MAA storage mission.

Based on the above observations, and pursuant to 42 U.S.C. § 2286b(d), the Board requests that NNSA provide a report and subsequent briefing within 90 days of receipt of this letter addressing the following topics:

- The rationale and safety considerations that led to the Y-12 contractor's decision to propose the change in approach to consolidate non-MAA materials in Building 9720-5, and how this preferred storage option was identified. This should include a list of facilities that were considered for non-MAA storage and assessments that were performed to evaluate their storage capacity, condition, risk, and ability to comply with non-MAA storage requirements.
- The type and amount of material to be stored in Building 9720-5, as well as a description of the need for this material.
- The current storage locations of the nuclear materials the Y-12 contractor is planning to consolidate in Building 9720-5 and any assessments performed to understand the risk associated with continued storage in these facilities.
- The specific disposition paths for excess non-MAA materials to support a reduction of material-at-risk. Of note, during the past decade, NNSA has dispositioned more than 115 metric tons of excess enriched uranium. The Board believes that it is important for NNSA to continue and expedite this effort in order to further improve the safety posture of Y-12.
- Any alternatives NNSA is considering for the long-term non-MAA material storage mission and the safety-related criteria that will be used to assess these alternatives; include any plans being considered for a line-item project to design and construct a replacement facility for Building 9720-5, and the schedule for executing these plans.
- The result of the evaluation of the Building 9720-5 mission consistent with DOE's Implementation Plan for Recommendation 2004-2 and/or the schedule for this evaluation.

Sincerely,



Peter S. Winokur, Ph.D.
Chairman

c: Mr. Theodore D. Sherry
Mrs. Mari-Jo Campagnone