

September 6, 2001

General John A. Gordon  
Administrator of the National  
Nuclear Security Administration  
Department of Energy  
1000 Independence Avenue, SW  
Washington, DC 20585-0701

Dear General Gordon:

The Defense Nuclear Facilities Safety Board (Board) and its staff have been following preparations for the Phase I Uranium-233 (U-233) Inspection and Repackaging Program at the Oak Ridge National Laboratory (ORNL). This program represents an important step toward addressing the issues identified in the Board's Recommendation 97-1, *Uranium-233 Storage Safety at Department of Energy Facilities*.

On August 14, 2001, the Board was briefed by representatives from the Department of Energy's Oak Ridge Operations Office (DOE-ORO) and DOE-Headquarters on findings from the recent Operational Readiness Review (ORR) for this activity. Based on this briefing and on observations made by the Board's staff, it appears that the Building 3019A operators and ORNL's technical support staff have made significant progress in conduct of operations. The Board believes this progress will support safe and reliable Phase I inspection operations once the ORR findings, particularly those associated with the safety basis, have been resolved.

The Board and its staff have reviewed the facility safety basis for the proposed operations and held discussions with DOE-ORO and its contractors. Based on these reviews and discussions, the Board believes formalized control of the confinement system is warranted to ensure that it will reliably prevent the release of radioactive materials during Phase I inspection operations. The primary confinement boundary for the proposed operations is the 3019A Vessel Off Gas (VOG) system and Stack 3039. Although these systems are not controlled as safety systems, the DOE ORR Team concluded that "system operability, configuration control, testing surveillance, preventative maintenance, monitoring and CM [configuration management] all appear to be more than would be required for a credited safety significant system."

It is important that the performance of this confinement system be maintained so it will function as required in the event of an accidental release in Building 3019A. It is also important to proceed with the Phase I inspections. The Board therefore believes Phase I inspections could be initiated safely using

near-term compensatory measures (e.g., periodic verification of the operating condition of Stack 3039 by 3019A personnel) imposed through DOE-ORO's 3019A Authorization Agreement until long-term corrective actions (e.g., installation of local HEPA filters at Building 3019A) can be completed. Long-term corrective actions are important, particularly in light of the fact that the Phase I inspection program will serve as the prelude for higher-hazard activities involving the stored U-233 materials, including a second phase of inspection and repackaging, as well as proposed work to support processing of the materials for medical applications.

The Board also believes that, given the nature of the ORR findings related to the safety basis, DOE would be well served to evaluate the DOE-ORO process for safety basis review. Establishment of a sound process for safety basis review is essential to ensuring acceptably safe operations.

Sincerely,

John T. Conway  
Chairman

c: The Honorable Jessie Hill Roberson  
Ms. Gertrude Leah Dever  
Mr. James F. Decker  
Mr. Mark B. Whitaker, Jr.