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Department of Energy
National Nuclear Security Administration
Washington, DC 20585
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DNF SAFETY BOARD

The Honorable John T. Conway
Chairman
Defense Nuclear Facilities Safety Board
625 Indiana Avenue, NW.
Suite 700
Washington, D.C. 20004-2901

Dear Mr. Chairman:

This letter is provided in response to your letter of November 13, 2002, on criticality safety practices at Y-12. Your letter noted concerns with the general neglect of criticality controls in the storage and handling of fissile material at Y-12. While the National Nuclear Security Administration shares the Defense Nuclear Facilities Safety Board's (Board) concern with the circumstances that led to the specific occurrence at Y-12, internal and external criticality safety reviews conducted at Y-12 have concluded that the contractor's Nuclear Criticality Safety (NCS) program is well designed, thoroughly documented, and implemented; the Y-12 Site Office has been active in monitoring and evaluating contractor performance.

The number of NCS noncompliance issues identified at Y-12 over the last 3 years has shown a steady decrease, while the workload has doubled, and the expected standard of performance has become more stringent. In February 2002, Y-12 broadened the scope of nuclear criticality issues that were classified as deficiencies to increase the level of evaluation of previously considered minor NCS issues to ensure the further maturing of Y-12's NCS Program. In accomplishing these improvements, actions have been taken and are being planned to reduce the complexity of NCS posting instructions, the number of containers in use in specific areas, and to improve the standardization of NCS requirements. However, actions to simplify and standardize fissile material handling operations are dependent on reducing the inventory of stored nuclear material and storing remaining materials in a smaller set of standard containers. These actions have not been fully implemented, which were determined to be a contributing cause to the occurrence in Building 9212.

Major resources at Y-12 over the last year have been focused on restarting Wet Chemistry Processes. Once running, these processes will reduce the inventory of stored materials, which will facilitate the standardization of fissile material handling operations. In parallel with the Wet Chemistry Restart as resources become available, plans are also being developed to create a long-term strategic plan to further reduce the inventory of stored nuclear materials and the storage of remaining materials in a smaller set of standard containers. The long-term strategic plan needs to incorporate complex-



wide actions on nuclear material disposition paths and nuclear material container shipping, receiving, and storage standards.

We are planning to brief the Board in January 2003 on improvements that have been made to the Y-12 NCS Program, and the status of development of Y-12's implementation plans to reduce the amount of stored nuclear materials and to standardize fissile material storage containers.

If there are any questions concerning our approach to address the criticality safety concerns at Y-12, please contact me or have your staff contact Rodney Lehman at (301) 903-6104.

Sincerely,



Everet H. Beckner
Deputy Administrator
for Defense Programs

cc:

M. Whitaker, EH-9