

A.J. Eggenberger, Chairman  
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# DEFENSE NUCLEAR FACILITIES SAFETY BOARD

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November 28, 2005

The Honorable Linton Brooks  
Administrator  
National Nuclear Security Administration  
U.S. Department of Energy  
1000 Independence Avenue, SW  
Washington, DC 20585-0701

Dear Ambassador Brooks:

The Defense Nuclear Facilities Safety Board (Board) was briefed on October 5, 2005, in response to a reporting requirement contained in the Board's letter of April 20, 2005, regarding structural deficiencies in the 9212 complex at the Y-12 National Security Complex (Y-12), and the need to eliminate the backlog of nuclear materials placed at risk by these deficiencies. The Board notes that the 9212 complex is more than 50 years old and is continuing to deteriorate. The 9212 complex is constructed of metal frame and hollow clay tile walls. This facility does not meet safety requirements for Hazard Category 2 nuclear facilities, and the current path forward does not identify upgrades needed for the facility to meet these requirements.

In summary, the National Nuclear Security Administration (NNSA) presented to the Board a plan for a phased approach to repair maintenance-related deficiencies, followed by an evaluation of the facility to identify potential modifications to improve its resistance to earthquakes or other natural phenomena hazards. These improvements would then be prioritized using a risk-based methodology. NNSA proposed that an annual review be conducted to determine which modifications will be implemented. In parallel, an effort to eliminate the backlog of nuclear materials stored in the 9212 complex is being undertaken to reduce the material-at-risk. The annual decision on implementing the additional structural improvements would depend on the operations planned for the 9212 complex, progress toward the goal of completing construction of the planned replacement facility, the Uranium Processing Facility (UPF), by 2013, and progress in reducing the backlog of nuclear materials.

The Board agrees that reduction of material-at-risk and maintenance-related repairs should be pursued immediately and aggressively as planned. However, the Board does not agree with the plan to assess the need for further structural improvements annually unless decisions on upgrades are directly linked to the achievement of specific milestones on a specified schedule in the UPF project. Otherwise, the annual assessments could result in a continuing series of

short-term decisions to accept deficiencies in the 9212 complex. Absent a direct link to progress on UPF, it is not clear what would cause a string of such incremental decisions to come to an end, or what would drive the difficult decision to invest heavily in the 9212 complex or shut down its operations should UPF not be developed as planned.

Although appropriate to support near-term operations, incremental improvements to the 9212 complex structure will not be sufficient to allow long-term operations given the continuing structural and process equipment deterioration. Construction of UPF or a major systemic upgrade of 9212 to meet Hazard Category 2 safety requirements (if such upgrades are even practical) is necessary to support long-term performance of the national security mission at Y-12. Any decision to upgrade 9212 for long-term operation would require a timely and thorough condition assessment of the 9212 complex. Absent that, consideration should be given to closing the facility at a point where the health and safety of the workers can no longer be objectively assured.

Therefore, pursuant to 42 U.S.C. § 2286b(d), the Board requests that a report be submitted within 60 days of completion of the risk prioritization activity (scheduled for April 2006), clearly setting forth the facility modifications that would be implemented should each Critical Decision milestone for the UPF project be delayed.

Sincerely,

A handwritten signature in black ink, appearing to read "A. J. Eggenberger". The signature is written in a cursive, somewhat stylized font.

A. J. Eggenberger  
Chairman

c: Mr. William J. Brumley  
Mr. Thomas P. D'Agostino  
Mr. Mark B. Whitaker, Jr.