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# DEFENSE NUCLEAR FACILITIES SAFETY BOARD

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October 23, 2007

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 National Nuclear Security Administration's (NNSA) current plan for sustained manufacturing of plutonium pits, essential to national security, relies on continued operation of the 55-year-old Chemistry and Metallurgy Research (CMR) facility at Los Alamos National Laboratory (LANL). The Defense Nuclear Facilities Safety Board (Board) believes that continued operation of the CMR facility in its current condition poses significant risks to workers and the public. Given the age, material condition, nuclear material inventory, and seismic capacity of CMR, it is important that NNSA fully understand these risks in its continued use of the facility.

The CMR facility is known to have serious vulnerabilities, such as the lack of robust building confinement to prevent a release of radioactivity during an accident. In the late 1990s, the Department of Energy (DOE) decided to scale down a planned CMR facility upgrade project and focus on safety system upgrades required to support safe operation until the CMR Replacement Project was completed in 2010. This decision to abandon a complete facility upgrade was due primarily to the identification of a seismic fault under two wings and the susceptibility of all the wings to structural collapse due to ground motion from a 500-year return period earthquake. While subsequent actions were taken to reduce combustibles and material-at-risk in the CMR facility, the safety of the facility has not been reassessed since the governing safety basis was approved in 1998.

In a letter to the Board dated February 16, 1999, the DOE Office of Defense Programs enclosed a copy of the "Strategy for Managing Risks at the CMR Facility at LANL." In that document, DOE outlined near-term and long-term actions to manage the risk at the CMR facility and continue safe operations until 2010. It was envisioned that the CMR Replacement Project would be completed by 2010; however, the Replacement Project has experienced significant delays, is now nominally projected for completion in 2016, and faces continued susceptibility to year-to-year budgetary uncertainty. Consequently, the CMR facility will likely be required to support pit production activities to 2016 and beyond.

The Board understands that LANL plans to develop a CMR facility safety basis for post-2010 operations, with approval and implementation of this new safety basis in 2009. It is unlikely that this effort will eliminate or mitigate the safety risks of operating the CMR facility beyond 2010 without significant facility upgrades or mission changes. This timetable leaves little time for NNSA to complete any necessary safety system upgrades or identify alternative strategies for meeting national security priorities. As noted above, the situation is further exacerbated by delays and continued budgetary uncertainty afflicting the CMR Replacement Project.

Therefore, pursuant to 42 U.S.C. 2286b(d), the Board requests that NNSA submit within 60 days of receipt of this letter a report and briefing providing (1) a safety rationale for continuing the operation of CMR, and (2) a detailed schedule of NNSA's actions to assure safe operation of this facility.

Sincerely,

A handwritten signature in black ink, appearing to read "A. J. Eggenberger". The signature is fluid and cursive, with a large initial "A" and "E".

A. J. Eggenberger  
Chairman

c: The Honorable J. Clay Sell  
Mr. Donald L. Winchell, Jr.  
Mr. Mark B. Whitaker, Jr.