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DEFENSE NUCLEAR FACILITIES SAFETY BOARD

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March 8, 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:

On November 3, 2004, the Defense Nuclear Facilities Safety Board (Board) wrote a letter to the Department of Energy concerning the lack of adequate configuration management for vital safety systems at Lawrence Livermore National Laboratory (LLNL). Your interim response of January 4, 2005, acknowledged the Board's concerns and committed to taking several actions to expedite the implementation of an adequate configuration management program for defense nuclear facilities at LLNL. In your response, you noted that an assessment by the National Nuclear Security Administration (NNSA) had identified or confirmed "serious vulnerabilities in the configuration management program at the institutional level and in the majority of the reviewed vital safety systems within Building 332." The configuration management program for the Plutonium Facility at LLNL is an administrative control program in the Technical Safety Requirements and a specific condition for operations in the Authorization Agreement.

A report issued on January 6, 2005, by the Department of Energy's Office of Independent Oversight and Performance Assurance identified serious deficiencies in a number of additional administrative control programs mandated by the Technical Safety Requirements for the Plutonium Facility. This report also identified significant deficiencies in the analyses supporting the functionality of certain safety systems. As a result of this assessment, LLNL declared violations of its Technical Safety Requirements for seven administrative control programs: the Configuration Management Control Program, the Radiation Protection Program, the Unreviewed Safety Question Program, the Maintenance Program, the Quality Assurance Program, Occurrence Reporting, and Procedures. Moreover, several potential inadequacies of the documented safety analysis have been declared to address deficiencies in supporting analyses for safety systems.

LLNL subsequently suspended programmatic operations in the Plutonium Facility pending the development and implementation of compensatory measures to address the identified deficiencies in these administrative control programs. Since that time and on a case-by-case basis, however, LLNL has undertaken, with the concurrence of NNSA's Livermore Site Office (LSO), certain operations considered critical but low risk.

More recently, in a letter to LSO dated February 9, 2005, LLNL requested approval of a set of compensatory measures to allow the resumption of a substantial number of programmatic nuclear operations in the Plutonium Facility. LSO has approved these compensatory measures, subject to certain additions and clarifications, and, according to its approval letter, intends to authorize the proposed nuclear operations following verification of the compensatory measures. The result of such an action would be the resumption of programmatic operations in the Plutonium Facility with seven inadequate safety management programs.

The Board is concerned that the approach being taken by LSO to resolve identified deficiencies and resume nuclear operations does not adequately address the safety issues raised by the above violations of Technical Safety Requirements and by the identified deficiencies in safety system analysis. Therefore, pursuant to 42 U.S.C. § 2286b(d), the Board requests a report from NNSA on the path forward for resumption of programmatic operations in the Plutonium Facility. This report should specifically address the following:

- How the conditions of the facility's Authorization Agreement, particularly those concerning the safety management program administrative controls, will be met.
- The recovery plans necessary to ensure that the seven deficient safety management programs will once again be effective.
- How the requirements of Department of Energy Order 425.1C, *Startup and Restart of Nuclear Facilities*, will be met.
- The approach and schedule for resolving the potential inadequacies in safety analysis that relate to safety systems.
- The approach and schedule for resuming programmatic operations in the Plutonium Facility.
- Actions to be taken by NNSA to enhance the effectiveness of federal oversight at the Plutonium Facility and minimize the possibility of a recurrence of the identified problems.

Should restart of nuclear operations be based on interim compensatory measures, the report should also address the following:

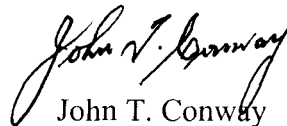
- NNSA's basis for determining that the proposed compensatory measures provide a level of safety that is commensurate with the administrative control programs and safety systems for which they are compensating.
- For each of the deficient administrative control programs, the residual risk involved in operating with compensatory measures instead of the fully implemented administrative program.

- The process to be used to verify the implementation of the proposed compensatory measures.

In addition, since nuclear safety management programs at LLNL are generally considered to be most mature in the Plutonium Facility, the widespread declaration of violations of administrative control programs in this facility raises questions about the condition of similar programs at other nuclear facilities. Therefore, the Board would also like this report to address NNSA's assessment of the condition of safety management programs mandated by the Technical Safety Requirements at the other defense nuclear facilities at LLNL.

The Board requests that NNSA provide this report prior to the resumption of programmatic operations in the Plutonium Facility.

Sincerely,

A handwritten signature in black ink, appearing to read "John T. Conway". The signature is written in a cursive style with a large, sweeping initial "J".

John T. Conway
Chairman

c: Mr. Mark B. Whitaker, Jr.