John T. Conway, Chairman

A.J. Eggenberger, Vice Chairman

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DEFENSE NUCLEAR FACILITIES SAFETY BOARD

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December 14, 2004

The Honorable Spencer Abraham Secretary of Energy 1000 Independence Avenue, SW Washington, DC 20585-1000

Dear Secretary Abraham:

The Defense Nuclear Facilities Safety Board (Board) issued Recommendation 2004-1, *Oversight of Complex, High-Hazard Nuclear Operations*, on May 21, 2004. On July 21, 2004, the Department of Energy (DOE) accepted Recommendation 2004-1. The enclosed technical report, DNFSB/TECH-35, *Safety Management of Complex, High-Hazard Organizations*, provides background information and ideas for implementing the Recommendation.

The report explores organizational aspects of safe operations with the intent of helping to identify how DOE could better organize itself to enhance safety, particularly nuclear safety. Academic research on organizations involved in operations with the potential for high-consequence accidents and lessons learned from major accidents and near-misses are summarized. The foundations for nuclear safety within DOE are then described, and a set of organizational attributes are proposed for safely managing operations that can lead to high-consequence, low-probability accidents. The report then describes DOE's proposed safety management changes and explains why the Board regards those changes as cause for concern. The proposed organizational attributes are applied to evaluate DOE's safety management of its high-hazard operations. Finally, suggested improvements to DOE's safety management of these operations are presented.

The ideas presented in the report are not intended to represent the only way to satisfy the Board's recommendation, but to provoke innovations and new solutions for a sustained organizational shift that should better ensure the safe management of high-hazard nuclear operations.

Sincerely,

John T. Conway

Chairman

c: The Honorable Linton Brooks Mr. Mark B. Whitaker, Jr.

Enclosure