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# DEFENSE NUCLEAR FACILITIES SAFETY BOARD

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June 19, 2006

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:

For the past several years, the Department of Energy (DOE) has been developing the capability to stage, assess, and support disposition of a damaged nuclear weapon or improvised nuclear device at the Nevada Test Site (NTS), in case such a situation should arise. DOE identified G-Tunnel at NTS as the facility to be used for staging and assessing a damaged weapon or device suspected of being too unstable to be taken directly to nuclear explosive facilities at the Pantex Plant or the Device Assembly Facility (DAF) at NTS. Although the National Nuclear Security Administration (NNSA) has improved the condition of G-Tunnel in recent years, essential improvements for life safety and safe nuclear explosive operations remain to be accomplished.

In a letter to NNSA dated March 28, 2005, the Defense Nuclear Facilities Safety Board (Board) expressed concern about the slow progress being made in developing and moving forward with a defined action plan for addressing known problems with G-Tunnel. The Board requested that NNSA identify the desired conditions of readiness for G-Tunnel, including facility and equipment improvements, and provide its plan and schedule for establishing those conditions. On July 25, 2005, NNSA responded with a plan that addressed currently identified safety issues, inadequacies in the Documented Safety Analysis, and facility maintenance needs. The plan indicated the actions to be taken would be completed in about 4 years.

Continued evaluation by the Board's staff revealed that the upgrades identified in NNSA's plan would take approximately 10 years to accomplish given the resources being applied. The Board discussed this issue with NNSA's Associate Administrator for Emergency Operations (NA-40) on February 8, 2006, and the Board's staff held a follow-up discussion with NA-40 staff and NNSA's Chief of Defense Nuclear Safety. These discussions indicated that NNSA is reevaluating its plans to upgrade G-Tunnel in light of recent decisions that potentially reduce the scope of the mission for the facility. NNSA's current expectation is that operations in G-Tunnel to address an improvised device will be of extremely short duration (i.e., no more than 3 days). On this basis, some upgrades at G-Tunnel are still likely to be pursued, but NNSA has not yet identified their scope or schedule. For a damaged nuclear weapon, NNSA currently expects disposition to occur at the Pantex Plant or DAF without involving G-Tunnel.

The basis for the contemplated change in mission for G-Tunnel is not clear. A damaged nuclear weapon may not be stable enough or sufficiently characterized to risk taking it directly to Pantex or DAF, both of which house activities essential to DOE's defense nuclear complex and the continuing viability of the nuclear stockpile. Likewise, an improvised nuclear device may need to be staged at G-Tunnel for more than a few days. Thus, having a facility, other than Pantex or DAF, prepared to stage and assess a problematic device safely for more than a few days appears necessary. NNSA's current assumption of disposition within a few days contrasts with preparations made by the nuclear weapons design laboratories, which anticipate potentially several weeks to assess and dispose of a weapon or device. The laboratories developed the capability and practiced to respond to emergencies with damaged nuclear weapons and improvised nuclear devices over the past two decades and were key to the development of the capability to dispose of such a weapon or device at NTS.

Accordingly, pursuant to 42 U.S.C. § 2286b(d), the Board requests that within 60 days of receipt of this letter, NNSA provide a report describing its plans for the staging, assessment, and disposition of a damaged nuclear weapon or improvised nuclear device; the scope of the mission for G-Tunnel and other facilities to be used for such activities; and the plan and schedule for identifying applicable requirements and desired conditions of readiness for the facilities and accomplishing any needed facility upgrades. This report should address how the requirements of Title 10 of the Code of Federal Regulations, Part 830, *Nuclear Safety Management*, will be met for these facilities and activities.

Sincerely,



A. J. Eggenberger  
Chairman

c: Mr. Thomas P. D'Agostino  
Admiral Joseph J. Krol  
Dr. Jay H. Norman  
Mr. Mark B. Whitaker, Jr.