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# DEFENSE NUCLEAR FACILITIES SAFETY BOARD

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November 8, 2002

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) would like to thank you and your staff for the briefing of October 2, 2002, on the F-Canyon facility at the Savannah River Site (SRS). The Board continues to remain interested in the status of the Department of Energy's (DOE) canyon processing capabilities.

Section 3137 of the National Defense Authorization Act for Fiscal Year 2001 (Pub.L. 106-398) requires the following of the Defense Nuclear Facilities Safety Board and the Department of Energy prior to obligating or expending funds for the purposes of commencing decommissioning of the F-Canyon facility:

“(b) Limitation on Use of Funds for Decommissioning of F-Canyon Facility. No amounts authorized to be appropriated or otherwise made available for the Department of Energy by this or any other Act may be obligated or expended for purposes of commencing the decommissioning of the F-canyon facility at the Savannah River Site until the Secretary and the Defense Nuclear Facilities Safety Board jointly submit to the Committee on Armed Services of the Senate and the Committee on Armed Services of the House of Representatives the following:

- (1) A certification that all materials present in the F-canyon facility as of the date of certification are safely stabilized.
- (2) A certification whether or not the requirements applicable to the F-canyon facility to meet the future needs of the United States for fissile materials disposition can be met through full use of the H-canyon facility at the Savannah River Site.
- (3) If the certification required by paragraph (2) is that such requirements cannot be met through such use of the H-canyon facility.

(A) an identification by the Secretary of each such requirement that cannot be met through such use of the H-canyon facility; and

(B) for each requirement identified in subparagraph (A), the reasons why that requirement cannot be met through such use of the H-canyon facility and a description of the alternative capability for fissile materials disposition that is needed to meet that requirement.”

During recent Board discussions, DOE representatives suggested that, following transfer of americium/curium solutions from F-Canyon, the Board and DOE complete the certification required by Section 3137. The Board does not believe that the conditions specified in Section 3137 for certification have been met.

First, although the americium/curium solutions are scheduled for transfer to the high-level waste system by March 2003, F-Canyon contains other materials that require stabilization. For example, more than 130,000 gallons of depleted uranium solutions are stored at F-Canyon. DOE has not presented a well-defined plan for disposition of this material. Second, DOE has not demonstrated that the requirements applicable to the F-Canyon for either current or future fissile material disposition needs will be met by the H-Canyon. DOE has not provided a definitive description of any alternative capability needed to meet these disposition requirements.

In its plans to cease plutonium uranium extraction (PUREX) operations at F-Canyon, DOE reassigned some F-Canyon material stabilization activities to the H-Canyon facility. As a result, H-Canyon operations would, by some estimates, have to continue until at least 2015 for all of these materials to be stabilized. Despite these estimates, the DOE Savannah River Operations Office issued a letter to the contractor, dated August 15, 2002, directing the contractor to complete H-Canyon operations by the end of fiscal year 2009. The contractor's response, dated September 30, 2002, stated that priority materials could be processed in H-Canyon by the end of fiscal year 2010, but that the following materials would remain unprocessed:

- Certain spent nuclear fuel identified as Table 5.2-1 fuel
- Miscellaneous spent nuclear fuel, targets, and cobalt slugs
- Foreign and domestic research reactor fuel
- Certain types of off-specification highly enriched uranium

The first two groups listed above were candidates for F-Canyon processing. Without F-Canyon or H-Canyon, an alternative capability would be required. The remaining two groups listed above are generally not compatible with F-Canyon, and have been candidates for H-Canyon processing. However, if H-Canyon operations are stopped prior to the stabilization of these materials, an additional alternative capability is required.

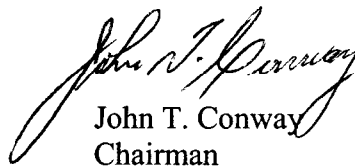
In an October 30, 2002, letter from the DOE Savannah River Operations Office to the contractor, DOE further accelerated the planned completion of H-Canyon processing to the end of fiscal year 2006, consistent with the revised Environmental Management program objectives (communicated in a memorandum dated October 10, 2002). This action will undoubtedly leave additional materials unprocessed and in need of an alternative capability. For example, composite parts from the Rocky Flats Environmental Technology Site, originally planned to be processed using the F-Canyon, were reassigned to the H-Canyon facility as part of DOE's effort to terminate PUREX processing in F-Canyon. With H-Canyon operations ending in 2006, it is unlikely that these items will be processed.

The recent direction to complete H-Canyon stabilization/processing in 2006 also notes the planned transfer of H-Canyon and HB-Line to the DOE's National Nuclear Security Administration (NNSA). It is not clear whether H-Canyon would continue to be available for materials stabilization following this transfer or whether NNSA would be expected to support operation of the H-Canyon facility until alternative capabilities are defined for material that remains unprocessed.

DOE's planned actions leave materials unstabilized and without well-defined disposition paths. As such, the Board does not believe that DOE can meet the certification requirement of Section 3137. Until DOE identifies clear and achievable disposition paths for materials present in the F-Canyon and identifies how future fissile materials disposition requirements can be met without the F-Canyon facility, the Board cannot complete the required certification.

The Board invites your staff to continue candid discussions with the Board and its staff concerning the suspension of F-Canyon operations and stabilization of nuclear materials. Please call if you have any questions on this matter.

Sincerely,



John T. Conway  
Chairman

c: The Honorable Jessie Hill Roberson  
Mr. Jeffrey M. Allison  
Mr. Mark B. Whitaker, Jr.