

**[DNFSB LETTERHEAD]**

December 29, 1993

The Honorable Hazel R. O'Leary  
Secretary of Energy  
Washington, D.C. 20585

Dear Secretary O'Leary:

The Defense Nuclear Facilities Safety Board (DNFSB) in a letter on September 10, 1993 suggested an enlarged review of the readiness of Los Alamos National Laboratory's (LANL's) Plutonium Facility (TA-55) for production associated with the Cassini Program. In memos dated September 28, 1993 and December 6, 1993, the Assistant Secretary for Defense Programs responded identifying actions being taken. The Board has reviewed this correspondence and has identified the following matters which merit further attention.

The Board notes a LANL memo dated September 16, 1993 to the Chief, Facility Operations Branch, Los Alamos Area Office, which forwarded an Unreviewed Safety Question Determination for an emergency generator reclassification. Upon reviewing the LANL document, and further independent review by the Board's staff, we are not fully convinced that the requirement to maintain ventilation capability has been adequately addressed. Further discussion can be found in the enclosure.

The Board also notes that, while significant improvement has been made in the assessment of compliance with Department of Energy (DOE) Orders at LANL, only six orders are presently being assessed as preparations proceed for full Cassini production. In the course of DOE's preparation of another plutonium facility for operations to support the Cassini Program (the HB-Line at the Savannah River Site), 19 DOE Orders were assessed for their compliance status. The Board has noted the unsatisfactory status of Order compliance efforts at LANL on two previous occasions (a June 15, 1993 letter to the Assistant Secretary for Defense Programs and the Board's September 3, 1993 comments with respect to DOE's Implementation Plan for Recommendation 90-2). It is not clear to the Board how a review of only six safety-related DOE Orders has provided the Department with sufficient information on TA-55's compliance status.

Therefore, pursuant to 42 U.S.C. 2286b(d), the Board requests that DOE provide the following two reports:

A report evaluating whether an Unreviewed Safety Question exists at TA-55 concerning the emergency generator. This report should include an evaluation of the issues listed in the enclosure and should identify any required corrective actions and compensatory measures, as well as a schedule for such actions.

A report discussing DOE's evaluation of the LANL Order compliance efforts to date, and the rationale for having assessed compliance with only six safety-related orders at TA-55 as the

Cassini program moves toward full production.

The Board requests the above reports be submitted within 30 days of receiving this letter. If you need any further information in this connection, please let me know.

Sincerely,

***John T. Conway***  
***Chairman***

c:

Dr. Victor Reis, DP-1

Dr. Tara O'Toole, EH-1

Mr. Mark Whitaker, Acting EH-6

Enclosure

LANL NEGATIVE UNREVIEWED SAFETY QUESTION DETERMINATION (USQD)  
FOR EMERGENCY GENERATOR RECLASSIFICATION

Background: LANL, in a memo dated September 16, 1993 from DR Harbur to DE Glenn, Chief, Facility Operations Branch, Los Alamos Area Office, forwarded a determination that a proposed reclassification of the emergency generator at the TA-55 Plutonium Facility as an "auxiliary generator" does not constitute an Unreviewed Safety Question.

Observations:

1. Standards in effect at the time TA-55 was designed and constructed (circa 1973-1978) generally call for ventilation systems for plutonium-handling facilities to have emergency power supply systems and to continue operation during power outages and other abnormal conditions. Standards currently in effect, including DOE Order 6430.1A, General Design Criteria, also discuss the need for ventilation systems to continue operating in plutonium-handling facilities during abnormal conditions.

The USQD does not identify or address these standards, yet it concludes that reclassifying the emergency generator as an auxiliary generator is acceptable. A discussion of how LANL determined these standards were inapplicable would appear appropriate.

2. The USQD states that "If the outside air temperature is extreme (high or low), the generator will not be started and ventilation will not be run." It also states that "... the surface air temperature at Los Alamos exceeds 80 below 32 acceptable bounds so that the generator cannot be run 12% of the time."

On the other hand, LANL states that "...the generator will immediately be manually started in the event of a fire alarm during a loss of off-site power so that the building is not pressurized."

If one accepts the LANL statements that the generator cannot be run when the outside temperature is less than 32 clear that any operations should be permitted in TA-55 during cold or unusually hot weather.

Calculated radiation doses to the public under accident conditions assume that four sets of HEPA filters are effective in removing radioactive particulate matter. However, if the ventilation system is not operating, and if an inlet damper were to fail in the open position, only one set of filters would be effective. Further, unfiltered leakage through the facilities' doors is also possible. The potential dose under postulated accident conditions then would be substantially increased.

It would appear that any justification for not immediately starting the generator in the event of a power failure needs to address the acceptability of calculated doses assuming

failure of one or more inlet dampers. In addition, the potential for leakage through cracks around doors should be addressed.