

May 15, 2000

Brigadier General Thomas F. Gioconda
Acting Deputy Administrator for
Defense Programs
Department of Energy
1000 Independence Avenue, SW
Washington, DC 20585-0104

Dear General Gioconda:

The Department of Energy (DOE) and its contractor at the Oak Ridge Y-12 Plant have been working for several years to address safety-related requisites for restarting hazardous but vital national security operations at Y-12. The Defense Nuclear Facilities Safety Board (Board) has highlighted a number of safety issues requiring attention, including those described in the enclosed reports: (1) delays in stabilizing fissile materials in Building 9206, (2) deficiencies in the implementation of consensus safety standards and contractual requirements in activity-level procedures that control work, (3) prolonged reliance on cursory or limited-scope safety analysis documents for nuclear facilities, and (4) deficiencies in emergency management.

These reports are provided for your information. The topics identified have been included among those discussed by the Board with your senior staff and staff of the Y-12 contractor during a trip to the Y-12 Plant in April 2000. The Board will continue to advise you on our observations as we continue our oversight efforts.

Sincerely,

John T. Conway
Chairman

c: Ms. G. Leah Dever
Mr. Mark B. Whitaker, Jr.

Enclosures

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

Staff Issue Report

March 13, 2000

MEMORANDUM FOR: J. K. Fortenberry, Technical Director

COPIES: Board Members

FROM: T. L. Hunt

SUBJECT: Timely Hazard Reduction at Building 9206, Y-12 Plant

The Department of Energy's (DOE) December 22, 1999, response to the Defense Nuclear Facilities Safety Board's (Board) letter of November 2, 1999, requesting details on a path forward to achieve more timely hazard reduction at the Y-12 Plant's Building 9206, failed to fully satisfy the expectations of the Board's staff. In its response, DOE indicates that the present risks are manageable, and the currently proposed agenda for hazard reduction is adequate; thus, no programmatic changes are deemed necessary. On the basis of this response, it appears that DOE attaches insufficient urgency to accelerating the cleanup and removal of hazardous materials from Building 9206.

The Board's letter asked explicitly how DOE proposes to achieve more timely hazard reduction in this building. It is recognized that some progress in risk reduction has recently been made, but the measures taken are not sufficient. There are other activities at Y-12, such as Enriched Uranium Operations, that rightly have higher priority, but the situation at Building 9206 cannot be ignored. There are hazards in this building that, if left uncorrected, will threaten public health and safety. For example, stabilization of solutions and pyrophoric materials needs to be accelerated. DOE has not presented an implementation schedule, based on a technically justified risk ranking, for accelerating the stabilization of hazardous materials.

The principal difficulty with the DOE *Building 9206 Phase Out/Deactivation Program Management Plan* referenced in DOE's response is that it does not ensure the commitment of adequate resources to the stabilization of these most hazardous residues. Without the benefit of a resource-loaded, integrated schedule, proposed activities are carried out in a haphazard manner, and deactivation activities have repeatedly been deferred without technical justification. Examples of the need for expedited risk reduction include the following:

- Pyrophorics are now planned to be moved from a hood to an argon glovebox during this fiscal year. The argon glovebox does not provide acceptable containment for extended storage of this material in this structurally vulnerable facility. Although the proposed action will improve safety marginally, it does not address the fundamental need to stabilize, package, and disposition this high-hazard material. DOE's response

does not indicate when processing of these compounds will be initiated.

- Liquid in processing equipment, especially glass columns, will not be drained during this fiscal year, despite the schedule provided in the *Building 9206 Phase Out/Deactivation Program Management Plan*. DOE's response describes only how leaks from the columns will be handled. No mention is made of plans for actually reducing the ever-increasing risk associated with this equipment. The fact remains, however, that aging glass columns are not a safe storage configuration and should be emptied at the earliest opportunity.
- The containerized highly enriched uranium (HEU) inventory may be reduced 45 percent this year by being transferred off site; however, the facility cannot rely on similar circumstances for dispositioning of the entire inventory of HEU. The DOE response does not provide plans or a timetable for stabilization or removal of the remaining containerized HEU. Given the uncertainties associated with the availability of Building 9212 to process HEU from Building 9206, alternatives for alleviating this dependency need to be considered, such as the direct disposal option suggested in the Board's letter of November 2, 1999.
- Nondestructive assay of holdup in the facility continues to lag. DOE's response states that testing of the cadmium zinc telluride equipment has been completed, but does not indicate when demonstrable holdup characterization will be performed. Completion of this activity—especially in process areas—is very important to support deactivation and risk reduction (e.g., criticality safety evaluations). The video survey of underground uranium-contaminated ductwork has also been delayed again, and a proposed action date is not provided in DOE's response.

It is important that these materials be rendered safe as soon as possible. It would be appropriate for DOE to reevaluate the findings and suggestions provided in the Board's past correspondence regarding this facility, and to provide a supplemental response that includes details on what can be done to accelerate stabilization activities in Building 9206. The details provided should include clear disposition pathways and schedules for the various materials at risk.