



**Department of Energy**  
**National Nuclear Security Administration**  
Washington, DC 20585

July 23, 2002

The Honorable John T. Conway  
Chairman  
Defense Nuclear Facilities Safety Board  
625 Indiana Avenue, NW.  
Suite 700  
Washington, D.C. 20004-2901

Dear Mr. Chairman:

This is an additional update to the Defense Nuclear Facilities Safety Board (Board) letter of May 13, 2002, which noted continuing concerns related to Fire Protection in the Wet Chemistry area of Building 9212 (B-1 Wing) at the Y-12 National Security Complex. In our interim response of June 17, 2002, we agreed that certain safety-related administrative controls may not be best suited for supporting long-term (10 to 15 years) operation of the Wet Chemistry process systems. While relying upon the current combination of administrative and engineered controls during Wet Chemistry operations is considered a necessary interim measure, BWXT Y-12, L.L.C. (BWXT Y-12), has been tasked by the National Nuclear Security Administration (NNSA) Y-12 Site Office to develop a long-term Fire Protection Plan with supporting safety and cost analysis for the B-1 Wing. We expect to brief you in July on BWXT's recommendation and NNSA's decision; however, the need to incorporate the results of recent burn tests into the risk model and decision-making process will require a 1-month delay in our response.

As part of the development of the BWXT Y-12 recommended long-term B-1 Wing Fire Protection Plan, burn tests were planned to determine and evaluate the effects that various combinations of combustible liquids, acids, and other liquids contained in the B-1 Wing would impose, given a postulated fire occurring. The results of the burn tests are being used as the basis for additional analysis of off-site and on-site doses to the public and the co-located worker. The initial burn test of the process organic liquids to validate the Fire Hazards Analysis (FHA) for Building 9212 was conducted in early June 2002. The results of this test did validate the organic fire characteristics applied in the FHA; however, the observed behavior of the burning surface raised questions regarding the appropriate airborne release fraction (ARF). The test involved process organic liquids, process organic liquids exposed to water, and process organic liquids exposed to nitric acid. To augment these tests and to gain a better understanding of the surface disturbance during burn, additional tests involving the configuration of a combustible organic liquid burning on an aqueous/acid layer were required (June 14-15, 2002). The results of these burn tests have been shared with your staff. The test results and information gathered from other sites with similar concerns are being evaluated per the information provided in Department of Energy Handbook 3010-94 to select an appropriate ARF. The B-1 Wing accident analysis will then be revised accordingly.



The requirement to conduct the additional burn tests to support the proposed BWXT Y-12 recommended long-term B-1 Wing Fire Protection Plan has resulted in several weeks delay to our July response. We now plan to brief your staff in late July on the basis for and recommendations from the BWXT Y-12 Long-Term Fire Protection Plan for the B-1 Wing followed by a brief to the Board in August 2002.

If there are questions concerning our approach for improving fire protection in the B-1 Wing at Y-12, please contact me or have your staff contact Rodney Lehman at (301) 903-6104.

Sincerely,



*For* Everet H. Beckner  
Deputy Administrator  
for Defense Programs

cc:  
M. Whitaker, S-3.1