Department of Energy
Under Secretary for Nuclear Security
Administrator, National Nuclear Security Administration
Washington, DC 20585

January 7, 2016

The Honorable Joyce L. Connery
Chairman
Defense Nuclear Facilities Safety Board
625 Indiana Avenue NW, Suite 700
Washington, D.C. 20004

Dear Madam Chairman:

Thank you for your October 29 letter regarding the Electrorefining (ER) Project at the Y-12 National Security Complex (Y-12). In that letter, the Defense Nuclear Facilities Safety Board expressed concern that certain project related structures, systems, and components (SSCs) had not been fully analyzed to determine whether they could perform their credited safety functions. Your letter also requested a response within 60 days that would provide a schedule for the following items:

- Technical Evaluation of the Confinement Approach per requirements of DOE Order 420.1C;
- Analysis of the current Fire Protection System (automatic sprinkler system) to establish adequate performance;
- Technical evaluation regarding glovebox windows to demonstrate that a combustible break resistant material provides performance equivalent to a noncombustible less break-resistant material (i.e., Lexan® versus laminated safety glass); and,
- Building 9998 structural analysis.

The evaluation and analyses of the Confinement Approach, the Fire Protection System, and glovebox windows are scheduled to be completed by April 30, 2016. This scheduled completion date is in support of the project's 30% design completion milestone. Additional detail regarding each is as follows:

- The ER Project is developing a technical evaluation of the Confinement Approach per Section 3.b. (3) of Chapter 1. Nuclear Safety Design Criteria, Attachment 2 of DOE O 420.1C and its associated Guide.

- The ER Project is developing an analysis of the Fire Protection System by modeling different fire scenarios to determine the worst case fire condition. Based on these results, a determination will be made regarding whether the existing sprinkler system provides adequate suppression coverage to protect

equipment and prevent fire spread. A hydraulic calculation of the suppression system will also be performed to assist in making this determination.

- The ER Project's Preliminary Fire Hazards Analysis will be revised to include the basis and justification for using Lexan MR 1 0® windows to meet requirements.

Building 9998 is part of the 9215 Complex. Structural analysis is a portion of the Extended Life Program (ELP) that has been established for both 9215 and 9204-2E. The ELP report for these facilities is scheduled to be completed by the middle of January 2016. A Y-12 briefing to the Board on the ELP is planned to occur in February 2016.

If you have any questions or need additional information, please contact Timothy P. Driscoll, NNSA Uranium Program Manager at (202) 586-3683.

Sincerely,

Frank G. Klotz

cc: J. Olencz, AU-1
Brig Gen S. Davis, NA-10
J. McConnell, NA-50
M. Thompson, NA-19
T. Driscoll, NA-194
R. Raines, NA-APM
H. Van Dyke, NA-GC
G. Beausoleil, NPO