



Department of Energy
National Nuclear Security Administration
Washington, DC 20585



October 16, 2008

Mr. Timothy Dwyer
Technical Director
Defense Nuclear Facilities Safety Board
625 Indiana Avenue, N.W., Suite 700
Washington, D.C. 20004-2901

Dear Mr. Dwyer:

Pursuant to the December 20, 2007, letter to the Chairman, Defense Nuclear Facilities Safety Board (DNFSB), from the Administrator for National Nuclear Security Administration (NNSA), enclosed for your information is the report which contains results of the Rebound Hammer Tests on concrete at the Device Assembly Facility (DAF). Although the initial plan was to correlate the rebound numbers to the compressive strength of core drills obtained from the construction of the Criticality Experiments Facility Project, it was decided that due to the limited number of usable cores, this comparison will not provide any meaningful information. We had a number of conference calls with the DNFSB staff on this issue and the staff agreed that relative strength would not be determined from these tests.

Instead, the test attempted to correlate the rebound numbers at the cracked and un-cracked locations at the DAF. According to the test plan that was coordinated with DNFSB staff, 65 locations were tested. These included 40 locations considered as "cracked" and 25 locations considered as "un-cracked". The statistical analysis of the test results clearly shows that there is no difference between the concrete, whether in "cracked" or "un-cracked" locations. This analysis was peer-reviewed and the results validated. In addition, similar to our previous reports on the cause of DAF cracks, this report concludes that the cracks were caused by concrete shrinkage in a constrained volume. NNSA is satisfied that the cracks in the DAF do not indicate a latent quality or construction problem and considers this issue resolved.

If you have any question, please contact me at (202) 586-4379 or have your staff contact Kim Loll at (202) 586-8955 of my staff or John Leppert at 702-295-1553 at the Nevada Site Office.

Sincerely,

A handwritten signature in black ink, appearing to read "James J. McConnell". The signature is fluid and cursive, with the first name "James" being the most prominent.

James J. McConnell
Director, Office of Safety

Enclosures

cc: M. Whitaker, Jr., HS-1.1