



Department of Energy
National Nuclear Security Administration
 Washington, DC 20585

December 20, 2007

OFFICE OF THE ADMINISTRATOR

The Honorable A. J. Eggenberger
 Chairman
 Defense Nuclear Facilities Safety Board
 Suite 700
 625 Indiana Avenue, N.W.
 Washington, D.C. 20004-2901

Dear Mr. Chairman:

As you know, the Criticality Experiments Facility (CEF) project currently underway at the Nevada Test Site, is modifying a portion of the Device Assembly Facility (DAF) to accommodate the transfer of four critical assembly machines from the Los Alamos National Laboratory Technical Area 18 to the DAF. Ongoing project work has afforded the National Nuclear Security Administration (NNSA) an opportunity to use some of the concrete cores drilled for the CEF project to verify the DAF structure compressive strength. Although the CEF cores will not be taken from the cracked areas of the facility, using them in combination with the Schmidt Hammer test or other non-destructive evaluation techniques may allow us to further evaluate the strength of the cracked areas.

My staff previously discussed our approach for conducting our limited planned testing with your staff during the last quarterly review in September 2007. This letter formalizes my plans to move forward with the proposed approach, which is summarized below:

- In the first quarter of Fiscal Year (FY) 2008, NNSA will perform compressive strength tests on core samples taken as part of the CEF project construction activities:
 - NNSA had estimated that 12 to 14 concrete cores could be collected and approximately six tested for compressive strength. However, the CEF project does not need as many new core drills as originally planned and some of the new cores will be smaller in diameter than what is suitable for compressive strength testing. As a result, currently NNSA has secured only three usable samples.
- In the first quarter of FY 2008, NNSA will evaluate available in-situ testing technologies and commercial expertise and procure the necessary hardware and/or services to:
 - Perform in-situ tests near core sample collection locations and correlate with core sample compressive strength test data.



- Perform in-situ tests near approximately 12 crack locations and compare results with the in-situ test results at the core locations to gauge concrete strength at crack locations.
- NNSA will provide the Board staff with the criteria and methods to correlate data from core strength tests to in-situ tests.
 - The Concrete Compressive Strength Testing Work Plan was provided to the Board on September 5, 2007.
 - The in-situ test plan will be provided to the Board for review.

Information resulting from this limited testing and evaluation will be documented in a report and submitted to your staff when completed. The completion date is dependent upon the industry response to the Request for Proposal.

NNSA has also initiated the structural analysis of the DAF buildings utilizing the newly generated seismic ground motions. The approach for the analysis was discussed with your staff in October 2007. NNSA has received positive comments and recommendations from your staff that will be addressed by our analysts.

I am fully committed to safe and cost effective conduct of our operations. I continue to value the Board's technical advice and involvement for improving the safety and reliability of our operations and facilities. I will be glad to discuss any further technical advice that the Board may have to improve our understanding of the structural integrity of the DAF.

If you have any questions, please contact me or have your staff call Gerald L. Talbot, Jr., Manager, Nevada Site Office at (702) 295-3211.

Sincerely,



Thomas P. D'Agostino
Administrator

cc: R. Smolen, NA-10
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