Department of Energy
National Nuclear Security Administration
Washington, DC 20585

September 22, 2008

OFFICE OF THE ADMINISTRATOR

The Honorable A.J. Eggenberger
Chairman
Defense Nuclear Facilities Safety Board
625 Indiana Avenue, NW Suite 700
Washington, DC 20004-2901

Dear Mr. Chairman:

This letter is in response to your correspondence dated June 25, 2008, concerning the Defense Nuclear Facilities Safety Board's (DNFSB) structural and geotechnical review of the Waste Solidification Building (WSB) at the Savannah River Site (SRS). I anticipate that this response and the attached documents, as well as the ongoing working relationship between DNFSB and the SRS-DOE staff, will result in a mutually agreeable path forward on WSB.

In response to your request regarding the development of the structural design package, documents addressing design and supporting calculations for the WSB that more clearly convey the approach used in the design and analysis of the facility have been revised and transmitted to your staff for review. To address your concern about the use of an improper roof design, the project team has modified the design of the facility and revised drawings have also been provided to your staff for review. On a more complicated topic, your letter asserted an inadequacy in the differential settlement profile used for the design of the facility and requested a report documenting: (1) the justification for the design differential settlement profile for the WSB, addressing recognized uncertainties in the methodology and analytical approach used to derive the profile, and (2) the sensitivity of the current design to differential settlement, including an estimate of the maximum differential settlement that the structure can accommodate and still remain with design acceptance limits. The attachment to this letter provides detailed analysis on these issues.

In summary, NNSA considers that given the results from the WSB geotechnical and structural analysis report, the WSB has employed a justifiable and sufficiently conservative total differential settlement on which to base the facility design. In order to provide an enhanced margin of safety, NNSA will take steps to add reinforcement throughout the facility basemat to the degree described in the report.

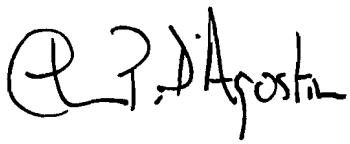
While NNSA views reinforcement to be a suitable alternative for this particular project, it is concerned with the inconsistent expectations for conservatism in new facility designs. Geotechnical analysis and the estimation of settlement have been topics of discussion with the DNFSB in recent years on a number of projects at SRS. SRS is leading the effort for the resolution of this issue. As you are aware, a meeting was held on June 12-13, 2008, with SRS

and its consultants, your staff, and a research team from the Georgia Institute of Technology to discuss the SRS Soft Zone Investigation Program. During this meeting, the participants agreed to refocus first-year program activities to specifically determine if the soft zones pose a static on cyclic issue and thus, to provide a potential new framework from which to consistently characterize and analyze the effects of soft zones on structural design. SRS is currently working with the Georgia Institute of Technology to finalize the scope of this multi-year program. The Soft Zone Investigation Program should result in a consistent approach to calculating the effect of soft zones on the design of future facilities.

I believe the agreement of the WSB project team to analyze the facility at a higher differential settlement and to incorporate design changes accommodating the results should not be viewed as a precedent for future facility designs. NNSA observes that no finding against national consensus codes or standards, or misapplication of DOE Orders or Standards was identified during this structural review. Furthermore, NNSA is committed to designing and constructing nuclear facilities in accordance with national standards and Departmental requirements.

I look forward to your continued collaboration with NNSA's capital projects. If you have any questions, please contact Ken Bromberg, Assistant Deputy Administrator for Fissile Materials Disposition, at (202)586-2695.

Sincerely,



Thomas P. D'Agostino
Administrator

Enclosure

cc: Mark Whitaker, DOE Representative to the DNFSB