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Document Control Desk
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

ATTENTION: R. W. BORCHARDT

SUBJECT: POLAR CRANE LOADS ON THE CONTAINMENT VESSEL

Dear Mr. Borchardt:

This letter provides clarification of the design conditions for the containment vessel with regards to the polar crane. The information is supplied to support the independent analyses of the containment vessel being performed by Ames Lab. The subject was discussed during the meeting on containment vessel design on July 5th and 6th and in a subsequent telecon on July 7th.

Ames Lab personnel used the AP600 Civil/Structural Design criteria provided for information by our letter of May 2, 1994 in order to develop load combinations for vessel analyses. The criteria are not clear on combinations of polar crane lift load, SSE and LOCA and Ames Lab included such a combination in their initial analyses. The AP600 design considers the following cases; the Civil/Structural design criteria will be revised to clarify these cases.

Plant operation - during plant operation, the polar crane is not used and is assumed to be in the specified parked position. The polar crane lift load is not included in the containment vessel analyses during plant operation. The polar crane dead and seismic loads are included in the containment vessel analyses for LOCA plus SSE.

Plant shutdown - during plant shutdown, the polar crane is used for refueling and maintenance. Analyses of the polar crane and its supports are performed for the critical lift (275 tons) in combination with the safe shutdown earthquake. Containment pressure and temperature are at ambient conditions during plant shutdown.

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If you have any questions on this clarification, please contact Mr. Richard S. Orr at (412) 374-5924.

N. J. Liparulo, Manager
Nuclear Safety Regulatory and Licensing Activities

/nja

Attachment

cc: L. Greimann Ames Lab
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