



South Texas Project Electric Generating Station P.O. Box 289 Wadsworth, Texas 77483

May 30, 2007
NOC-AE-07002170
10CFR50.55a

U. S. Nuclear Regulatory Commission
Attention: Document Control Desk
One White Flint North
11555 Rockville Pike
Rockville, MD 20852-2738

South Texas Project
Units 1 and 2
Docket No. STN 50-498, STN 50-499
Finite Element Analysis Status for Pressurizer Butt Welds

Reference: Letter, David W. Rencurrel to Document Control Desk, "Inspection and Mitigation of Alloy 82/182 Pressurizer Butt Welds - Revised," dated February 22, 2007 (NOC-AE-07002120, ML070600123)

As described in the referenced correspondence regarding inspection and mitigation of Alloy 82/182 pressurizer butt welds, additional refined crack growth calculations of the limiting pressurizer nozzle Alloy 82/182 weld configuration are being developed using three-dimensional finite element analysis. Modeling a changing crack shape, rather than a semi-elliptical flaw shape, is expected to result in a significant increase in the estimated time between through-wall penetration and rupture for the limiting case nozzle. STP Nuclear Operating Company (STPNOC) committed to provide a status of the analysis by May 31, 2007.

The analysis is on track for completion by the end of June 2007, with expected submittal of a final report by NEI in late July 2007. The analysis has incorporated input from the NRC staff. STPNOC expects that the results will support continued operation of STP Unit 1 until its spring 2008 refueling outage.¹ However, as committed in the referenced correspondence, STPNOC will adopt contingency plans to shut down Unit 1 by December 31, 2007, if technical information being developed through this advanced finite element analysis does not provide reasonable assurance to the NRC that pressurized water stress corrosion cracking (PWSCC) conditions will remain stable and not lead to rupture without significant time from the onset of detectable leakage.

¹ STPNOC requires the analysis results for application to Unit 1 only since weld overlay mitigation was performed on the STP Unit 2 pressurizer nozzles in spring 2007.

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NRC/NRR

STPNOC staff is available to meet with the NRC to discuss any of the information in this letter. If there are any questions, please contact either Mr. Philip L. Walker at (361) 972-8392 or me at (361) 972-7867.

There are no new commitments in this letter.



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cc:

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