



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

July 22, 2015
NOC-AE-15003276
10 CFR 50.55a

U. S. Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, DC 20555-0001

South Texas Project
Unit 1
Docket Nos. STN 50-498
Response to Request for Additional Information Regarding Relief Request
RR-ENG-3-17 Regarding Deferral of Inservice Inspection of Reactor Pressure
Vessel Cold Leg Nozzle Dissimilar Metal Butt Welds

References:

1. Letter; M. Berg to USNRC Document Control Desk; "Request for Relief from Code Case N-770-1, Subsection 2400 and Table 1 Inspection Frequency of Reactor Vessel Cold Leg Nozzle to Safe-end Welds with Flaw Analysis (Relief Request RR-ENG-3-17);" NOC-AE-15003250; dated April 24, 2015 (ML15133A130)
2. Letter; M. Berg to USNRC Document Control Desk; "Request for Relief from Code Case N-770-1, Subsection 2400 and Table 1 Inspection Frequency of Reactor Vessel Cold Leg Nozzle to Safe-end Welds with Flaw Analysis Supplement (Relief Request RR-ENG-3-17);" dated June 25, 2015
3. E-mail; L. Regner to L. Sterling; "NRC question: South Texas- RPV CL Relief" dated July 16, 2015

By Reference 1, as supplemented by Reference 2, STP Nuclear Operating Company (STPNOC) requested a relief request for South Texas Project (STP) Unit 1 for performing the reactor vessel Cold Leg nozzle to safe-end weld inspections, covered by ASME Code Case N-770-1. By Reference 3, the NRC staff requested additional information (RAI) to complete its review. STPNOC's response to Reference 3 is provided in the Enclosure to this letter.

There are no commitments in this letter.

If there are any questions, please contact Drew Richards at (361) 972-7666 or me at (361) 972-7030.

Michael Berg
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Enclosure: Response to Request for Additional Information Regarding Relief Request RR-ENG-3-17 Regarding Deferral of Inservice Inspection of Reactor Pressure Vessel Cold Leg Nozzle Dissimilar Metal Butt Welds

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**RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION REGARDING RELIEF
REQUEST RR-ENG-3-17 REGARDING DEFERRAL OF INSERVICE INSPECTION OF
REACTOR PRESSURE VESSEL COLD LEG NOZZLE DISSIMILAR METAL BUTT WELDS**

By letter dated April 24, 2015 (ADAMS Number ML15133A130), STP Nuclear Operating Company (the licensee) requested relief from requirements of the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code (B&PV Code) for the volumetric examination of the reactor pressure vessel (RPV) cold leg nozzle dissimilar metal (DM) butt welds at the South Texas Project (South Texas), Unit 1.

To complete its review, the NRC staff requests the following additional information.

1. In order for the NRC staff to perform a confirmatory flaw evaluation, provide the following information for the RPV cold leg DM welds under consideration.
 - a. Provide normal operating pressure that the South Texas, Unit 1, RPV cold leg DM welds are exposed to.

The NRC staff notes that Table 3-2 in Attachment 1 of relief request RR-ENG-3-17 shows the RPV inlet nozzle piping loads.

- b. Do the maximum pipe break loads given in Table 3-2 include the pressure loads. If the provided maximum pipe break loads did not include pressure loads, then provide the pressure loads.
 - c. Do the safe shutdown earthquake (SSE) loads given in Table 3-2 include both the SSE inertia loads and the SSE seismic anchor movement (SAM) loads. If the provided SSE loads did not include SSE inertia loads and SSE SAM loads, then provide SSE inertia loads and SSE SAM loads.

STPNOC Response:

- 1.a. The normal operating pressure for the South Texas, Unit 1, RPV cold leg DM welds is 2250 psia.
- 1.b. The pressure load is separate from the maximum pipe break loads in the evaluation. For normal operating conditions, an internal pressure of 2.25 ksi is used to calculate the internal axial pipe force (1333.5 kips). For upset, emergency, and faulted condition, an internal pressure of 2.71 ksi is conservatively used to calculate the internal axial pipe force (1606.1 kips).
- 1.c. The seismic spectral analysis, including the inertia effects, is based on a complete reactor coolant loop model. The seismic moments resulting from the anchor motions are typically considered in the piping evaluation if they are significant. However, the SAMs for the current evaluation were insignificant and therefore were not considered in the evaluation.