



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

September 20, 2010  
NOC-AE-10002592  
File No.: G25  
10 CFR 50.55a

U. S. Nuclear Regulatory Commission  
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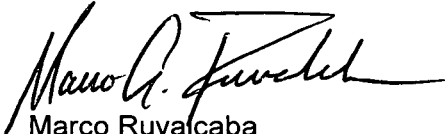
South Texas Project  
Units 1 and 2  
Docket Nos. STN 50-498, STN 50-499  
Request for Relief from ASME Section XI Code Requirements for  
Steam Generator Nozzle Non-Destructive Examination  
(Relief Request RR-ENG-3-01)

In accordance with the provisions of 10 CFR 50.55a(g)(6)(i), the STP Nuclear Operating Company (STPNOC) requests relief from the ASME Section XI code nondestructive examination requirements applicable to the South Texas Project steam generator main steam nozzle inside-radius sections. Due to their flow restrictor-type design, the South Texas Project steam generator main steam nozzles do not contain a high-stress inside-radius section for which the Section XI volumetric examination is intended. Therefore, compliance with the Section XI examination requirement is impractical.

There are no commitments in this correspondence.

STPNOC requests NRC review and approval of this relief request by March 1, 2011, to support implementation of the Unit 1 and Unit 2 Ten Year Inservice Inspection Plan for the third inspection interval.

If there are any questions, please contact either Mr. Philip Walker at 361-972-8392 or me at 361-972-7904.

  
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PLW

Attachment: Request for Relief from ASME Section XI Code Requirements for Steam Generator Nozzle Non-Destructive Examination (Relief Request RR-ENG-3-01)

STI: 32733139

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SOUTH TEXAS PROJECT  
UNITS 1 AND 2  
REQUEST FOR RELIEF FROM ASME SECTION XI CODE REQUIREMENTS FOR  
STEAM GENERATOR NOZZLE NON-DESTRUCTIVE EXAMINATION  
(RELIEF REQUEST RR-ENG-3-01)

A. Components Affected

- (a) Component: Steam generator
- (b) Description: Main steam nozzle, inside-radius section
- (c) Class: ASME Code Class 2

B. Applicable Code Requirement

The applicable code is ASME Section XI, 2004 Edition (no addenda).

ASME Section XI, Table IWC-2500-1, Code Category C-B, Item Number C2.22, requires that a volumetric examination of the inside-radius section of nozzles at terminal ends of piping runs be performed in accordance with Figure IWC-2500-4(a), (b), or (d) each inspection interval. The applicable nozzles include those welded to or integrally cast in vessels that connect to piping runs selected for examination under Examination Category C-F, excluding manways and handholes.

C. Basis for Relief from Code Requirements

In accordance with the provisions of 10CFR50.55a(g)(5)(iii), the STP Nuclear Operating Company (STPNOC) requests relief from the Section XI code requirement for a volumetric examination of the inside-radius section of the Unit 1 and 2 steam generator main steam nozzles because compliance with the requirement is impractical.

D. Alternative Examination:

No alternative examination is proposed in lieu of the volumetric examination for which relief is requested.

E. Justification for Granting Relief

The inside-radius section of main steam nozzles is considered susceptible to flaw initiation and growth due to the high thermal and mechanical stresses associated with the vessel and connected piping systems. Each South Texas Project steam generator main steam nozzle is a one-piece forging with a set of seven holes bored parallel to the nozzle centerline. The design does not correspond to Figure Nos. IWC-2500-4(a), (b), or (d) and does not have a "radius bend". Furthermore, the borehole orientation precludes a meaningful ultrasonic examination in the area of the inner radius. Because of this design configuration, the examination required by Section XI would not provide any meaningful results. In addition, because the ligaments between the holes distribute the stresses throughout the nozzle forging, the South Texas Project steam generator main steam nozzles have no high-stress inside-radius section.

These design considerations make the code-required inservice inspection impractical for application at the South Texas Project.

F. Implementation Schedule

STPNOC requests relief from ASME Section XI nondestructive examination requirements for the steam generator main steam nozzle inside radius sections for the duration of the third ten-year inservice inspection interval of Units 1 and 2. The Nuclear Regulatory Commission is requested to review and approve this relief request by March 1, 2011, to support implementation of the Unit 1 and Unit 2 Ten Year Inservice Inspection Plan for the third interval.

G. Precedent

Relief from this examination requirement was previously approved by the NRC for the South Texas Project second 10-year interval inservice inspection program by safety evaluation dated December 15, 1999 (ML993570106) for Relief Request RR-ENG-2-2.