



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

September 20, 2010
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File No.: G25
10 CFR 50.55a

U. S. Nuclear Regulatory Commission
Attention: Document Control Desk
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11555 Rockville Pike
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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
Reactor Pressure Vessel Flange Insert Non-Destructive Examination
(Relief Request RR-ENG-3-02)

In accordance with the provisions of 10 CFR 50.55a(a)(3)(i), the STP Nuclear Operating Company (STPNOC) requests relief from the ASME Section XI code nondestructive examination requirements applicable to the South Texas Project reactor pressure vessel flange inserts. As an alternative to the visual examination, the South Texas Project proposes to perform a straight beam ultrasonic examination from the top surface of each insert (36 per unit) as described in the attached relief request.

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.

Marco Ruvalcaba
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PLW

Attachment: Request for Relief from ASME Code Section XI Code Requirements for Reactor Pressure Vessel Flange Insert Non-Destructive Examination (Relief Request RR-ENG-3-02)

STI: 32733140

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SOUTH TEXAS PROJECT
UNITS 1 AND 2
REQUEST FOR RELIEF FROM ASME SECTION XI CODE REQUIREMENTS FOR
REACTOR PRESSURE VESSEL FLANGE INSERT NON-DESTRUCTIVE EXAMINATION
(RELIEF REQUEST RR-ENG-3-02)

A. Components Affected

(a) Component: Reactor Pressure Vessel

(b) Description: Roto-Lok flange inserts (bushings)

The vessel insert material specification is SA-540, Class 3, Gr. B-24 (as modified by Code Case 1605).

(c) Class: ASME Code Class 1

B. Applicable Code Requirement

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

IWB-2500, Table IWB-2500-1, Code Category B-G-1, Item Number B6.50 requires that all bushings receive a visual, VT-1 examination each inspection interval. Examination of bushings and threads in flange base material is required only when the connections are disassembled. Bushings may be inspected in place.

C. Basis for Relief from Code Requirements

In accordance with the provisions of 10 CFR 50.55a(a)(3)(i), STP Nuclear Operating Company (STPNOC) requests relief from the Section XI code requirement for a visual, VT-1 examination of reactor pressure vessel bushings and threads in flange base material. Roto-Lok flange inserts (see attached illustration) consist of conventional threads on the outside surface and three rows of lugs on the inside surface. With the Roto-Lok flange inserts in place in the reactor vessel flange, portions of the lugs are not accessible for Visual, VT-1 examination.

D. Alternative Examination:

Pursuant to 10 CFR 50.55a(a)(3)(i), STPNOC proposes to perform a straight beam ultrasonic examination of the vessel inserts from the top end of the vessel inserts as an alternative to the Code-required Visual, VT-1 examination. The proposed alternative examination is to be performed concurrently with that of the vessel flange thread volumetric examination to inspect for radial-circumferential flaws.

E. Justification for Granting Relief

Performing the examination concurrent with the vessel flange thread ultrasonic examination will reduce total radiation exposure. The ultrasonic technique will examine the entire length of the vessel insert and is superior to the VT-1 examination. The straight beam ultrasonic examination procedure has been demonstrated to ensure examination adequacy.

Volumetric examination in lieu of the Visual, VT-1 examination was successfully performed during the Second Inservice Inspection Interval at STP Units 1 and 2. A calibration block was prepared in accordance with ASME Section XI, Appendix VI, Table VI-2430-1 to examine the entire length of the vessel insert.

The proposed alternate straight beam ultrasonic examine will ensure continued structural integrity of the vessel inserts and provide a comparable or superior level of quality and safety when compared to the Code-required Visual, VT-1 examination.

F. Implementation Schedule

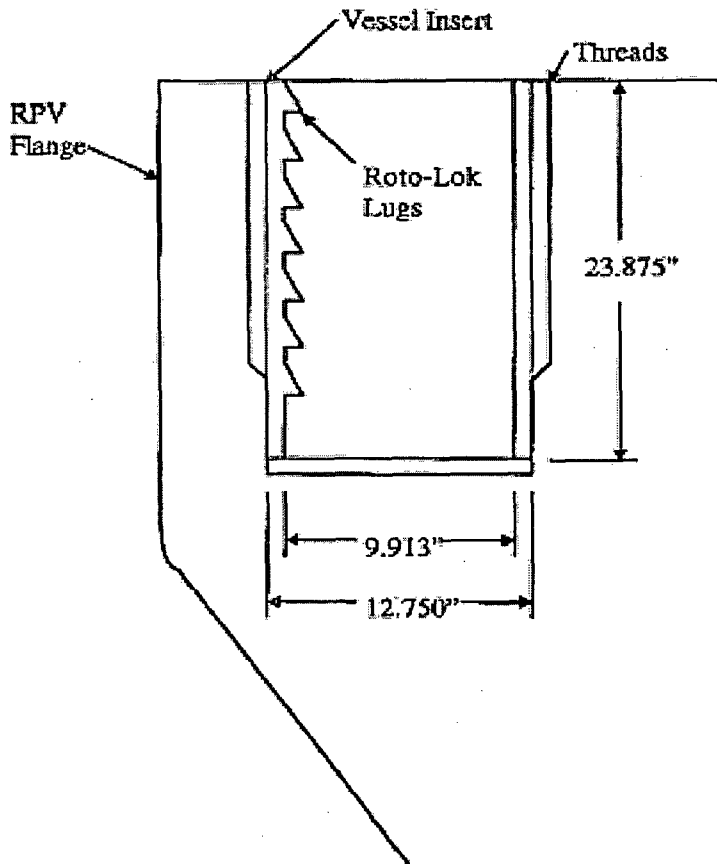
STPNOC requests relief from ASME Section XI nondestructive examination requirements for the reactor pressure vessel flange inserts for the duration of the third ten-year inservice inspection interval of Units 1 and 2. The Nuclear Regulatory Commission is requested to review and approve this relief request 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 to apply the proposed alternative at the South Texas Project was previously approved by the NRC for the second 10-year inservice inspection interval:

- Inservice Inspection Program, Relief Request RR-ENG-2-5 (June 17, 1999) (TAC Nos. MA5462 and MA5463)

ILLUSTRATION OF ROTO-LOK FLANGE INSERT



Reference Westinghouse (vendor) drawings 11073-179-003, rev. 03 and 11073-171-006, rev. 1.
There are three sets of Roto-Lok lugs equally spaced around the inner circumference of the vessel insert.