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

October 26, 2004
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10CFR50.54(f)

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

South Texas Project
Units 1 and 2
Docket No. STN 50-498 and STN 50-499
Response to NRC Generic Letter 2004-01

The Attachment to this letter provides STP Nuclear Operating Company's response to NRC Generic Letter 2004-01: Requirements for Steam Generator Tube Inspections, dated August 30, 2004.

There are no new commitments in this letter.

If there are any questions regarding this response, please contact John Conly, at (361) 972-7336 or me at (361) 972-7902.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on October 26, 2004

T. J. Jordan
Vice President,
Engineering & Technical Services

jtc

Attachment: Response to NRC Generic Letter 2004-01

A115

STI: 31801349

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Attachment

Response to NRC Generic Letter 2004-01

Requested Information

Within 60 days of the date of this generic letter, addressees are requested to provide the following information to the NRC:

1. Addressees should provide a description of the SG tube inspections performed at their plant during the last inspection. In addition, if they are not using SG tube inspection methods whose capabilities are consistent with the NRC's position, addressees should provide an assessment of how the tube inspections performed at their plant meet the inspection requirements of the TS in conjunction with Criteria IX and XI of 10 CFR Part 50, Appendix B, and corrective action taken in accordance with Appendix B, Criterion XVI. This assessment should also address whether the tube inspection practices are capable of detecting flaws of any type that may potentially be present along the length of the tube required to be inspected and that may exceed the applicable tube repair criteria.

Response

Steam generator tube inspections performed at the South Texas Project (STP) are consistent with the NRC's position regarding tube inspections.

South Texas Project Units 1 and 2 each has four Delta 94 replacement steam generators. The tubing material in each of the steam generators is Alloy 690 thermally treated. In addition, the first seventeen rows had the U-bend area stress relieved after bending. The tubes are fully hydraulically expanded into the tube sheet.

STP Nuclear Operating Company performed the following steam generator tube inspections in Unit 2 during the last inspection, which was completed in April 2004. This scope applied to each of the four steam generators in Unit 2:

- bobbin coil eddy current test (ET) of the full length of all in-service tubes
- motorized rotating probe ET of the area from the hot leg tube end to a point 3 inches above the secondary face of the tubesheet of 3% of all in-service tubes
- motorized rotating probe ET of 20% of the reported dings 5.0 volts and less in amplitude at tube support plates
- motorized rotating probe ET of all dings greater than 5.0 volts in amplitude
- motorized rotating probe ET of the U-bend area between the uppermost tube support plates of sixteen Row 1 tubes

For Unit 1, the October 2001 inspection scope for the first inservice inspection after SG replacement was a 100% full-length (i.e., from hot leg tube end to cold leg tube end, including the U-bends) inspection of all SG tubes in service in all SGs. This scope was significantly greater than would be required by the Technical Specifications for both the first and second inservice inspections after replacement. The inspection results showed no degraded or defective tubes.

South Texas Project uses tube inspection methods that are capable of detecting flaw types that may be present. A degradation assessment that includes operating experience is performed prior to each inspection to identify degradation mechanisms that may be present and a technique validation assessment is performed to verify that the eddy current techniques are capable of detecting those flaw types identified in the degradation assessment.

2. If addressees conclude that full compliance with the TS in conjunction with Criteria IX, XI and XVI of 10 CFR Part 50, Appendix B, requires corrective actions, they should discuss their proposed corrective actions (e.g., changing inspection practices consistent with the NRC's position or submitting a TS amendment request with the associated safety basis for limiting the inspections) to achieve full compliance. If addressees choose to change their TS, the staff has included in the attachment suggested changes to the TS definitions for a tube inspection and for plugging limits to show what may be acceptable to the staff in cases where the tubes are expanded for the full depth of the tubesheet and where the extent of the inspection in the tubesheet region is limited.

Response

Steam generator tube inspections performed at South Texas Project are consistent with the NRC's position regarding tube inspections. Therefore this question does not apply.

3. For plants where SG tube inspections have not been or are not being performed consistent with the NRC's position on the requirements in the TS in conjunction with Criteria IX, XI, and XVI of 10 CFR Part 50, Appendix B, the licensee should submit a safety assessment (i.e., a justification for continued operation based on maintaining tube structural and leakage integrity) that addresses any differences between the licensee's inspection practices and those called for by the NRC's position. Safety assessments should be submitted for all areas of the tube required to be inspected by the TS where flaws have the potential to exist and inspection techniques capable of detecting these flaws are not being used, and should include the basis for not employing such inspection techniques. The assessment should include an evaluation of (1) whether the inspection practices rely on an acceptance standard (e.g., cracks located at least a minimum distance of x below the top of the tube sheet, even if these cracks cause complete severance of the tube) which is different from the TS acceptance standards (i.e., the tube plugging limits or repair criteria), and (2) whether the safety assessment constitutes a change to the "method of evaluation" (as defined in 10 CFR 50.59) for establishing the structural and leakage integrity of the joint. If the safety assessment constitutes a change to

the method of evaluation under 10 CFR 50.59, the licensee should determine whether a license amendment is necessary pursuant to that regulation.

Response

Steam generator tube inspections performed at South Texas Project are consistent with the NRC's position regarding tube inspections. Therefore this question does not apply.