



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

January 20, 2015

Mr. Dennis L. Koehl
President and CEO/CNO
STP Nuclear Operating Company
South Texas Project
P.O. Box 289
Wadsworth, TX 77483

SUBJECT: SOUTH TEXAS PROJECT, UNIT 2 – REVIEW OF THE FALL 2013 STEAM
GENERATOR TUBE INSPECTION REPORT PERFORMED DURING
REFUELING OUTAGE 2RE16 (TAC NO. MF4193)

Dear Mr. Koehl:

By letter dated May 22, 2014 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML14161A146), as supplemented by letters dated November 20 and November 24, 2014 (ADAMS Accession Nos. ML14337A043 and ML14352A230, respectively), STP Nuclear Operating Company (the licensee), submitted information summarizing the results of the 2013 steam generator inspections performed at the South Texas Project (STP), Unit 2, during refueling outage 2RE16.

The U.S. Nuclear Regulatory Commission (NRC) staff has completed its review of the submittal and concludes that the licensee provided the information required by the STP, Unit 2, technical specifications. No additional follow-up is required at this time. The results of the NRC staff's review and observations are enclosed.

If you have any questions, please contact me at (301) 415-1906 or via e-mail at Lisa.Regner@nrc.gov.

Sincerely,

A handwritten signature in black ink, appearing to read "Lisa M. Regner", written over a horizontal line.

Lisa M. Regner, Senior Project Manager
Plant Licensing Branch IV-1
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-499

Enclosure:
As stated

cc w/encl: Distribution via Listserv



UNITED STATES
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REVIEW OF THE 2013 STEAM GENERATOR INSPECTION REPORT

STP NUCLEAR OPERATING COMPANY

SOUTH TEXAS PROJECT, UNIT 2

DOCKET NO. 50-499

By letter dated May 22, 2014 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML14161A146), as supplemented by letters dated November 20 and November 24, 2014 (ADAMS Accession Nos. ML14337A043 and ML14352A230, respectively), STP Nuclear Operating Company (the licensee), submitted information summarizing the results of the 2013 steam generator (SG) inspections performed at the South Texas Project (STP), Unit 2, during refueling outage 2RE16.

In December 2002, STP, Unit 2 replaced its SGs with four Westinghouse model Delta 94 SGs. Each SG contains 7,585 thermally treated Alloy 690 tubes. The tubes have a nominal outside diameter of 0.688 inches, a nominal wall thickness of 0.040 inches, and are supported by stainless steel tube support plates (TSPs) with trefoil-shaped holes. The U-bends of the tubes in rows 1 through 17 were thermally stress relieved after bending.

The licensee provided the scope, extent, methods, and results of its SG tube inspections in the documents referenced above. In addition, the licensee described corrective actions (e.g., tube plugging) taken in response to the inspection findings.

After review of the information provided by the licensee, the U.S. Nuclear Regulatory Commission (NRC) staff has the following comments/observations:

- The replacement SGs have operated for 112.19 effective full power months since the first inservice inspection. The next SG tube inspections are expected to take place during refueling outage (RFO) 19 in the spring of 2018.
- Loose parts tend to deposit in SG 2D because the feedwater piping for SG 2D is the last outlet on the common header. About 50 percent of the loose parts typically deposit into SG 2D, while the remaining 50 percent deposit in the other three SGs.
- Proximity signals have been present since the first inservice inspection conducted during RFO 10. No degradation has been associated with proximity indications. The licensee plans to inspect proximity indications via rotating pancake coil probe.
- Dings occurred in the tubing near the periphery of the ninth TSP as a result of fabrication (uneven heating during welding). A small number of new dings are reported each inspection outage, but the licensee does not believe that new dings are developing. Instead, the licensee believes that dings just below the reporting threshold (2 Volts) in previous outages begin to measure just above the

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threshold in following outages due to measurement uncertainty variations of indicated size from inspection to inspection.

No additional tubes were plugged in SGs 2A, 2B, 2C, and 2D during RFO 2RE16.

Based on a review of the information provided by the licensee, the NRC staff concludes that the licensee provided the information required by its technical specifications. The SG tube inspections at STP, Unit 2 appear to be consistent with the objective of detecting potential tube degradation and the inspection results appear to be consistent with industry operating experience at similarly designed and operated units.

January 20, 2015

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STP Nuclear Operating Company
South Texas Project
P.O. Box 289
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SUBJECT: SOUTH TEXAS PROJECT, UNIT 2 – REVIEW OF THE FALL 2013 STEAM GENERATOR TUBE INSPECTION REPORT PERFORMED DURING REFUELING OUTAGE 2RE16 (TAC NO. MF4193)

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Sincerely,

/RA/

Lisa M. Regner, Senior Project Manager
Plant Licensing Branch IV-1
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

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ADAMS Accession No. ML15013A101

***Memo dated January 7, 2015**

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