



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

April 16, 2013

Vice President, Operations
Entergy Nuclear Operations, Inc.
Indian Point Energy Center
450 Broadway, GSB
P.O. Box 249
Buchanan, NY 10511-0249

SUBJECT: INDIAN POINT NUCLEAR GENERATING UNIT NO. 3 – CONFERENCE CALL
SUMMARY REGARDING THE SPRING 2013 STEAM GENERATOR TUBE
INSPECTIONS (TAC NO. MF0741)

Dear Sir or Madam:

On March 18, 2013, the staff of the Steam Generator Tube Integrity and Chemical Engineering Branch (ESGB) of the Division of Engineering participated in a conference call with representatives of Entergy Nuclear Operations, Inc., the licensee, regarding the ongoing steam generator tube inspection activities at Indian Point Nuclear Generating Unit No. 3. The purpose of the call was to ensure that acceptable steam generator tube inspections were being performed and that tube integrity is being maintained. At the time of the conference call, the inspections were approximately 80 percent complete.

The ESGB staff noted that the licensee did not take any exceptions to the industry Pressurized Water Reactor Steam Generator Examination Guidelines. The staff concluded that there were no issues requiring immediate follow-up actions. A summary of the conference call is attached.

Please feel free to contact me at 301-415-1364 if you have any questions.

Sincerely,

A handwritten signature in black ink that reads "Douglas V. Pickett".

Douglas V. Pickett, Senior Project Manager
Plant Licensing Branch I-1
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-286

Enclosure:
Summary of Conference Call

cc w/encl: Distribution via Listserv

SUMMARY OF CONFERENCE CALL WITH
ENTERGY NUCLEAR OPERATIONS INC.
REGARDING THE SPRING 2013 STEAM GENERATOR TUBE INSPECTIONS
INDIAN POINT NUCLEAR GENERATING UNIT NO. 3
DOCKET NO. 50-286

On March 18, 2013, the staff of the Steam Generator Tube Integrity and Chemical Engineering Branch of the Division of Engineering participated in a conference call with representatives of Entergy Nuclear Operations, Inc., the licensee, regarding the ongoing steam generator (SG) tube inspection activities at Indian Point Nuclear Generating Unit No. 3. At the time of the conference call, the inspections were approximately 80 percent complete. The licensee predicted closeout of eddy current testing in the SGs by March 19, 2013.

There was no observed primary-to-secondary leakage during the recently completed cycle and no secondary side pressure tests were performed.

No exceptions were taken to the industry Pressurized Water Reactor Steam Generator Examination Guidelines.

The scope of the steam generator (SG) tube inspections included:

- A 50 percent sample with the bobbin probe, from the hot-leg tube end to the cold-leg tube end, in all four SGs. This sample included all tubes with previous indication history.
- A 60 percent sample with an array probe, at the top-of-the-tubesheet (TTS) on the hot-leg side of all four SGs. These inspections were performed in a manner that ensured the entire periphery of each hot-leg was included in the 60 percent sample.
- A 22 percent sample with an array probe, at the TTS on the cold-leg side of all four SGs. These inspections were performed in a manner that ensured the entire periphery of each cold-leg was included in the 22 percent sample.
- All possible loose part (PLP) indications that were identified in the TTS inspections and/or bobbin inspections were further examined and bounded by inspections in the tubes surrounding the PLP indications with a magnetic rotating pancake coil (MRPC) probe.
- A 50 percent sample of the row 1 and 2 U-bends was performed with an MRPC probe in all four SGs.

Dent and ding exams included:

- SG 31 – 100 percent of dings greater than or equal to five volts and 100 percent of dents greater than or equal to two volts were examined with an MRPC probe.

Enclosure

- SG 32 – 100 percent of dings greater than or equal to five volts and 100 percent of dents greater than or equal to two volts with an MRPC Probe.
- SG 33 – There were no dings or dents that met the greater than or equal to 5.0 volt or 2.0 volt criteria, so a 25 percent sample of dings and dents of lesser voltage values were sampled with an MRPC probe.
- SG 34 – 30 percent of dings greater than or equal to five volts and dents greater than or equal to two volts with an MRPC probe. This sample completed 100 percent of all dings and dents meeting the criteria from refueling outage 12 (RFO12), RFO14, and RFO17.

The licensee clarified that there was no degradation found in any of the inspections. At the time of the call, the licensee was projecting that they would not plug any tubes in any of the SGs. No in-situ pressure testing was scheduled and no tube pulls were planned.

The bobbin and array probes were used to identify PLP indications from the TTS to the first tube support plate in each SG. Very few secondary side PLPs were identified and no tube damage was attributed to a loose part.

Sludge lancing of the four SGs removed the following amounts of sludge; SG 31 – 40 pounds; SG 32 – 42 pounds; SG 33 – 41 pounds; SG 34 – 34 pounds.

After sludge lancing, the licensee performed a visual inspection of the TTS and a foreign object search and retrieval inspection. In SG 31, a 1 inch long wire (1/64 of an inch in diameter) was found and left in service. In SG 32, a 1 inch long wire (1/64 of an inch in diameter) and a piece of gasket material (1 ¼ inches long and fixed in place) were found and left in service. In SG 33, no secondary side loose parts were found. In SG 34, one very small sludge rock was found and left in service. The licensee evaluated these loose parts and concluded that none of these loose parts would cause any tube damage.

In addition to the loose part inspections discussed above, the secondary side inspection scope this outage included the steam drum, the upper bundle, and the seventh tube support plate of both SGs 33 and 34. At the time of the call, only the inspection of the steam drum in SG 33 remained. No sizable deposits were noted during the secondary side inspections of SGs 33 and 34.

During RFO12 in 2003, a traceable anomaly was reported in SG 32, row 5 column 37, at the hot-leg top-of-tube sheet. In response to a question from the Nuclear Regulatory Commission staff, the licensee reported that during the current outage (RFO17), this tube was inspected with both the bobbin coil and array probe, and no detectable degradation was detected. A review of the data from RFO12 and RFO17, for the tube in question, was performed.

The NRC staff did not identify any issues that warranted immediate follow-up action.

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The ESGB staff noted that the licensee did not take any exceptions to the industry Pressurized Water Reactor Steam Generator Examination Guidelines. The staff concluded that there were no issues requiring immediate follow-up actions. A summary of the conference call is attached.

Please feel free to contact me at 301-415-1364 if you have any questions.

Sincerely,

/ra/

Douglas V. Pickett, Senior Project Manager
Plant Licensing Branch I-1
Division of Operating Reactor Licensing
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