

April 1, 2002

Mr. William R. McCollum, Jr.
Vice President, Oconee Site
Duke Energy Corporation
7800 Rochester Highway
Seneca, SC 29672

SUBJECT: SUMMARY OF TELEPHONE CONFERENCES WITH DUKE ENERGY
RE: STEAM GENERATOR INSPECTION RESULTS AT OCONEE NUCLEAR
STATION, UNIT 3 (TAC NO. MB3180)

Dear Mr. McCollum:

On November 15 and November 29, 2001, your staff and our staff participated in conference calls regarding the steam generator inspection activities at Oconee Nuclear Station, Unit 3. We documented our request and suggested agenda for these calls in our letter dated October 26, 2001. Enclosure 1 is a brief summary of the calls, and Enclosure 2 is material your staff sent us in preparation for the calls.

Based on the information discussed during the calls, we did not identify any issues requiring further discussion.

Sincerely,

/RA/

Leonard N. Olshan, Project Manager, Section 1
Project Directorate II
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket No. 50-287

Enclosures: 1. Summary of Conference Call With Duke Energy Regarding Current Steam
Generator Inspection Results at Oconee Unit 3
2. Telefax entitled, "ONS 3EOC-19 S/G Inspection Plans and Results"

cc w/encls: See next page

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SUMMARY OF CONFERENCE CALL
WITH
DUKE ENERGY
REGARDING CURRENT STEAM GENERATOR INSPECTION RESULTS
AT OCONEE, UNIT 3

The NRC staff participated in conference calls with Duke Energy (the licensee) on November 15 and November 29, 2001, to discuss the plans and results of the steam generator tube inspection activities at Oconee Nuclear Station, Unit 3 (Oconee 3).

Topics discussed during the conference calls consisted of initial eddy current testing scope, scope expansion plans, indications identified to-date, repair/plugging plans, new inspection findings, in-situ pressure test plans and actions taken in response to lessons learned from the Indian Point 2 tube failure.

During the November 15, 2001, conference call, the licensee discussed its plans for addressing the potential for plugged tubes to affect adjacent active tubes at Oconee 3. As a result of findings at Three Mile Island Unit 1 (TMI-1), discussed in NRC Information Notice 2002-02, "Recent Experience with Plugged Steam Generator Tubes (ML013480327)," the licensee elected to deplug and inspect approximately 48 tubes with alloy 600 plugs and 73 tubes whose original alloy 600 plugs were replaced with alloy 690 plugs. This population was intended to include all tubes which passed through drilled hole locations at the tube support plates. These tubes are located in the outer periphery of the tube bundle. The licensee was not planning to deplug and inspect any tube that had been originally repaired with an alloy 690 plug on the basis that the inspections at TMI-1 did not reveal any water or swelling in these tubes and that there were significant improvements in the installation process when alloy 690 plugs were installed. However, because the number of inspections in alloy 690 plugs at TMI-1 were very limited, the staff suggested that the licensee may want to consider unplugging some of the outer periphery tubes originally plugged with alloy 690 plugs to further support the TMI-1 findings.

The November 29, 2001, conference call focused on the Oconee 3 steam generator tube inspection results. At the time of this conference call, the inspections were completed and the plant was performing tube plugging in the steam generators.

As a result of the inspections, 165 eddy current indications were found in steam generator A and 81 in steam generator B. Most of them were axial in nature and in the freespan region. Of the 6 tubes with indications at dented locations, some were axial in nature while others were circumferential. These indications were estimated to be short and shallow with the circumferential indications measuring less than 0.7 inch in arc length. No new degradation mechanisms were detected during this outage.

None of the indications detected during the outage exceeded the criteria which would require the performance of an in-situ pressure test. Nonetheless, the licensee elected to in-situ pressure test several indications to three times the normal operating differential pressure. The

indications tested included axial flaws (one had the highest plus-point voltage, one with the longest length which was a 7-inch long axial indication), and several volumetric flaws attributed to impingement. The deepest of these was estimated to be 75 percent through-wall. A total of 13 tubes were in-situ tested to three times the normal operating differential pressure. None of these indications leaked during the test.

The licensee plans to plug a total of 354 tubes as a result of the inspections. This includes the tubes with the 246 indications discussed above and 110 tubes to capture non-stabilized plugged tubes. The latter tubes were plugged in response to the findings at TMI-1 (i.e., to prevent a non-stabilized tube from severing and impacting an active tube).

Based on the information discussed during the conference calls, the staff did not identify any issues requiring further discussion.

Subsequent to the conference calls, the licensee provided additional inspection results in letters dated December 6, 2001, "End-of-Cycle 19 Steam Generator Tube Inspection - Report on Indication of Circumferential Defects (ML020170422)," and December 20, 2001, "Steam Generator Inservice Inspection - Steam Generator Tube Plugging and Repair 30-day Report (ML020240179)."

Also, during a public meeting on January 31, 2002 (ML020580478), it was indicated that 4 tubes in the outer periphery of the tube bundle had been plugged with alloy 600 plugs and were not deplugged and inspected during the outage. These plugs had been repaired following installation and were not identified until after the inspections were completed.

Oconee Nuclear Station

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