



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

July 7, 2010

Mr. Regis T. Repko
Vice President
McGuire Nuclear Station
Duke Energy Carolinas, LLC
12700 Hagers Ferry Road
Huntersville, NC 28078

SUBJECT: MCGUIRE NUCLEAR STATION, UNIT 1 (MCGUIRE 1) - REVIEW OF THE 2008
STEAM GENERATOR (SG) TUBE INSPECTIONS DURING REFUELING
OUTAGE 19 END OF CYCLE (EOC 19) (TAC NO. ME1139)

Dear Mr. Repko:

By letter dated February 2, 2009 (Agencywide Documents Access Management System Accession No. ML090490836), Duke Energy Carolinas, LLC (the licensee), submitted information summarizing the results of the 2008 SG tube inspections at McGuire 1. These inspections were performed during EOC 19. The Nuclear Regulatory Commission (NRC) staff conducted a conference call with the licensee on February 2, 2010, to clarify a few items in this letter.

The NRC staff has completed its review of the submittal and concludes that the licensee provided the information required by the McGuire 1 Technical Specifications. No additional follow up is required at this time. The NRC staff's review, which includes a summary of the February 2, 2010, discussion, is enclosed.

If you have any questions, please call me at 301-415-1119.

Sincerely,

A handwritten signature in black ink, reading "Jon Thompson".

Jon Thompson, Project Manager
Plant Licensing Branch II-1
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-369

Enclosure:
As stated

cc w/encl: Distribution via Listserv

STAFF EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO RESULTS OF 2008 STEAM GENERATOR TUBE INSPECTIONS
PERFORMED DURING REFUELING OUTAGE 19
MCGUIRE NUCLEAR STATION, UNIT 1
DOCKET NO. 50-369

By letter dated February 2, 2009 (Agencywide Documents Access Management System Accession No. ML090490836), Duke Energy Carolinas, LLC (the licensee), submitted information summarizing the results of the 2008 steam generator (SG) tube inspections at McGuire Nuclear Station, Unit 1 (McGuire 1). These inspections were performed during refueling outage 19 End of Cycle (EOC 19).

McGuire 1 has four Babcock and Wilcox International model CFR 80 SGs. Each SG contains 6633 thermally-treated Alloy 690 tubes. Each tube has a nominal outside diameter of 0.688 inches with a nominal wall thickness of 0.040 inches. The equilateral triangular tube pitch is 0.930 inches. The tubes are hydraulically expanded the entire depth of the tubesheet in both the hot-leg and cold-leg. The tubesheet is 26.63 inches thick without the clad. The tubes are flush welded to the primary face of the tubesheet. The tube support structures are lattice grids made of 410 stainless steel and the U-bend supports are 410 stainless steel.

The licensee provided the scope, extent, methods, and results of their SG tube inspections in the document referenced above. In addition, the licensee described corrective actions, such as tube plugging, taken in response to the inspection findings. The tubes in all four SGs were inspected this outage.

After reviewing the information provided by the licensee, the Nuclear Regulatory Commission (NRC) staff has the following comments/observations:

- The licensee reported that in SG B, the tube in row 104 column 107 was preventatively plugged due to the presence of a foreign object. On February 2, 2010, the licensee clarified that the foreign object was not removed and the tube was stabilized. The licensee stated that the tubes surrounding the stabilized tube will continue to be monitored with a bobbin probe.
- On February 2, 2010, the licensee clarified that secondary side inspections were performed in all SGs during Refueling Outage 19. The inspections included a foreign object search and retrieval in all SGs and visual inspections of the steam drum in SG A. In addition, sludge lancing was performed in all SGs. No issues were reported as a result of these activities.
- On February 2, 2010, the licensee clarified that the tube in row 97, column 72 was identified with a 27 percent through-wall wear indication. This tube was not preventatively plugged (unlike the tube in row 116, column 75, which was preventatively plugged due to a 27 percent through-wall indication) due to the slow growth rate of the indication. It was reported that the indication was 23 percent through-wall in 2004 and 27 percent through-wall during the 2008 refueling outage.

Enclosure

Based on a review of the information provided, the NRC staff concludes that the licensee provided the information required by the Technical Specifications. In addition, the NRC staff concludes that there are no technical issues that warrant follow-up action at this time since the inspections appear to be consistent with the objective of detecting potential tube degradation and that inspection results appear to be consistent with industry operating experience at similarly designed and operated units.

July 7, 2010

Mr. Regis T. Repko
Vice President
McGuire Nuclear Station
Duke Energy Carolinas, LLC
12700 Hagers Ferry Road
Huntersville, NC 28078

SUBJECT: MCGUIRE NUCLEAR STATION, UNIT 1 (MCGUIRE 1) - REVIEW OF THE 2008
STEAM GENERATOR (SG) TUBE INSPECTIONS DURING REFUELING
OUTAGE 19 END OF CYCLE (EOC 19) (TAC NO. ME1139)

Dear Mr. Repko:

By letter dated February 2, 2009 (Agencywide Documents Access Management System Accession No. ML090490836), Duke Energy Carolinas, LLC (the licensee), submitted information summarizing the results of the 2008 SG tube inspections at McGuire 1. These inspections were performed during EOC 19. The Nuclear Regulatory Commission (NRC) staff conducted a conference call with the licensee on February 2, 2010, to clarify a few items in this letter.

The NRC staff has completed its review of the submittal and concludes that the licensee provided the information required by the McGuire 1 Technical Specifications. No additional follow up is required at this time. The NRC staff's review, which includes a summary of the February 2, 2010, discussion, is enclosed.

If you have any questions, please call me at 301-415-1119.

Sincerely,

/RA/

Jon Thompson, Project Manager
Plant Licensing Branch II-1
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-369

Enclosure:
As stated

cc w/encl: Distribution via Listserv

DISTRIBUTION:

PUBLIC
LPL2-1 R/F
RidsAcrsAcnw_MailCTR Resource
RidsNrrDciCsgb Resource

RidsNrrDorLpl2-1 Resource
KKarwoski, NRR
A Obodoako, NRR
RidsOgcRp Resource

RidsRgn2MailCenter Resource
RidsNrrLAMOBrien Resource (hard copy)
RidsNrrPMMcGuire Resource (hard copy)

ADAMS Accession No. ML101820231

*no significant change to memo ML100570252

OFFICE	NRR/LPL2-1/PM	NRR/LPL2-1/LA	NRR/CSGB/BC	NRR/LPL2-1/BC	NRR/LPL2-1/PM
NAME	JThompson	MO'Brien (SLittle for)	RTaylor*	GKulesa	JThompson
DATE	7/01/10	07/01/10	2/26/10	7/7/10	7/7/10

OFFICIAL RECORD COPY