



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

June 21, 2012

Mr. J. R. Morris
Site Vice President
Catawba Nuclear Station
Duke Energy Carolinas, LLC
4800 Concord Road
York, SC 29745

SUBJECT: CATAWBA NUCLEAR STATION, UNIT 1 (CATAWBA 1) - REVIEW OF THE
2011 STEAM GENERATOR (SG) TUBE INSERVICE INSPECTIONS DURING
REFUELING OUTAGE (RFO) END OF CYCLE 19 (EOC 19) (TAC NO. ME7218)

Dear Mr. Morris:

By letter dated, (Agencywide Documents Access and Management System (ADAMS)
Accession No. ML11255A024), Duke Energy Carolinas, LLC (the licensee), submitted
information summarizing the results of the 2011 SG tube inspections performed during EOC 19
outage at Catawba 1.

The Nuclear Regulatory Commission (NRC) staff has completed its review of the submittal and
concludes that the licensee provided the information required by the Catawba 1 Technical
Specifications. No additional follow up is required at this time. The NRC staff's review of the
letter dated September 1, 2011, is enclosed.

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

Sincerely,

A handwritten signature in black ink that reads "Jon Thompson".

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

Docket No. 50-413

Enclosure:
Staff Evaluation

cc w/encl: Distribution via Listserv



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U.S. NUCLEAR REGULATORY COMMISSION
STAFF'S EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO RESULTS OF 2011 STEAM GENERATOR TUBE INSPECTIONS
PERFORMED DURING REFUELING OUTAGE 19
CATAWBA NUCLEAR STATION, UNIT 1
DOCKET NO. 50-413

By letter dated September 1, 2011 (Agencywide Documents Access Management System (ADAMS) Accession No. ML11255A024), Duke Energy Carolinas, LLC (the licensee), submitted information summarizing the results of the 2011 steam generator (SG) tube inspections performed during the end-of-cycle (EOC) 19 outage at Catawba Nuclear Station, Unit 1, (Catawba 1).

Catawba 1 has four replacement model CFR 80 SGs, installed in 1996, and designed and fabricated by Babcock and Wilcox International (BWI). Each SG has 6,633 thermally-treated Alloy 690 tubes that have an outside diameter of 0.6875 inches and a nominal wall thickness of 0.040 inches. The tubes were hydraulically-expanded at each end for the full depth of the tubesheet. The tubesheet is 27.1 inches thick with the cladding. The tubes are supported by lattice grid tube supports and fan/connector bars. All supports are constructed from Type 410 stainless steel.

The licensee provided the scope, extent, methods and results of their Catawba 1 SG tube inspections in the document referenced above. In addition, the licensee described corrective actions (i.e., tube plugging) taken in response to the inspection findings. The tubes in both SGs were inspected this outage.

On March 8, 2012, the licensee provided the following additional clarifying information via a conference call with the Nuclear Regulatory Commission (NRC) staff:

- A secondary side visual inspection was performed on a SG at the 7th lattice grid revealed light magnetite accumulation. Foreign object search and retrieval was performed in all four SGs. Sludge lancing was performed in all four SGs and 22 pounds of sludge was removed. Sixty-nine objects were left in the SGs. An evaluation was performed by the licensee and they concluded that tube integrity will be maintained until the next SG tube inspection with these parts left in the SGs.
- Thirteen new dent indications were detected. All indications were single indications.
- The header on page 6 of 20 should have referred to "EOC19."

Enclosure

- Elevated levels of sodium were observed during March/April 2009. The sodium levels were in Action Level 1 for approximately 5 days. The sodium levels were approximately 6.5 parts per billion. No adverse trends affecting the life of the SGs are expected.

Based on a review of the information provided, the NRC staff concludes that the licensee provided the information required by the Catawba 1 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 the inspection results appear to be consistent with industry operating experience at similarly designed and operated units.

Principal Contributor: A. Obodoako

Date: June 21, 2012

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/RA/

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Staff Evaluation

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ADAMS Accession No. ML12167A016

* No significant change to memo dated 6/4/12

OFFICE	NRR/LPL2-1/PM	NRR/LPL2-1/LA	NRR/CSGB/BC	NRR/LPL2-1/BC	NRR/LPL2-1/PM
NAME	JThompson	SFiguroa	GKulesa*	NSalgado	JThompson
DATE	06/21/12	06/15/12	06/4/12	06/21/12	06/21/12

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