



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

September 4, 2015

Mr. Kelvin Henderson  
Site Vice President  
Catawba Nuclear Station  
Duke Energy Carolinas, LLC  
4800 Concord Road  
York, NC 29745

SUBJECT: CATAWBA NUCLEAR STATION, UNIT 2 – REVIEW OF THE STEAM  
GENERATOR TUBE INSERVICE INSPECTION REPORT FOR THE  
SPRING 2015 REFUELING OUTAGE 20 (TAC NO. MF6452)

Dear Mr. Henderson:

By letter dated July 6, 2015 (Agencywide Documents Access and Management System, (ADAMS) Accession No. ML15190A109), Duke Energy Carolinas, LLC (the licensee) submitted information summarizing the results of the spring 2015 Steam Generator (SG) tube inspections at the Catawba Nuclear Station, Unit No. 2 (Catawba, Unit 2). These inspections were performed during refueling outage 20.

The NRC staff has completed its review of the information and concludes that Duke has provided the information required by the Catawba 2 Technical Specifications. No additional follow up is necessary at this time. The NRC staff's review of the SG inspection report is enclosed.

If you have any questions, please contact me at 301-415-2481 or via e-mail at [Ed.Miller@nrc.gov](mailto:Ed.Miller@nrc.gov).

Sincerely,

A handwritten signature in black ink, appearing to read "G. Edward Miller", is written over the typed name.

G. Edward Miller, Project Manager  
Plant Licensing Branch II-1  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Docket Nos. 50-414

Enclosure:  
As stated

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STAFF EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION  
RELATED TO RESULTS OF THE 2015 STEAM GENERATOR TUBE INSPECTIONS

DUKE ENERGY CAROLINAS, LLC

CATAWBA NUCLEAR STATION, UNIT 2

DOCKET NO. 50-414

By letter dated July 6, 2015 (Agencywide Documents Access and Management System Accession No. ML15190A109), Duke Power Company, LLC (the licensee), submitted information summarizing the results of the spring 2015 steam generator (SG) tube inspections at Catawba Nuclear Station, Unit 2 (Catawba, Unit 2). These inspections were performed during refueling outage 20.

Catawba, Unit 2, has four Westinghouse Model D5 SGs that were installed in 1986. Each SG has 4,570 thermally treated Alloy 600 tubes with an outside diameter of 0.750 inches and a nominal wall thickness of 0.043 inches. The tubes were hydraulically expanded at each end for the full depth of the tubesheet and are supported by Type 405 stainless steel support plates with quatrefoil-shaped holes. The U-bend region of the tubes in rows 1 through 9 were stress relieved after bending.

The licensee provided the scope, extent, methods, and results of their 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.

On August 6, 2015, the licensee clarified the following during a conference call:

- Fifty percent of all historical and all new dents greater than two volts, as measured by bobbin coil, were inspected using an array probe.
- The presumed crack-like indication found at the tube support plate elevation (04H) on the tube at row 29, column 75 (R29C75) initiated from the outside diameter of the tube. The tube at R29C75 is a 2-sigma tube (i.e., a tube with potentially elevated stresses). No denting is associated with the indication.

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 the inspection results appear to be consistent with industry operating experience at similarly designed and operated units.

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Site Vice President  
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If you have any questions, please contact me at 301-415-2481 or via e-mail at [Ed.Miller@nrc.gov](mailto:Ed.Miller@nrc.gov).

Sincerely,

/RA/

G. Edward Miller, Project Manager  
Plant Licensing Branch II-1  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

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ADAMS Accession No.: ML15238B752

\*Via SE Input

OFFICE	NRR/DORL/LPL2-1/PM	NRR/DORL/LPL2-1/LA	NRR/DE/ESGB/BC	NRR/DORL/LPL2-1/BC
NAME	GEMiller	SFigueroa	GKulesa (PKlein for)*	RPascarelli
DATE	09/03/15	09/01/15	08/17/15	09/04/15

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