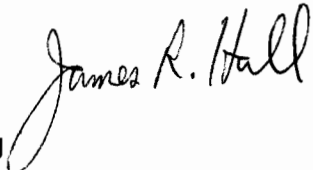




UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

March 9, 2016

MEMORANDUM TO: Michael T. Markley, Chief
Plant Licensing Branch II-1
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

FROM: James R. Hall, Senior Project Manager
Plant Licensing Branch II-1
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation 

SUBJECT: OCONEE NUCLEAR STATION, UNITS 1, 2, AND 3 - REQUEST FOR
ADDITIONAL INFORMATION FOR RELIEF REQUEST 14-ON-001,
LETDOWN COOLER NOZZLE WELDS (CAC NOS. MF6290, MF6291
AND MF6292)

By letter dated May 4, 2015 (Agencywide Documents and Access Management System (ADAMS) Accession No. ML15132A279), Duke Energy Carolinas, LLC, (the licensee) requested the Nuclear Regulatory Commission (NRC) to authorize relief from Section XI of the American Society of Mechanical Engineers Boiler and Pressure Vessel Code (ASME Code) related to inspection of the inside radius sections of the Letdown Cooler nozzles over the duration of the fifth (ten-year) in-service inspection (ISI) interval.

On February 25, 2016, the NRC staff and the licensee held a clarifying discussion on the staff's draft request for additional information (RAI), transmitted via e-mail on January 7, 2016 (ADAMS Accession No. ML16008A246). Based on that discussion, the NRC staff developed the attached final RAI, and requested that the licensee submit written responses to the revised questions, so that the staff can complete its review of the subject relief request.

Docket Nos. 50-269, 50-270, and 50-287

Attachment: Final RAI

cc w/attachment: Distribution via Listserv

FINAL REQUEST FOR ADDITIONAL INFORMATION

RELIEF REQUEST 14-ON-001

LETDOWN COOLER NOZZLE WELDS

OCONEE NUCLEAR STATION, UNITS 1, 2 AND 3

DUKE ENERGY CAROLINAS, LLC

DOCKET NOS. 50-269, 50-270 AND 50-287

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1. Please provide a more detailed description of the nozzle inside radius sections that are required to be ultrasonically examined per the ASME Code, Section XI, by either referring to the drawings in the relief request as a guide or by providing additional sketches or drawings of the subject welds/nozzles.
2. Section 1 of the relief request states that "... Oconee Unit 1 has two Letdown Coolers 1A and 1B. Each component has typically four B3.160 welds...." Please confirm that the required examination is on the attachment welds of the nozzles, not the nozzles themselves, and that the required examination is on the inside radius of the welds. It appears that the nozzles are forged and are attached to the side of a pipe as a branch connection. The welds are deposited on the inside and outside circumference of the nozzles that are attaching to the pipe. Is the staff's understanding correct? If not, please clarify.
3. Section 1 of the relief request states that, "The coolers also have operational ready spares of similar design that are rotated from spare to installed components as required

by maintenance..." What is the relevance of this sentence with respect to the required examination of the subject nozzle weld inside radius sections?

4. Briefly describe the design and operation of the letdown coolers. Are the subject nozzles connected to the tube side or shell side of the letdown cooler? What fluids flow in the tube side and shell side of the coolers? What are the operating and design pressures and temperatures of the subject nozzles? If the fluid is not from the reactor coolant system, is the fluid being chemically treated to minimize corrosion?
5. Discuss how the letdown cooler and letdown system would be affected if the subject nozzles/welds fail completely (i.e., what are the consequences if the nozzle fails?). Section 4 of the relief request states that the nozzles are "set-on"; discuss the possibility of the nozzle ejecting from the pipe. Alternatively, discuss the bases for concluding that catastrophic failure of the nozzles/welds will not occur.
6. Confirm that the subject nozzles are made of 3-inch, stainless steel forging. What is the nozzle wall thickness? What is the material of the pipe that the nozzle is attached to? What are the nominal pipe size and wall thickness of the pipe to which the nozzle is attached?
7. What is the weld filler material of the affected nozzles? Is the subject weld a full penetration weld, partial penetration weld, or fillet weld?
8. Has there been any leakage from or degradation of the subject nozzles/welds?

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ADAMS Accession No.: ML16061A565

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