

September 8, 2008

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

SUBJECT: CATAWBA NUCLEAR STATION, UNITS 1 AND 2, REQUEST FOR
ADDITIONAL INFORMATION (RAI) REGARDING RELIEF 06-CN-003, USE OF
POLYETHYLENE MATERIAL IN NUCLEAR SAFETY-RELATED PIPING
APPLICATIONS (TAC NOS. MD3729 AND MD3730)

Dear Mr. Morris:

By letter dated October 26, 2006, as supplemented by letters dated June 21, 2007, March 13, 2008, and May 29, 2008, Duke Energy Carolinas, LLC, the licensee, submitted a request for relief RR-06-CN-003 from the American Society of Mechanical Engineers (ASME), *Boiler and Pressure Vessel Code* (Code), Section XI, 1998 Edition through 2000 Addenda requirement pertaining to using high-density polyethylene (HDPE) pipe in lieu of the ASME Code requirements for Class 3 carbon steel piping for the ASME Code Class 3 piping for the third 10-year inservice inspection interval (ISI) at Catawba Nuclear Station, Units 1 and 2 (Catawba 1 and 2). There are a total of 8 lines for which the licensee is seeking approval for the use of HDPE pipe. These lines are the supply and return buried lines 1A, 1B, 2A and 2B, which run to and from the diesel generator jacket water coolers. The U.S. Nuclear Regulatory Commission (NRC) staff has identified additional information needed to complete its entire review of this relief request. The NRC staff is seeking information concerning supply lines 1B, 2B and return lines 1A, 1B, 2A, and 2B. The RAI is provided as an enclosure to this letter.

The NRC staff has concluded that the licensee has provided sufficient information for the NRC staff to accept the use of HDPE pipe for the 1A and 2A supply lines to the diesel generator jacket water coolers for the third 10-year ISI interval at Catawba 1 and 2. The NRC will document this in the near future.

Sincerely,

/RA/

John Stang, Senior Project Manager
Plant Licensing Branch II-1
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket Nos. 50-413 and 50-414

Enclosure:
Request for Additional Information

cc w/encl: See next page

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MECHANICAL AND CIVIL ENGINEERING BRANCH

REQUEST FOR ADDITIONAL INFORMATION

REGARDING RELIEF 06-CN-003, USE OF POLYETHYLENE MATERIAL IN NUCLEAR

SAFETY-RELATED PIPING APPLICATIONS

CATAWBA NUCLEAR STATION UNITS 1 AND 2

TAC NOS. MD3729 AND MD3730

By letter dated October 26, 2006, as supplement by letters dated June 21, 2007, March 13, 2008, and May 29, 2008, Duke Energy Carolinas, LLC, the licensee, submitted a request for relief RR-06-CN-003 from the American Society of Mechanical Engineers (ASME), *Boiler and Pressure Vessel Code* (Code), Section XI, 1998 Edition through 2000 Addenda requirement pertaining to using high-density polyethylene (HDPE) pipe in lieu of the ASME Code requirements for Class 3 carbon steel piping for the ASME Code Class 3, 12-inch nominal diameter supply and return buried piping to and from the diesel generator jacket water coolers for the third 10-year inservice inspection (ISI) interval at Catawba Nuclear Station, Units 1 and 2 (Catawba 1 and 2). There are a total of 8 lines for which the licensee is seeking approval for the use of HDPE pipe, supply and return lines 1A, 1B, 2A and 2B. The U.S. Nuclear Regulatory Commission (NRC) staff has identified additional information needed to complete its review of this relief request. The NRC staff is seeking information concerning supply lines 1B, 2B and return lines 1A, 1B, 2A, and 2B.

The NRC staff has concluded that the licensee has provided sufficient information for the NRC staff to accept the use of HDPE pipe for the 1A and 2A supply lines to the diesel generator jacket water coolers for the third 10-year ISI interval. The NRC will document this in the near future.

For the NRC staff to make a determination regarding the acceptability of the entire proposed alternative, the licensee is requested to respond to the following items.

1. In the relief request 06-CN-003, dated October 26, 2006, the licensee stated that the request for relief is to support a proposed alternative of utilizing polyethylene material in lieu of steel material in piping associated with the emergency diesel generator jacket water coolers and other nuclear safety related piping applications. The licensee is requested to clarify whether the relief request is limited to a total of eight (8) lines only, namely four (4) emergency diesel jacket water intake or supply lines (1A, 1B, 2A, 2B), and four (4) emergency diesel jacket water discharge lines (1A, 1B, 2A, 2B), and that no other nuclear safety related piping applications are included in the relief request.

2. In Appendix A of the October 26, 2006 letter (Analysis for Catawba Piping), of the relief request, the licensee included the detailed analytical calculations for 12 inch supply lines for Diesel Buildings 1A and 2A along with simple isometrics of the piping model. The licensee is requested to supplement its request to confirm that the analysis for supply lines 1B, & 2B, and

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discharge lines 1A, 1B, 2A, and 2B will employ the same methodology, assumptions, parameters, and allowable limits reviewed and approved by the staff for intake lines 1A and 2A. In addition to confirming the analysis methodology, the licensee is requested to provide (a) input parameters (pipe size, wall thickness, design pressure, and design temperature), (b) simple isometrics of the piping model, and (c) a summary of results based on as-designed analysis for the remaining six (6) emergency diesel jacket water lines, namely two (2) intake or supply lines (1B, & 2B), and four (4) discharge lines (1A, 1B, 2A, and 2B).

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