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

June 24, 2010

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

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

SUBJECT: CATAWBA NUCLEAR STATION, UNITS 1 AND 2 (CATAWBA 1 AND 2), AND MCGUIRE NUCLEAR STATION, UNITS 1 AND 2 (MCGUIRE 1 AND 2), REQUESTS FOR ADDITIONAL INFORMATION (RAI) REGARDING LICENSE AMENDMENT RELATED TO REQUEST TO REVISE BATTERY CONNECTION RESISTANCE ACCEPTANCE CRITERIA IN TECHNICAL SPECIFICATIONS (TAC NOS. ME2934, ME2935, ME2936, AND ME2937)

Dear Mr. Morris and Mr. Repko:

By letter dated December 14, 2009, Duke Energy Carolinas, LLC (the licensee), submitted a proposed license amendment to change the Catawba 1 and 2 and McGuire 1 and 2 Technical Specifications (TSs). The proposed change revises the TSs to allow a change in the battery connection resistance acceptance criteria.

The U.S. Nuclear Regulatory Commission (NRC) staff has reviewed the licensee's submittal and determined that additional information is needed in order to complete our review. The enclosed document describes this RAI. A written response should be provided to the NRC staff within 30 days of the issuance of this letter in order to support our timely review of this application.

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

Sincerely,

Jon Thompson

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

Docket Nos. 50-413, 50-414, 50-369, 50-370

Enclosure:
RAI

cc w/encl: Distribution via Listserv

REQUEST FOR ADDITIONAL INFORMATION (RAI)

BY THE OFFICE OF NUCLEAR REACTOR REGULATION

REGARDING LICENSE AMENDMENT RELATED TO

REVISION OF THE BATTERY CONNECTION RESISTANCE

ACCEPTANCE CRITERIA IN THE TECHNICAL SPECIFICATIONS (TSs)

CATAWBA NUCLEAR STATION, UNITS 1 AND 2 (CATAWBA 1 AND 2)

MCGUIRE NUCLEAR STATION, UNITS 1 AND 2 (MCGUIRE 1 AND 2)

The following RAI from the Nuclear Regulatory Commission (NRC) staff pertains to the proposed 125 volt direct current battery connection resistance acceptance values in the TSs for Catawba 1 and 2 and McGuire 1 and 2 as described in the license amendment request (LAR) sent by letter dated December 14, 2009 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML093500597), submitted by Duke Energy Carolinas, LLC (the licensee):

1. Provide an executive summary of battery connection resistance calculations that shows how the values in proposed TS Table 3.8.4-1 were derived. Include in your response the battery design duty cycle profiles, key assumptions, any credit of margins, and supporting documentation to demonstrate that a) the batteries will perform their intended safety functions when operating within these limits and b) the safe shutdown equipment will have required minimum voltage to perform the required safety functions for the postulated design-basis accident and the station blackout scenarios.

2. The licensee proposed to include a new parameter "Average Intercell Connection" in TS Table 3.8.4-1 and in the associated TS Bases sections. However, the NRC staff did not find any definition or details of this proposed parameter in the LAR or the TS Bases. Lack of any definition or details in the TS Bases could create confusion in future. Discuss in detail the proposed parameter "average intercell connection" including the definition and provide a Regulatory Commitment to include a definition and details of this parameter in the TS Bases.

3. Provide a chart of the past 5 years of surveillance test results for Surveillance Requirements 3.8.4.6 (Catawba 1 and 2) and 3.8.4.5 (McGuire 1 and 2) for "As Found" and "As Left" battery intercell, inter-tier, inter-rack and terminal connection resistances.

4. Battery manufacturers typically recommend correcting any battery connection that has a resistance value of more than 20% above the benchmark values. Provide the benchmark resistance values for each connection in proposed TS Table 3.8.4-1. Provide justifications for any connection resistance value in proposed TS Table 3.8.4-1 that is higher than 20% of the benchmark value and is contrary to the battery manufacturer's recommendations.

Enclosure

5. Battery manufacturers typically require that a benchmark value for all similar connections should be no greater than 10% or 5 micro ohms, whichever is greater, above the average resistance of all such connections in the battery. On page 3.8.4-4 of the McGuire 1 and 2 LAR, (Attachment 2, TS Table 3.8.4-1), the proposed value of "Single Intercell Connection" resistance is approximately 72.9% or 34.2 micro ohms above the "Average Intercell Connection" resistance. Provide justification for exceeding the manufacturer's recommendation.

6. Discuss why average connection resistance values for inter-tier, inter-rack, and terminal connection limits were not included in proposed TS Table 3.8.4-1 for McGuire 1 and 2 and Catawba 1 and 2.

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 Nos. 50-413, 50-414, 50-369, 50-370

Enclosure:
RAI

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NAME	JThompson	MO'Brien	GMatharu	GKulesa (VSreenivas for)	JThompson
DATE	06/23/10	06/23/10	06/23/10	06/24/10	06/24/10

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