



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

October 12, 2010

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

SUBJECT: MCGUIRE NUCLEAR STATION, UNITS 1 AND 2 (MCGUIRE 1 AND 2),  
REQUEST FOR ADDITIONAL INFORMATION (RAI) REGARDING LICENSE  
AMENDMENT RELATED TO THE EMERGENCY CORE COOLING SYSTEM  
WATER MANAGEMENT INITIATIVE (TAC NOS. ME4051 AND ME4052)

Dear Mr. Repko:

By letter dated May 28, 2010 (Agencywide Documents Access and Management System, Accession No. ML101600256), Duke Energy Carolinas, LLC (the licensee), submitted a proposed license amendment to change the McGuire 1 and 2 Technical Specifications (TSs). The proposed change revises the TSs to allow the manual operation of the containment spray system in lieu of automatic actuation.

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,

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 Nos. 50-369 and 50-370

Enclosure:  
RAI

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REQUEST FOR ADDITIONAL INFORMATION (RAI)  
BY THE OFFICE OF NUCLEAR REACTOR REGULATION  
REGARDING LICENSE AMENDMENT REQUEST (LAR) RELATED TO  
THE EMERGENCY CORE COOLING SYSTEM (ECCS) WATER MANAGEMENT INITIATIVE  
MCGUIRE NUCLEAR STATION, UNITS 1 AND 2 (MCGUIRE 1 AND 2)

The following RAI from the U.S. Nuclear Regulatory Commission staff pertains to the subject proposed LAR for McGuire 1 and 2 sent by letter dated May 28, 2010 (Agencywide Documents Access and Management System, Accession No. ML101600256), submitted by Duke Energy Carolinas, LLC (the licensee):

1. Provide documentation (including any calculations addressing tank geometry) for establishing the required range of the instrumentation loop used by the operators to achieve this technical specification (TS) surveillance requirement (SR). Provide a calculation of the instrumentation loop uncertainty analysis, including required calibration tolerances associated with the loop readout device, especially in the vicinity of the level corresponding to 383,146 gallons.
2. Provide the indicated acceptance value used by the operators to determine that there is at least 383,146 gallons in the refueling water storage tank (RWST). Demonstrate that this value allows for the total instrument loop uncertainty described in item 1 above.
3. Provide a description of the periodic calibration surveillance method associated with the maintenance of the instrument loop that is used to provide operators with the information needed to satisfy this TS SR for the RWST. Provide the basis for the 7-day surveillance interval.
4. Discuss the alternate instrumentation available and steps taken when this instrument fails (or is otherwise unavailable) and justify these steps.
5. In Section 3.2.3 of the LAR, the licensee states that:

The delayed actuation of containment spray proposed by this amendment request can cause sump temperature to exceed the current design temperature of 190 °F. At the time of switchover, sump temperature is approximately 197 °F and remains above 190 °F for about 9 minutes.

Provide detailed discussion concerning how the increased sump temperature factors into the equipment qualification (EQ) revised environmental profiles and any affects on EQ qualified equipment.

Enclosure

6. The existing plant design has the containment spray (CS) pump (400 HP) loaded on the emergency diesel generator (EDG) at step 4 of the sequencer. The proposed change will manually start this large motor on the EDG when it is almost fully loaded. Provide detailed discussion of calculation results which demonstrate the EDGs ability to start a CS system pump after EDG sequencing is completed while maintaining adequate voltage and frequency for all other 1E loads. Also provide discussion about how the EDG is tested for this evolution to support operability.

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/RA/

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

Docket Nos. 50-369 and 50-370

Enclosure:  
RAI

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ADAMS Accession No. ML102860055

\*transmitted via memo ML102150008 \*\*transmitted via memo ML102590512

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|--------|---------------|---------------|-------------|----------------|-----------------------|---------------|
| NAME   | JThompson     | MO'Brien      | WKemper*    | RMathew**      | GKulesa (RMartin for) | JThompson     |
| DATE   | 09/22/10      | 09/22/10      | 08/03/10*   | 9/17/10        | 10/06/10              | 10/12/10      |

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