



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

August 25, 2010

Mr. Dave Baxter  
Vice President, Oconee Site  
Duke Energy Carolinas, LLC  
7800 Rochester Highway  
Seneca, SC 29672

SUBJECT: OCONEE NUCLEAR STATION, UNITS 1, 2, AND 3, GENERIC LETTER 2008-01, "MANAGING GAS ACCUMULATION IN EMERGENCY CORE COOLING, DECAY HEAT REMOVAL, AND CONTAINMENT SPRAY SYSTEMS," REQUEST FOR ADDITIONAL INFORMATION (RAI) (TAC NOS. MD7852, MD7853, AND MD7854)

Dear Mr. Baxter:

Generic Letter (GL) 2008-01, "Managing Gas Accumulation In Emergency Core Cooling, Decay Heat Removal, And Containment Spray Systems," requests licensees to submit information to demonstrate that the emergency core cooling, decay heat removal, and containment spray systems are in compliance with the applicable regulatory requirements, and that suitable design, operational, and testing control measures are in place for maintaining this compliance.

The Nuclear Regulatory Commission (NRC) has concluded that additional information is required to demonstrate that the subject systems are in compliance with the current licensing and design bases and applicable regulatory requirements, and that suitable design, operational, and testing control measures are in place for maintaining this compliance as stated in GL 2008-01. The NRC staff's RAI is enclosed. Unless otherwise agreed to, please submit all responses to these RAI questions within 30 days.

If you have any questions, please call me at 301-415-1345.

Sincerely,

A handwritten signature in black ink, appearing to read "John Stang", is written over the word "Sincerely,".

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

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

Enclosure:  
RAIs

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## REQUEST FOR ADDITIONAL INFORMATION (RAI)

### GENERIC LETTER (GL) 2008-01, "MANAGING GAS ACCUMULATION IN EMERGENCY

### CORE COOLING, DECAY HEAT REMOVAL, AND CONTAINMENT SPRAY SYSTEMS"

### OCONEE NUCLEAR STATION, UNITS 1, 2, AND 3

1. Provide a discussion of the methods used to determine the volume of voids for both venting and ultrasonic testing. Discuss follow up actions such as trending the volume of voids.
2. In Reference 4, the licensee states that "Surveillance procedures have a low threshold for as found gas" and "The Corrective Action Program is entered if the vented volume exceeds a predetermined threshold." Clarify what the threshold volume is, how it was determined, and if it takes into account both water hammers and gas injection limits for pumps.
3. In Reference 4, the licensee states that "the consequences of the gas were evaluated to be acceptable." Please provide a brief description of the criteria and methodology used to determine acceptability.
4. In Reference 4, the licensee states that "Approximately 20 new vent valves will be needed on each unit." What is the status of these valves? Please justify any cancellations of installation.
5. In Reference 4, the licensee states that "Effective transport velocities when dynamic venting is credited (Froude number of  $> 0.55$  for horizontal piping runs and  $> 1.0$  for vertical piping runs)." Justify that dynamic venting under these conditions is able to remove voids.
6. Describe the monitoring of appropriate plant parameters during normal and shutdown operation, including reduced inventory and mid-loop operation, such as monitoring level indicators, including the level of the volume control tank and accumulator and piping pressures. Clarify how often the accumulator water make-ups and water make-up rates are monitored and trended as part of the Engineering Support Program. For reduced inventory and mid-loop operations justify that the water level is sufficient to prevent vortexing due to suction from the residual heat removal system.
7. Training was not identified in the GL (Reference 3) but is considered to be a necessary part of applying procedures and other activities when addressing the issues identified in GL. 2008-01. Provide a brief description of training.

## REFERENCES

1. Ruland, William H., "Preliminary Assessment of Responses to Generic Letter 2008-01, 'Managing Gas Accumulation in emergency Core Cooling, Decay Heat Removal, and Containment Spray Systems,' and Future NRC Staff Review Plans," NRC letter to James H. Riley, Nuclear Energy Institute, (Agencywide Documents Access and Management System (ADAMS) Accession No. ML091390637), May 28, 2009. Riley, James H., "Generic Letter (GL) 2008-01, 'Managing Gas Accumulation in Emergency Core Cooling, Decay Heat Removal, and Contain Spray Systems' Evaluation and 3 Month Response Template," Letter to Administrative Points of Contact from Director, Engineering, Nuclear Generation Division, Nuclear Energy Institute, Enclosure 2, "Generic Letter 2008-01 Response Guidance," March 20, 2008.
2. Case, Michael J., "NRC Generic Letter 2008-01: Managing Gas Accumulation in Emergency Core Cooling, Decay Heat Removal, and Containment Spray Systems," Letter from Director, Division of Policy and Rulemaking, Office of Nuclear Regulation, NRC, January 11, 2008 (ADAMS Accession No. ML072910759).
3. Harrall, T., "Duke Energy Carolinas, LLC (Duke); Oconee Nuclear Station, Units 1, 2 & 3, Docket Nos. 50-269, 50-270, 50-287; McGuire Nuclear Station, Units 1 & 2, Docket Nos. 50-369, 50-370; Catawba Nuclear Station, Units 1 & 2, Docket Nos. 50-413, 50-414; Generic Letter 2008-01, 9-Month Response," Letter to Document Control Desk, NRC, from Vice President, Plant Support, Duke Energy Carolinas, LLC, October 13, 2008 (ADAMS Accession No. ML082900490).
4. Morris, J., "Duke Energy Carolinas, LLC (Duke); Catawba Nuclear Station - Unit 2; Nine-Month Supplemental (Post-Outage) Response to NRC Generic Letter 2008-01 (10CFR50.54f)," Letter to Document Control Desk, NRC, from Vice President, Catawba Nuclear Site, Duke Energy Carolinas, LLC July 15, 2009 (ADAMS Accession No. ML092010132).
5. Warren C. Lyon, U.S. Nuclear Regulatory Commission, "Revision 2 to NRC Staff Criteria for Gas Movement in Suction Lines and Pump Response to Gas," March 26, 2009 (ADAMS Accession No. ML090900136).

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

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

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RAIs

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**\*By Memo Dated**

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