



**UNITED STATES  
NUCLEAR REGULATORY COMMISSION**

WASHINGTON, D.C. 20555-0001

January 19, 2010

Mr. Eric McCartney, Vice President  
Carolina Power & Light Company  
H. B. Robinson Steam Electric Plant,  
Unit No. 2  
3581 West Entrance Road  
Hartsville, South Carolina 29550

**SUBJECT: H. B. ROBINSON STEAM ELECTRIC PLANT, UNIT NO. 2 – REQUEST FOR  
ADDITIONAL INFORMATION REGARDING SUPPLEMENTAL RESPONSE TO  
GENERIC LETTER 2008-01, “MANAGING GAS ACCUMULATION IN  
EMERGENCY CORE COOLING, DECAY HEAT REMOVAL, AND  
CONTAINMENT SPRAY SYSTEMS” (TAC NO. MD7871)**

Dear Mr. McCartney:

By letter dated October 14, 2008 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML082900579), as supplemented on February 13, 2009 (ADAMS Accession No. ML090540060), Carolina Power & Light Company (the licensee), now doing business as Progress Energy Carolinas, Inc., submitted a response to Generic Letter (GL) 2008-01, “Managing Gas Accumulation in Emergency Core Cooling, Decay Heat removal, and Containment Spray Systems”, for the H.B. Robinson Steam Electric Plant, Unit No. 2.

The U.S. Nuclear Regulator Commission (NRC) staff has reviewed the licensee’s submittal and has concluded that additional information is required from the licensee for the NRC staff to determine that the licensee has acceptably demonstrated “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 enclosed document describes these requests for additional information (RAIs).

The NRC requests that the licensee respond to these RAIs within 60 days of the date of this letter. If the licensee concludes that more than 60 days are required to respond to the RAIs, the licensee should request additional time, including a basis for why the extension is needed.

E. McCartney

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Please contact me at 301-415-2788 if you have any questions on this issue, would like to participate in a conference call, or if you require additional time to submit your responses.

Sincerely,

A handwritten signature in black ink, appearing to read "Tracy J. Orf". The signature is fluid and cursive, with the first name "Tracy" being the most prominent part.

Tracy J. Orf, Project Manager  
Plant Licensing Branch II-2  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Docket No. 50-261

Enclosure: As stated

cc: Distribution via Listserv

REQUEST FOR ADDITIONAL INFORMATION

REGARDING

H.B. ROBINSON STEAM ELECTRIC PLANT, UNIT NO. 2

SUPPLEMENTAL RESPONSE TO GENERIC LETTER 2008-01:

“MANAGING GAS ACCUMULATION IN EMERGENCY CORE COOLING, DECAY HEAT

REMOVAL, AND CONTAINMENT SPRAY SYSTEMS”

DOCKET NO. 50-261

Guidance on the U.S. Nuclear Regulatory Commission (NRC) staff expectations is provided by Reference 1, which is generally consistent with the Nuclear Energy Institute (NEI) guidance provided to industry in Reference 2 and clarified in later NEI communications. The NRC staff recommends that the licensee consult Reference 1 when responding to the following RAIs:

1. Generic Letter (GL) 2008-01 (Reference 3) discussed the loss of high pressure safety injection pumps at Oconee in 1997 as an example of failure of a subject system. This was caused by a failure of level transmitters associated with the letdown storage tank that is commonly referred to as the volume control tank (VCT). The VCT was not identified in the Reference 4 reply to the GL. Either identify the VCT as a part of the subject systems or provide a justification for its exclusion.
2. In Reference 5 the licensee stated that “Evaluations considered and utilized, as appropriate, gas transport analysis, Owners Group pump suction void fraction acceptance criteria, Net Positive Suction Head requirements, Reactor Coolant System void acceptance criteria...” Clarify if the analysis to determine the void size acceptance criteria follows NRC guidance (particularly the use of 0.5 second intervals) or provide justification that the current analysis bounds the behavior of the system.
3. The responses (References 4 and 5) did not consider the effect a water hammer would have on operability. Justify that water hammers were appropriately excluded from consideration or provide an evaluation of the effect of pressure pulses and water hammers as per Reference 1.
4. 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, and if they are used as indication of potential gas intrusion; give that “Leakage through valves from accumulators” was identified in Reference 4 as a potential gas intrusion mechanism.

Enclosure

5. Clarify the frequency of inspections that are used to ensure the subject systems remain functional (this includes inspections for voids as well as monitoring existing voids). If inspections will be less frequent than once every 31 days (NUREG-1431 SR 3.5.2.3), provide a justification.
6. 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 the GL. Provide a brief description of training for operators and other personnel.
7. For both inspections and other fill and vent operations, describe the method used to ensure that the gas was successfully vented and not transported to another high point.

## 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, ML091390637, May 28, 2009.
2. 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.
3. 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, ML072910759, January 11, 2008.
4. McCartney, E. A., "H. B. Robinson Steam Electric Plant, Unit No. 2; Nine-Month Response to NRC Generic Letter 2008-01, 'Managing Gas Accumulation in Emergency Core Cooling, Decay Heat Removal, and Containment Spray Systems,'" Letter to Document Control Desk, NRC, from Director, Site Operations, Progress Energy Carolinas, Inc., ML082900579, October 14, 2008.
5. McCartney, E. A., "H. B. Robinson Steam Electric Plant, Unit No. 2; Supplemental Response to NRC Generic Letter 2008-01, 'Managing Gas Accumulation in Emergency Core Cooling, Decay Heat Removal, and Containment Spray Systems,'" Letter to Document Control Desk, NRC, from Director, Site Operations, Progress Energy Carolinas, Inc., ML090540060, February 13, 2009.

E. McCartney

- 2 -

Please contact me at 301-415-2788 if you have any questions on this issue, would like to participate in a conference call, or if you require additional time to submit your responses.

Sincerely,

*/RA/*

Tracy J. Orf, Project Manager  
Plant Licensing Branch II-2  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Docket No. 50-261

Enclosure: As stated

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