



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

December 10, 2009

Mr. Jon A. Franke, Vice President
Crystal River Nuclear Plant (NA2C)
ATTN: Supervisor, Licensing & Regulatory Programs
15760 W. Power Line Street
Crystal River, Florida 34428-6708

SUBJECT: CRYSTAL RIVER UNIT 3 - REQUEST FOR ADDITIONAL INFORMATION
REGARDING THE RESPONSE TO GENERIC LETTER 2008-01, "MANAGING
GAS ACCUMULATION IN EMERGENCY CORE COOLING, DECAY HEAT
REMOVAL, AND CONTAINMENT SPRAY SYSTEMS" (TAC NO. MD7816)

Dear Mr. Franke:

By letters dated October 13, 2008, Florida Power Corporation (the licensee) provided responses to Generic Letter (GL) 2008-01 for the Crystal River Unit 3 Nuclear Generating Plant (CR-3). On the basis of the provided information, the Nuclear Regulatory Commission (NRC) staff has determined that additional information is required from the licensee for the NRC staff to conclude that the licensee has acceptably demonstrated that, as stated in GL 2008-01, "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."

In order to complete its review, the NRC staff requests that you respond to the specific questions found in the enclosed request for additional information (RAI). The questions were sent via electronic transmission on November 18, 2009, to Mr. Dennis Herrin, of your staff. The draft questions were sent to ensure that the questions were understandable and that the regulatory basis for the questions was clear. The draft questions were discussed with your staff on, November 30, 2009, and it was agreed that a response to this RAI would be submitted within 45 days from the date of this letter.

Please contact me at 301-415-1447, if you have any questions.

Sincerely,

A handwritten signature in black ink, reading "Farideh E. Saba".

Farideh E. Saba, Senior Project Manager
Plant Licensing Branch II-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-302

Enclosure: Request for Additional Information

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REQUEST FOR ADDITIONAL INFORMATION
CRYSTAL RIVER UNIT 3 NUCLEAR GENERATING PLANT
GENERIC LETTER 2008-01, "MANAGING GAS ACCUMULATION IN
EMERGENCY CORE COOLING, DECAY HEAT REMOVAL AND
CONTAINMENT SPRAY SYSTEMS"
DOCKET NO. 50-302

By letters dated October 13, 2008 (Reference 1), Florida Power Corporation (the licensee) provided responses to Generic Letter (GL) 2008-01 "Managing Gas Accumulation in Emergency Core Cooling, Decay Heat Removal, and Containment Spray Systems" (Reference 2) for the Crystal River Unit 3 Nuclear Generating Plant (CR-3). Additional information is required for the Nuclear Regulatory Commission (NRC) staff to determine that the licensee has acceptably demonstrated that, as stated in GL 2008-01, "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."

Guidance on NRC staff expectations is provided by Reference 3, which is generally consistent with the Nuclear Energy Institute (NEI) guidance provided to industry in Reference 4, and as clarified in later NEI communications. The NRC staff recommends that the licensee consult Reference 3 when responding to the following RAIs:

1. In Reference 1, the licensee states that gas intrusion "through the high to low pressure interfaces ... is not expected to occur without Operations knowledge due to one or more of the following: possible relief valve lifting; unexplained level increases in the BWST; decreasing level in a Core Flood Tank; and/or a mismatch in the reactor coolant system water balance calculation." Clarify how frequently these parameters are monitored and whether abnormal results would trigger inspections for voids.
2. The licensee has established "inspections [which] include a requirement for periodic verification (every 92 days) that the ECCS [emergency core cooling system], DH [decay heat removal system], and BS [containment spray system] piping will be maintained sufficiently full of water by a combination of ultrasonic testing (UT), and venting as deemed necessary, of locations identified to be potentially susceptible to gas intrusion (high to low pressure interfaces)". Justify that this is an acceptable inspection interval given previous operating history; include a discussion of the parameters from question one.
3. Consistent with Section 3.7 of Reference 2, briefly discuss your plans for training at CR-3 that is "considered to be a necessary part of applying procedures and other activities when addressing the issue identified in the GL."

Enclosure

4. In Reference 1, the licensee stated that "industry guidance will be considered when either evaluating operability or establishing acceptance criteria." Industry guidance is not in accordance with NRC staff's acceptance criteria in Reference 4. Clarify if the analysis to determine the void size acceptance criteria follows NRC guidance (particularly the use of 0.5 second intervals) or provide additional justification that the current analysis bounds the behavior of the system.

REFERENCES

- 1 Young, Dale E., "Crystal River Unit 3 - 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 Vice President, Crystal River Nuclear Plant, October 13, 2008, (Agencywide Documents Access and Management System (ADAMS) Accession No. ML082890555).
- 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 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, May 28, 2009 (ADAMS Accession No. ML091390637).
- 4 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, NEI, Enclosure 2, "Generic Letter 2008-01 Response Guidance," March 20, 2008 (ADAMS Accession Nos. ML093070575, , ML093070630, and ML093070647)
- 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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GAS ACCUMULATION IN EMERGENCY CORE COOLING, DECAY HEAT
REMOVAL, AND CONTAINMENT SPRAY SYSTEMS" (TAC NO. MD7816)

Dear Mr. Franke:

By letters dated October 13, 2008, Florida Power Corporation (the licensee) provided responses to Generic Letter (GL) 2008-01 for the Crystal River Unit 3 Nuclear Generating Plant (CR-3). On the basis of the provided information, the Nuclear Regulatory Commission (NRC) staff has determined that additional information is required from the licensee for the NRC staff to conclude that the licensee has acceptably demonstrated that, as stated in GL 2008-01, "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."

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Sincerely,
/ra/

Farideh E. Saba, Senior Project Manager
Plant Licensing Branch II-2
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