



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

August 12, 2009

Mr. James A. Spina, Vice President
Calvert Cliffs Nuclear Power Plant, Inc.
Calvert Cliffs Nuclear Power Plant
1650 Calvert Cliffs Parkway
Lusby, MD 20657-4702

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION RE: RESPONSE TO GENERIC LETTER 2008-01, "MANAGING GAS ACCUMULATION IN EMERGENCY CORE COOLING, DECAY HEAT REMOVAL, AND CONTAINMENT SPRAY SYSTEMS" - CALVERT CLIFFS NUCLEAR POWER PLANT, UNIT NOS. 1 AND 2 - (TAC NOS. MD7807 AND MD7808)

Dear Mr. Spina:

By letters dated October 14, 2008, and June 12, 2009, Calvert Cliffs Nuclear Power Plant, Inc. provided supplemental responses to Generic Letter (GL) 2008-01 for the Calvert Cliffs Nuclear Power Plant, Unit Nos. 1 and 2. On the basis of this information, the Nuclear Regulatory Commission staff has concluded that additional information is required in order 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.

Enclosed is the staff's request for additional information (RAI). As discussed with your staff, we understand that you intend to respond to this RAI within approximately 45 days of the date of this letter.

Please contact me at 301-415-1364 if you have any questions.

Sincerely,

A handwritten signature in black ink that reads "Douglas V. Pickett".

Douglas V. Pickett, Senior Project Manager
Plant Licensing Branch I-1
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket Nos. 50-317 and 50-318

Enclosure:
As stated

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REQUEST FOR ADDITIONAL INFORMATION

CALVERT CLIFFS NUCLEAR POWER PLANT, UNIT NOS. 1 AND 2

OFFICE OF NUCLEAR REACTOR REGULATION

GENERIC LETTER 2008-01

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

1. Generic Letter (GL) 2008-01 (Reference 3) discussed the loss of high-pressure safety injection (HPSI) 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. Provide a schedule for applying the technical specification task force process to any technical specification modification.
3. An evaluation of vortex formation was stated to have concluded that effects of minor air entrainment into the HPSI pumps, due to vortexing from the refueling water tank and emergency containment sump during design basis accidents were found acceptable. Since expected flow rates under accident conditions may significantly exceed the design basis accident flow rates, discuss how the stated conclusions are applicable to actual expected accident conditions.
4. 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.
5. Clarify the frequency at which the subject systems are inspected for voids. If inspections are less frequent than once every 31 days, provide a justification.
6. In Reference 4, it is stated that the "Corrective Action Program is used to document gas intrusion/accumulation issues as potential nonconforming conditions [and]... evaluated for potential impact on operability and reportability." Clarify whether follow-up actions will be accomplished through the corrective action program whenever a void is identified or provide justification of excluding voids. Clarify the definitions of "potential impact" (Reference 4) and the phrase "no appreciable gas" (Reference 5), including any criteria used to determine acceptability.

Enclosure

7. Venting of the subject systems is accomplished by following processes described in station procedures. Describe the void surveillance procedures used to ensure that the gas was successfully vented and gas was not transported to a previously inspected high point.
8. Address post-surveillance activities by providing a brief description of such activities as, the response actions to be taken if surveillance criteria are not met, and the trending of gas volume for tracking purposes.
9. Describe how procedures and the work control process are used to ensure that the subject systems are not rendered inoperable as a result of voids introduced during maintenance. The licensee states that "For activities not currently covered by procedures... Condition Reports were initiated to drive development of general fill and vent processes" (Reference 4). If the current maintenance work process and procedures do not ensure that any voids introduced during maintenance are either determined to be acceptable or adequately vented prior to returning the component to service; provide a schedule for the development and implementation of the procedures.
10. Describe the monitoring of pump operation in all modes and specialized monitoring of appropriate plant parameters during shutdown operation, including reduced inventory and mid-loop operation.
11. Training was not identified in the GL but is considered to be a necessary part of applying procedures and other activities when addressing the issues identified in the GL. Briefly discuss 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, 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 Reactor Regulation, NRC, ML072910759, January 11, 2008.
4. Spina, James A., "Calvert Cliffs Nuclear Power Plant, Unit Nos. 1 & 2; Docket Nos. 50-317 & 50-318, 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, Constellation Energy Operating Company, ML082900149, October 14, 2008.
5. Trepanier, Thomas E., "Calvert Cliffs Nuclear Power Plant, Unit No. 2; Docket No. 50-318, Nine-Month Supplemental (Post-Outage) Response to NRC Generic Letter 2008-01," Letter to Document Control Desk, NRC, from Plant General Manager, Calvert Cliffs Nuclear Power Plant, Inc. ML091670262, June 12, 2009.

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/RA/

Douglas V. Pickett, Senior Project Manager
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