



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

November 6, 2009

Mr. David A. Heacock
President and Chief Nuclear Officer
Dominion Nuclear Connecticut, Inc.
Innsbrook Technical Center
5000 Dominion Boulevard
Glen Allen, VA 23060-6711

SUBJECT: MILLSTONE POWER STATION, UNIT NOS. 2 AND 3 – REQUEST FOR
ADDITIONAL INFORMATION REGARDING GENERIC LETTER 2008-01,
“MANAGING GAS ACCUMULATION IN EMERGENCY CORE COOLING,
DECAY HEAT REMOVAL, AND CONTAINMENT SPRAY SYSTEMS” (TAC
NOS. MD7845 AND MD7846)


Dear Mr. Heacock:

By letter dated October 14, 2008, as supplemented by letter dated January 15, 2009 (Agencywide Document Access and Management System (ADAMS) Accession Nos. ML082890266 and ML090150378, respectively), Dominion Nuclear Connecticut, Inc. (DNC or the licensee) provided a response to Generic Letter (GL) 2008-01, “Managing Gas Accumulation in Emergency Core Cooling, Decay Heat Removal, and Containment Spray Systems,” for Millstone Power Station, Unit Nos. 2 and 3 (MPS2 and MPS3, respectively). Specifically, DNC’s response discusses the emergency core cooling, decay heat removal, and containment spray systems with regards to compliance with the current licensing and design bases and applicable regulatory requirements, and suitable design, operational, and testing control measures are in place for maintaining compliance. To complete its review, the Nuclear Regulatory Commission staff requests responses to the enclosed additional information.

The draft questions were sent to Mr. William Bartron, of your staff, to ensure that the questions were understandable, the regulatory basis for the questions was clear, and to determine if the information was previously docketed. On October 29, 2009, Mr. Bartron agreed that you would provide a response by January 14, 2010.

If you have any questions regarding this matter, please contact me at 301-415-1603.

Sincerely,


Carleen J. Sanders, Project Manager
Plant Licensing Branch I-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket Nos. 50-336 and 50-423

Enclosure:
As stated

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REQUEST FOR ADDITIONAL INFORMATION (RAI)

RESPONSE TO GENERIC LETTER 2008-01

"MANAGING GAS ACCUMULATION IN EMERGENCY CORE COOLING, DECAY HEAT

REMOVAL, AND CONTAINMENT SPRAY SYSTEMS"

MILLSTONE POWER STATION, UNIT NOS. 2 AND 3

DOCKET NOS. 50-336 AND 50-423

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Guidance on NRC staff expectations is provided in Reference 1. Nuclear Energy Institute (NEI) guidance is provided in Reference 2. The NRC staff recommends that DNC consult Reference 1 when responding to the following questions:

1. In Reference 4, Dominion Nuclear Connecticut, Inc. noted that "a corrective action is in place to monitor the status of the TSTF [Technical Specification Task Force] traveler described above." The TSTF traveler described above is being developed for making changes to TSs related to the potential for unacceptable gas accumulation.

Clarify the schedule for evaluating the TSTF traveler and submitting a license amendment, if necessary.

2. The licensee states in Reference 4 that MPS2 has several locations of possible gas accumulation that require further confirmation. "UT [ultrasonic testing] measurements of these potential voids will be performed to validate void size."

The licensee also states that, "MPS2 has utilized this methodology [Joint Owners group methodology using plant specific information for piping restraints and relief valve set points to determine the acceptable gas volume accumulation such that a relief valve does not lift] in technical evaluation (M2-EV-08-0027) for evaluation of any gas accumulation found in discharge piping of susceptible GL2008-01 in scope systems [Emergency Core Cooling, Decay Heat Removal, and Containment Spray System]."

Enclosure

Clarify how voids are being detected in the pump discharge piping. If gas accumulation is detected, how are these potential voids going to be monitored and trended?

3. In Reference 4, the licensee states that for MPS2 "with the exception of SIT [Safety Injection Tank] back leakage, there are no known gas intrusion mechanisms that impact these piping systems [emergency core cooling, decay heat removal, and containment spray systems] during the operating cycle." Discuss measures used to guard against gas intrusion due to inadvertent draining, system realignments, incorrect maintenance procedures, or other evolutions.

References 1 and 3 identify additional gas intrusion mechanisms, such as leakage from the reactor coolant system and issues related to the charging systems that may apply to MPS2. Please list the potential gas intrusion mechanisms identified in the references and justify why they are not a concern for MPS2.

4. In reference 4, the licensee states that if gas accumulation was discovered at MPS2 or MPS3, a condition report would be initiated and the shift manager would be notified.

Clarify how gas accumulation is determined, including the overall criteria. Also, discuss any follow-up actions that would be taken.

5. In Reference 4, the licensee states for MPS3 that "when gas voids were present in pump suction lines, the pumps were evaluated to ensure gas would not accumulate within the pumps due to low flow rates."

Were any follow-up actions taken in regard to this issue, if so what were they? Discuss in generic terms the source of the gas voids present.

6. 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. 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, 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 Price, Ian, "Dominion Nuclear Connecticut, Inc. Millstone Power Station Units 2 and 3, Docket No. 50-336, 50-423, Nine-Month Response to NRC Generic Letter 2008-01," Letter to Document Control Desk, NRC, from President, Nuclear Engineering, Dominion Nuclear Connecticut, Inc., ML082890266, October 14, 2008.
- 5 Matthews, William R., "Dominion Nuclear Connecticut, Inc. Millstone Power Station Unit 3 Supplemental Response to Generic Letter 2008-01," Letter to Document Control Desk, NRC, from Senior Vice President, Nuclear Operations, Dominion Nuclear Connecticut, Inc., ML090150378, January 15, 2009.
- 6 "Revision 2 to NRC Staff Criteria for Gas Movement in Suction Lines and Pump Response to Gas," ML090900136, March 26, 2009.

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