



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

June 2, 2011

Mr. Thomas Joyce
President and Chief Nuclear Officer
PSEG Nuclear LLC
P.O. Box 236, N09
Hancocks Bridge, NJ 08038

SUBJECT: SALEM NUCLEAR GENERATING STATION, UNIT NOS. 1 AND 2 - CLOSEOUT OF GENERIC LETTER 2008-01, "MANAGING GAS ACCUMULATION IN EMERGENCY CORE COOLING, DECAY HEAT REMOVAL, AND CONTAINMENT SPRAY SYSTEMS (TAC NOS. MD7874 AND MD7875)

Dear Mr. Joyce:

On January 11, 2008, the U.S. Nuclear Regulatory Commission (NRC) issued Generic Letter (GL) 2008-01, "Managing Gas Accumulation in Emergency Core Cooling, Decay Heat Removal, and Containment Spray Systems" (Agencywide Documents Access and Management System (ADAMS) Accession No. ML072910759). The stated purpose of GL 2008-01 was: (1) to request addressees to submit information 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; and, (2) to collect the requested information to determine if additional regulatory action is required.

GL 2008-01 requested that licensees provide the following information within 9 months of the date of the GL:

- (a) A description of the results of evaluations that were performed pursuant to the requested actions specified in the GL. This description should provide sufficient information to demonstrate that the licensee will be in compliance with the quality assurance criteria in Sections III, V, XI, XVI, and XVII of Appendix B to Part 50 of Title 10 of the *Code of Federal Regulations* and the licensing basis and operating license as those requirements apply to the subject systems;
- (b) A description of all corrective actions, including plant, programmatic, procedure, and licensing basis modifications that the licensee determined were necessary to assure compliance with these regulations; and,
- (c) A statement regarding which corrective actions were completed, the schedule for completing the remaining corrective actions, and the basis for that schedule.

By letters dated April 10, 2008, October 13, 2008, February 10, 2009, February 8, 2010, and March 11, 2010 (ADAMS Accession Nos. ML081130785, ML082970217, ML090560529, ML100501158, and ML100820285, respectively), PSEG Nuclear LLC (PSEG, the licensee) provided information in response to the GL for Salem Nuclear Generating Station, Unit Nos. 1 and 2 (Salem). PSEG's letter dated March 11, 2010, provided a response to an NRC staff

request for additional information (RAI). The NRC staff's evaluation of the RAI response is discussed below.

- In RAI 1, the NRC staff noted that the GL was intended to address all modes and all operating conditions and it is not limited to events and accidents evaluated in the Updated Final Safety Analysis Report. The staff requested that the licensee confirm that the subject systems were evaluated for all modes and operating conditions. The licensee confirmed that all subject systems (as identified in the response) were evaluated for all modes and operating conditions. The NRC staff finds this to be responsive to the GL.
- In RAI 2, the NRC staff requested the licensee to demonstrate that adequate net positive suction head margin exists when air ingestion effects are considered in the calculations for the residual heat removal, safety injection, and containment spray pumps. The licensee uses a table to determine the maximum allowable pump suction voiding limits. The table is based on the criteria provided in a Nuclear Energy Institute (NEI) letter dated June 18, 2009, "Industry Guidance - Evaluation of Unexpected Voids or Gas Identified in Plant ECCS [emergency core cooling system] and Other Systems" (ADAMS package Accession No. ML091800422). The NRC staff finds that the licensee's approach is responsive to the GL.
- In RAI 3, the NRC staff requested that the licensee briefly summarize the fill and vent procedures for instrument lines and to discuss the details of any confirmatory testing following use of these procedures. The licensee provided general information regarding the procedures for filling and venting of ECCS instrument lines. With respect to confirmatory testing, the licensee stated that it is standard practice to verify proper instrument response upon completion of filling and venting maintenance activities. Abnormal system or instrument response is investigated and corrected prior to declaring the system or instrumentation operable. The NRC staff finds that the licensee's approach is responsive to the GL.
- In RAI 4, the NRC staff requested additional information on the licensee's training with respect to the issues discussed in the GL. The licensee's response provided information regarding its training program related to gas intrusion and water hammer topics. In addition, the response stated that PSEG is an active participant in the NEI Gas Accumulation and Management Team which is currently working with the Institute of Nuclear Power Operations in the development of generic training modules for gas accumulation and management. PSEG plans to evaluate these training modules following their completion for their applicability to Salem. The NRC finds that the information provided is responsive to the issues discussed in the GL.

During the week of August 2, 2010, the NRC's Region I staff performed an inspection at Salem using Temporary Instruction (TI) 2515/177, "Managing Gas Accumulation in Emergency Core Cooling, Decay Heat Removal, and Containment Spray Systems (NRC Generic Letter 2008-01)" (ADAMS Accession No. ML082950666). The inspectors selectively verified that the onsite documentation, system hardware, and PSEG's actions were consistent with the information provided in PSEG's response to GL 2008-01. The results of the inspection were

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discussed with PSEG staff on August 5, 2010. Region I indicated at that time that the TI would remain open, pending completion of the NRC's review of PSEG's RAI response on the GL, in order to determine if further inspection was warranted. Based on its review of PSEG's response to the RAIs discussed above, the NRC staff has determined that no further inspection using the TI is needed.

Based on review of the information provided in PSEG's letters dated April 10, 2008, October 13, 2008, February 10, 2009, February 8, 2010, and March 11, 2010, the NRC staff finds that the licensee's response to GL 2008-01 for Salem is acceptable. Consequently, your GL response is considered closed and no further information or action is requested of you.

If you have any questions regarding this matter, please contact me at 301-415-1420.

Sincerely,

A handwritten signature in black ink, appearing to read "R B Ennis". The signature is fluid and cursive, with the first letters of the first and last names being capitalized and prominent.

Richard B. Ennis, Senior Project Manager
Plant Licensing Branch I-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket Nos. 50-272 and 50-311

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/ra/

Richard B. Ennis, Senior Project Manager
Plant Licensing Branch I-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

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