October 6, 2004

Mr. A. Christopher Bakken, III
President & Chief Nuclear Officer
PSEG Nuclear - X15
P.O. Box 236
Hancocks Bridge, NJ 08038

SUBJECT: SALEM NUCLEAR GENERATING STATION, UNIT NO. 1, REQUEST FOR ADDITIONAL INFORMATION RE: RELIEF REQUESTS S1-RR-04-V01 AND V02 (TAC NO. MC3855)

Dear Mr. Bakken:

By letter dated July 9, 2004, PSEG Nuclear, LLC (PSEG) submitted a request for relief from the provisions of Title 10 of the *Code of Federal Regulations*, Section 50.55a(f), Inservice Testing Requirements. Specifically, the requested relief would allow use of an alternate testing methodology to that specified in the American Society of Mechanical Engineers Code for Operation and Maintenance of Nuclear Power Plants OMa-1988, Part 10-4.3.2.1. The testing verifies that the Accumulator Outlet Check Valves 11SJ55, 12SJ55, 13SJ55, 14SJ55, 11SJ56, 12SJ56, 13SJ56, and 14SJ56 are able to perform their safety function.

The Nuclear Regulatory Commission (NRC) staff is reviewing your response and has determined that the information requested in the enclosure to this letter is necessary for completion of the NRC staff's review. The required information was discussed with Mr. Michael Mosier of your staff on September 28, 2004. The NRC staff requests that you provide responses to the enclosed questions within 90 days in order for the NRC to complete its review in a timely manner. If you have any questions, please contact me at (301) 415-1427.

Sincerely,

/RA/

George F. Wunder, Project Manager, Section 2
Project Directorate I
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket No. 50-272

Enclosure: As stated

cc w/encl: See next page

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Salem Nuclear Generating Station, Unit No. 1

cc:

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REQUEST FOR ADDITIONAL INFORMATION

REGARDING RELIEF REQUESTS S1-RR-04-V01 AND V02

SALEM NUCLEAR GENERATING STATION, UNIT NO. 1

DOCKET NO. 50-272

By letter dated July 9, 2004, PSEG Nuclear, LLC (PSEG) submitted a request for relief from the provisions of Title 10 of the *Code of Federal Regulations*, Section 50.55a(f), Inservice Testing Requirements. Specifically, the requested relief would allow use of an alternate testing methodology to that specified in the American Society of Mechanical Engineers Code for Operation and Maintenance of Nuclear Power Plants OMa-1988, Part 10-4.3.2.1. The testing verifies that the Accumulator Outlet Check Valves 11SJ55, 12SJ55, 13SJ55, 14SJ55, 11SJ56, 12SJ56, 13SJ56, and 14SJ56 are able to perform their safety function. The Nuclear Regulatory Commission (NRC) staff has completed its preliminary review of your response and determined that responses to the following questions are necessary for completion of the NRC staff's review:

1. For Salem Unit 1, the third 10-year IST interval commenced August 30, 1999. In a letter dated September 26, 2001 from the NRC to PSEG Nuclear, LLC, the NRC staff stated its understanding that the third IST interval program would be resubmitted by the licensee and the NRC staff would review the revised program, with its associated relief requests. As of the date of this submittal, it is not apparent that PSEG has resubmitted its third IST interval program. Please provide the aforementioned information or clarify what conditions have changed with respect to the NRC staff's understanding in the September 26, 2001 letter.

2. The submittal states that the valves are tested during refueling with the reactor head removed and cavity level between 125.5 and 126.5 feet. The time histories provided in calculation S-1-SJ-MDC-1539 indicate that the reactor head is on. Provide the time histories for reactor head off conditions. Include a discussion to clarify this apparent discrepancy.

3. Two previous safety evaluations authorizing similar reliefs for Salem Units 1 and 2 dated March 12, 1999, and January 2, 2004 (Available in ADAMS under accession numbers 9903190004 and ML033370985, respectively) imposed a condition that when the acceptance criterion is exceeded during the proposed testing, both check valves associated with the specific accumulator be evaluated for the need for corrective action. Justify why this condition has not been included in the relief request, or why it should not be imposed by the staff.

4. Provide the actual recorded decay times for all the accumulators prior to implementing the valve stroke time modification and the decay times for the accumulators after implementation of the modification. State whether the decay times are trended from test to test.

Enclosure

5. The supporting calculation uses the accumulator with the highest flow resistance values and an assumed valve stroke time of 22 seconds to model the decay profile. The calculation states that the Unit 1 acceptance criterion will be made equal to the Unit 2 criterion. Modeling the decay profile using the accumulator with the highest flow resistance will possibly result in longer calculated decay times and does not appear to be conservative with respect to establishing one acceptance criterion for all accumulators. Using a valve stroke time of 22 seconds to model accumulator pressure and flow does not appear to be conservative when the actual measured stroke times were 20.5 and 21.3 seconds. Additionally, this is not consistent with the Unit 2 methodology, which uses the fastest acting valve to model pressure decay and flow. Explain why the Unit 1 calculation is conservative with respect to establishing the acceptance criterion for the accumulators and describe the rational for concluding that Unit 1 is bounded by the acceptance criterion established for Unit 2. Provide pressure and discharge flow rate time histories for check valve maximum swing of 60 degrees.