



10 CFR 50.54(f)

LR N16-0183

OCT 31 2016

ATTN: Document Control Desk
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

Salem Generating Station Units 1 and 2
Renewed Facility Operating License Nos. DPR-70 and DPR-75
NRC Docket Nos. 50-272 and 50-311

Subject: **RESPONSE TO NRC GENERIC LETTER 2016-01,
"MONITORING OF NEUTRON-ABSORBING MATERIALS IN
SPENT FUEL POOLS"**

References: 1. NRC Generic Letter 2016-01, "Monitoring of Neutron-Absorbing Materials in Spent Fuel Pools," dated April 7, 2016
2. "Issuance of Renewed Facility Operating License Nos. DPR-70 and DPR-75 for Salem Nuclear Generating Station, Units 1 and 2," (ML11136A134) dated June 30, 2011

On April 7, 2016 the Nuclear Regulatory Commission (NRC) issued Reference 1 to all power licensees except those that have permanently ceased operation with all power reactor fuel removed from on-site spent fuel pool storage.

The purpose of this letter is to provide a response for Salem Generating Station, Unit 1 and Unit 2 (Salem). Salem has been determined to be a Category 3 licensee in accordance with Reference 1. PSEG Nuclear LLC incorporated the neutron-absorbing material monitoring program into the Salem licensing basis through an NRC-approved license condition in Reference 2. No changes have been made to the neutron-absorbing material monitoring program as described in license condition in Reference 2.

Attachment 1 to this letter contains the Salem Generating Station response to NRC GL 2016-01.

This letter contains no new regulatory commitments.

If you have any questions or require additional information, please contact Lee Marabella at (856) 339-1208.

OCT 31 2016

I declare under penalty of perjury that the foregoing is true and correct.

Executed on 10/31/16

Sincerely,



Charles V. McFeaters
Site Vice President – Salem

Attachment 1: Salem Generating Station Response to NRC Generic Letter
2016-01, "Monitoring of Neutron-Absorbing Materials in Spent
Fuel Pools"

C Administrator - Region I, NRC
Project Manager – Salem, NRC
NRC Senior Resident Inspector – Salem
Mr. P. Mulligan, Chief, NJBNE
L. Marabella, Corporate Commitment Tracking Coordinator
T. Cachaza, Salem Commitment Tracking Coordinator

Attachment 1

**Salem Generating Station Response to NRC Generic Letter 2016-01,
"Monitoring of Neutron-Absorbing Materials in Spent Fuel Pools"**

Salem Response for GL 2016-01 Appendix A

Nuclear Regulatory Commission (NRC) Request

Nuclear Regulatory Commission (NRC), Generic Letter (GL) 2016-01, requested each licensee submit a written response in accordance with 10 CFR 50.54(f) within 210 days of the date of the GL to provide the requested information summarized below:

- (1) a description of the neutron-absorbing material credited in the Spent Fuel Pool (SFP) nuclear criticality safety (NCS) analysis of record (AOR) and its configuration in the SFP;
- (2) a description of the surveillance or monitoring program used to confirm that the credited neutron-absorbing material is performing its safety function, including the frequency, limitations, and accuracy of the methodologies used;
- (3) a description of the technical basis for determining the interval of surveillance or monitoring for the credited neutron-absorbing material;
- (4) a description of how the credited neutron-absorbing material is modeled in the SFP NCS AOR and how the monitoring or surveillance program ensures that the actual condition of the neutron-absorbing material is bounded by the NCS AOR; and
- (5) a description of the technical basis for concluding that the safety function for the credited neutron-absorbing material in the SFP will be maintained during design-basis events.

The NRC provided four areas of categorization from which they would accept a response.

Category 1: Power reactor addressees that do not credit neutron-absorbing materials other than soluble boron in the AOR.

Category 2: Power reactor addressees that have an approved license amendment to remove credit for existing neutron-absorbing materials and that intend to complete full implementation no later than 24 months after the issuance of this GL.

Category 3: Power reactor addressees that have incorporated their neutron-absorbing material monitoring programs into their licensing basis through an NRC-approved Technical Specification (TS) change or license condition.

Category 4: All other power reactor addressees.

Category 3 includes power reactor addressees that have incorporated their neutron-absorbing material monitoring programs into their licensing basis through an NRC approved TS change or license condition. Those addressees may submit a response letter referencing their approved TS change or license condition and affirming that no change has been made to their neutron-absorbing material monitoring program, as described in the referenced license renewal condition. If a change has been made since NRC approval of the reference, the response letter should also describe any such changes.

SALEM GENERATING STATION UNIT 1 AND UNIT 2 (SALEM) RESPONSE:

Salem falls within Category 3. Salem received its Renewed Facility Operating Licenses on June 30, 2011 (Reference 3). Salem's commitment to a Boral Monitoring Program is documented under license condition 2.C.(19) of the Salem Unit 1 Renewed Facility Operating License and license condition 2.C.(35) of the Salem Unit 2 Renewed Facility Operating License.

- C. This renewed license shall be deemed to contain and is subject to the conditions specified in the Commission's regulations set forth in 10 CFR Chapter I and is subject to all applicable provisions of the Act and to the rules, regulations, and orders of the Commission now or hereafter in effect; and is subject to the *additional conditions specified or incorporated below*: . . .

UNIT 1

- (19) Appendix A of NUREG-2101, "Safety Evaluation Report Related to the License Renewal of Salem Nuclear Generating Station," dated June 2011, and the licensee's UFSAR supplement submitted pursuant to 10 CFR 54.21(d), as revised on May 18, 2011, describe certain future programs and activities to be completed before the period of extended operation. PSEG Nuclear LLC shall complete these activities no later than August 13, 2016, and shall notify the NRC in writing when implementation of these activities is complete.

Note: Reference 2 provided the written notification on August 11, 2016.

UNIT 2

- (35) Appendix A of NUREG-2101, "Safety Evaluation Report Related to the License Renewal of Salem Nuclear Generating Station," dated June 2011, and the licensee's UFSAR supplement submitted pursuant to 10 CFR 54.21(d), as revised on May 18, 2011, describe certain future programs and activities to be completed before the period of extended operation. PSEG Nuclear LLC shall complete these activities no later than April 18, 2020, and shall notify the NRC in writing when implementation of these activities is complete.

Reference 4, ML11166A135.

Commitment 45 is described in Appendix A of NUREG-2101 (Reference 4).

During the review of the Salem license renewal application by the staff of the NRC, PSEG Nuclear made commitments related to Aging Management Programs (AMPs) to manage aging effects of structures and components (SCs) prior to the period of extended operation. The following table lists the commitment associated with the Boral Monitoring Program:

Item Number	Commitment
45	<p>Boral Monitoring Program is an existing program that will be enhanced to include:</p> <ol style="list-style-type: none">1. The program will be enhanced to perform a neutron attenuation measurement on one each of the three (no vent holes, one vent holes and two vent holes) flat plate sandwich Boral test coupons during the first three two-year inspection frequency periods and every six years thereafter for the Exxon spent fuel storage rack assemblies.2. The program will be enhanced to include acceptance criteria of the neutron attenuation measurement on the Boral test coupons for the Exxon spent fuel storage rack assemblies: A decrease of no more than 5% in Boron-10 content as determined by neutron attenuation measurements. The benchmark Boron-10 content used for comparison will be based on the nominal B-10 areal density in the design basis specification.

As stated in GL 2016-01, "Previously-docketed information may be referenced (including license renewal applications and license amendment requests) if the addressee affirms that the information remains applicable and provides any updated or missing information. In all cases, the NRC is asking licensees to provide information available, based on a reasonable search of plant records, docketed information, and licensing basis." Reference 3 docketed correspondence contains License conditions 2.C.(19) for Unit 1 and 2.C.(35) for Unit 2 which refer to the License Renewal Safety Evaluation Report (Reference 4) which describes the existing Salem Boral Monitoring Program as enhanced by commitment number 45.

There has been no change made to the Salem neutron-absorbing material monitoring program as described in Appendix A to NUREG 2101 (Reference 4) as referenced by license conditions 2.C.(19) for Unit 1 and 2.C.(35) for Unit 2.

The correspondence referenced below represents previously docketed information from PSEG and the NRC that demonstrates that credited neutron-absorbing material in the Salem Spent Fuel Pools is in compliance with the licensing and design basis, and with applicable regulatory requirements; and that there are measures in place to maintain this compliance.

References:

Letters from PSEG Nuclear:

1. LR-N09-0161, "Application for Renewed Operating Licenses – Salem Nuclear Generating Station, Unit 1 and Unit 2," (ML092430230) dated August 18, 2009
2. LR-N16-0144, "Completion of Activities to Support Entry into the Period of Extended Operation," (ML16224B111) dated August 11, 2016

Letters from NRC:

3. "Issuance of Renewed Facility Operating License Nos. DPR-70 and DPR-75 for Salem Nuclear Generating Station, Units 1 and 2," (ML11136A134) dated June 30, 2011
4. NUREG – 2101, "Safety Evaluation Report Related to the License Renewal of Salem Nuclear Generating Station," (ML11166A135) Published June 2011