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Nuclear L.L.C.

JUN 14 2010

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

Salem Nuclear Generating Station, Unit No. 1 and Unit No. 2
Facility Operating License Nos. DPR-70 and DPR-75
NRC Docket Nos. 50-272 and 50-311

Subject: Response to NRC Request for Additional Information dated May 24, 2010, Related to Section 3.3.2 of the Salem Nuclear Generating Station, Units 1 and 2 License Renewal Application

Reference: Letter from Ms. Bennett Brady (USNRC) to Mr. Thomas Joyce (PSEG Nuclear, LLC) "REQUEST FOR ADDITIONAL INFORMATION FOR THE SALEM NUCLEAR GENERATING STATION, UNITS 1 AND 2, LICENSE RENEWAL APPLICATION, SECTION 3.3.2 (TAC NOS ME1836 AND ME1834)" dated May 24, 2010

In the referenced letter, the NRC requested additional information related to Section 3.3.2 of the Salem Nuclear Generating Station, Units 1 and 2 License Renewal Application. Enclosed is the response to this request for additional information.

This letter and its enclosure contain no regulatory commitments.

If you have any questions, please contact Mr. Ali Fakhar, PSEG Manager - License Renewal, at 856-339-1646.

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

Executed on 6/14/10

Sincerely,

Paul J. Davison

Paul J. Davison
Vice President, Operations Support
PSEG Nuclear LLC

Enclosure: Response to Request for Additional Information

cc: S. Collins, Regional Administrator – USNRC Region I
B. Brady, Project Manager, License Renewal – USNRC
R. Ennis, Project Manager - USNRC
NRC Senior Resident Inspector – Salem
P. Mulligan, Manager IV, NJBNE
L. Marabella, Corporate Commitment Tracking Coordinator
Howard Berrick, Salem Commitment Tracking Coordinator

Enclosure

Response to Request for Additional Information related to Section 3.3.2 of the Salem Nuclear Generating Station, Units 1 and 2 License Renewal Application (LRA)

RAI 3.3.2.3.4-1

Background
GALL AMP XI.M28, "Buried Piping and Tanks Inspection Program" recommends that buried piping and tanks be inspected when they are excavated for any reason. The frequency that has been established for this program is consistent with the preventive measures used in the program. These preventative measures are in accordance with the standard industry practice including the maintenance of external coatings and wrappings.

Issue
Salem Nuclear Generating Station LRA Tables 3.3.2-4, 3.3.2-6, 3.3.2-10, 3.3.2-12, 3.3.2-18, and 3.3.2-23 indicates that carbon and low alloy steel bolting exposed to soil can undergo loss of material and loss of preload. The applicant indicated that these buried bolting components will be managed by the Bolting Integrity Program, but that the monitoring frequency will be outlined in the Buried Piping Inspection Program. As indicated in the background, the frequency established for the Buried Piping Inspection Program or the Buried Non-Steel Piping Inspection Program is based on preventative measures including application of external coatings and wrappings. It is not clear to the staff if the carbon and low alloy steel bolting exposed to soil in LRA Tables 3.3.2-4, 3.3.2-6, 3.3.2-10, 3.3.2-12, 3.3.2-18, and 3.3.2-23 are wrapped or coated.

Request
Provide additional information if the carbon and low alloy steel bolting exposed to soil is wrapped or coated. If the components are not wrapped or coated, provide additional information regarding why the frequency adopted from the Buried Piping Inspection Program or the Buried Non-Steel Piping Inspection Program is applicable.

PSEG Response:

The following Summary of Aging Management Evaluations system tables credit the Bolting Integrity Aging Management Program (Salem LRA Appendix B, Section B.2.1.9) to manage aging of carbon and low alloy steel bolting in a soil or groundwater/soil external environment:

- Table 3.3.2-4, Circulating Water System
- Table 3.3.2-6, Compressed Air System
- Table 3.3.2-10, Demineralized Water System
- Table 3.3.2-12, Fire Protection System
- Table 3.3.2-18, Non-Radioactive Drain System
- Table 3.3.2-23, Service Water System

The tables listed above have line items for carbon and low alloy steel buried bolting which credit the Salem Bolting Integrity aging management program to prevent loss of intended function. The buried carbon steel bolting line items are assigned plant specific notes. The plant specific notes explain that external inspections of buried bolting in these systems will occur in accordance with the frequency outlined in the Buried Piping Inspection Aging Management Program (Salem LRA Appendix B, Section B.2.1.22). These plant specific notes do not indicate exceptions to the inspection recommendations in the GALL Bolting Integrity Program. The intent of these plant specific notes is to indicate that the Bolting Integrity Program will be supplemented by buried bolting inspections in these systems which will occur when buried bolting is exposed during the directed and opportunistic excavations of buried piping required by the Buried Piping Inspection Program.

Station documentation and site interviews indicate buried bolting in the above listed systems were initially coated. Carbon steel bolts in the Fire Protection and the Service Water Systems have been observed during excavations. The carbon steel bolts on the Service Water System have been observed with intact coating, whereas buried carbon steel bolts in the Fire Protection System have been observed without coating. However, the Salem Bolting Integrity Program does not take credit for coating or wrapping of buried bolting on any of the above listed systems to prevent loss of intended function.

As indicated above, buried bolts are inspected during the directed and opportunistic excavations of buried piping that are required by the Buried Piping Inspection Program. The buried portion of the Service Water System contains bolting that is ASME Class 3 and inaccessible. GALL AMP XI.M18, Bolting Integrity, recommends that inspections for this system be performed in accordance with ASME Section XI for ASME Class 3 Systems. Sections IWD-2500 and IWD-5000 of ASME Section XI, 1998 Edition with 2000 Addenda, require either a visual examination or a flow test to confirm no significant leakage from pressure retaining ASME Class 3 components. For Salem Units 1 and 2, these requirements are met by performing system flow tests.

With the exception of the Compressed Air System which does not have buried bolts, the remaining buried bolts on the above listed systems are non-ASME bolts and are inaccessible. Periodic inspections of inaccessible non-ASME bolts are not recommended by GALL AMP XI.M18, Bolting Integrity, and are not required by ASME Section XI, 1998 Edition with 2000 Addenda.

During the preparation of this response, it was recognized that the Compressed Air System Table (3.3.2-6) conservatively contained line items which depicted carbon steel bolts in an external soil environment. However, upon further review of the applicable construction specifications the underground portions of this system were not designed with buried bolts. LRA Table 3.3.2-6, page 3.3-185, is revised to delete two "Bolting" line items as shown below. Note that deleted information is displayed with a strike through.

Table 3.3.2-6 Compressed Air System

Component Type	Intended Function	Material	Environment	Aging Effect Requiring Management	Aging Management Program	NUREG-1801 Vol. 2 Item	Table 1 Item	Notes
~~Bolting~~	~~Mechanical Closure~~	~~Carbon and Low Alloy Steel Bolting~~	~~Soil (External)~~	~~Loss of Material/General Pitting, Crevice, and Microbiologically Influenced Corrosion~~	~~Bolting Integrity~~			~~G, 3~~
~~Bolting~~	~~Mechanical Closure~~	~~Carbon and Low Alloy Steel Bolting~~	~~Soil (External)~~	~~Loss of Preload/Thermal Effects, Gasket Creep and Self Loosening~~	~~Bolting Integrity~~			~~G, 3~~

~~3. The aging effects for closure bolting in a soil environment include loss of material and loss of preload. External inspections of buried bolting will occur in accordance with the frequency outlined in the Buried Piping Inspection program.~~