



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

August 9, 2010

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

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION FOR SALEM NUCLEAR  
GENERATING STATION, UNITS 1 AND 2 LICENSE RENEWAL APPLICATION  
(TAC NOS. ME1834 AND ME1836)

Dear Mr. Joyce:

By letter dated August 18, 2009, Public Service Enterprise Group Nuclear, LLC, submitted an application pursuant to Title 10 of the *Code of Federal Regulations* Part 54 for renewal of Operating License Nos. DPR-70 and DPR-75 for Salem Nuclear Generating Station, Units 1 and 2, respectively. The staff of the U.S. Nuclear Regulatory Commission (NRC or the staff) is reviewing this application in accordance with the guidance in NUREG-1800, "Standard Review Plan for Review of License Renewal Applications for Nuclear Power Plants." During its review, the staff has identified areas where additional information is needed to complete the review. The staff's request for additional information is included in the Enclosure. Further requests for additional information may be issued in the future.

Items in the enclosure were provided to Mr. John Hufnagel and other members of your staff, and a mutually agreeable date for the response is within 30 days from the date of this letter. If you have any questions, please contact me by telephone at 301-415-2981 or by e-mail at [bennett.brady@nrc.gov](mailto:bennett.brady@nrc.gov).

Sincerely,

A handwritten signature in black ink, reading "Bennett M. Brady", is positioned above the typed name.

Bennett M. Brady, Project Manager  
Projects Branch 1  
Division of License Renewal  
Office of Nuclear Reactor Regulation

Docket Nos. 50-272 and 50-311

Enclosure:  
As stated

cc w/encl: Distribution via Listserv

REQUEST FOR ADDITIONAL INFORMATION FOR SALEM NUCLEAR GENERATING STATION  
UNITS 1 AND 2 LICENSE RENEWAL APPLICATION  
(TAC NOS. ME1834 AND ME1836)

**RAI 3.1.2.2.7.2-01**

Background:

License renewal application (LRA) Section 3.1.2.2.7.2 addresses the aging management of cracking due to stress corrosion cracking (SCC) of Class 1 cast austenitic stainless steel (CASS) piping and piping components exposed to reactor coolant. LRA Table 3.1.1 item 3.1.1-24, which also refers to LRA Section 3.1.2.2.7.2, addresses the applicant's aging management of SCC in the CASS components. The applicant stated that the aging effect will be managed by implementing the Water Chemistry Program (LRA Section B.2.1.2) and Thermal Aging Embrittlement of Cast Austenitic Stainless Steel Program (LRA Section B.2.1.6).

LRA Section B.2.1.6 states that the Thermal Aging Embrittlement of CASS Program is consistent with GALL AMP XI.M12, "Thermal Aging Embrittlement of Cast Austenitic Stainless Steel (CASS)," with no exception or enhancement. LRA Section B.2.1.6 also indicates that the applicant's program includes the inspections, flaw evaluations, and repairs and replacements in accordance with the ASME Section XI Inservice Inspection, Subsections IWB, IWC, and IWD Program.

Issue:

The staff noted that the material screening criteria used to manage the thermal aging embrittlement of CASS, as described in GALL AMP XI.M12, are different from the material screening criteria used to further evaluate and manage the SCC of CASS as described under GALL Report item IV.C2-3.

In order to adequately manage the SCC of CASS components under GALL Report item IV.C2-3, the GALL Report recommends further evaluation for CASS that has carbon content greater than 0.035 percent or ferrite content less than 7.5 percent. In contrast, the material screening criteria of the Thermal Aging Embrittlement of CASS Program are based on the combinations of molybdenum content, different threshold levels of ferrite content (14 percent and 20 percent) and casting methods (static casting and centrifugal casting). Therefore, the staff found the need to clarify whether the applicant's material screening criteria used to manage the SCC applicant's aging management method are consistent with GALL Report item IV.C2-3.

Request:

1. Clarify how the applicant's material screening criteria used to further evaluate and manage the SCC of CASS are consistent with GALL Report item IV.C2-3 which recommends that SCC of CASS with carbon content greater than 0.035 percent or ferrite content less than 7.5 percent be further evaluated and adequately managed.

ENCLOSURE

2. Clarify whether the SCC in the CASS components is managed by the inspections, flaw evaluations, and repairs and replacements in accordance with the ASME Section XI Inservice Inspection, Subsections IWB, IWC and IWD Program. If the ASME Section XI Inservice Inspection, Subsections IWB, IWC and IWD Program is not used to manage the aging effect, justify why the applicant's program is adequate to manage the aging effect.

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/RA/

Bennett M. Brady, Project Manager  
Projects Branch 1  
Division of License Renewal  
Office of Nuclear Reactor Regulation

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DATE	07/26/10	07/23/10	07/27/10	08/09/10

OFFICIAL RECORD COPY

Letter to T. Joyce from B. Brady dated August 9, 2010

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