

January 5, 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 REGARDING SCOPING OF
METAL FATIGUE FOR THE SALEM NUCLEAR GENERATING STATION,
UNITS 1 AND 2, AND THE HOPE CREEK GENERATING STATION

Dear Mr. Joyce:

By letter dated August 18, 2009, as supplemented by letter dated January 23, 2009, Public Service Enterprise Group Nuclear, LLC (PSEG), submitted an application pursuant to Title 10 of the *Code of Federal Regulations*, Part 54 (10 CFR Part 54) for renewal of Operating License Nos. DPR-70, DPR-75, and NPF-57 for Salem Nuclear Generating Station (SALEM), Units 1 and 2, and Hope Creek Generating Station (HCGS), respectively. The staff of the U.S. Nuclear Regulatory Commission (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 requests for additional information are included in the enclosure. Further requests for additional information may be issued in the future.

Items in the enclosure were discussed with Mr. John Hufnagel, of the License Renewal Project 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 301-415-3191 or by e-mail at Donnie.Ashley@nrc.gov.

Sincerely,

/RA/

Donnie J. Ashley, Senior Project Manager
Projects Branch 1
Division of License Renewal
Office of Nuclear Reactor Regulation

Docket Nos. 50-272, 50-311, and 50-354

Enclosure:
As stated

cc w/encl: See next page

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Donnie J. Ashley, Senior Project Manager
Projects Branch 1
Division of License Renewal
Office of Nuclear Reactor Regulation

Docket Nos. 50-272, 50-311, and 50-354

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As stated

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OFFICE	PM:RPB1:DLR	LA:RPOB:DLR	BC:DLR:RPB1	PM:DLR:RPB1
NAME	D. Ashley	S. Figueroa	B. Pham	D. Ashley (Signature)
DATE	12/03/09	12/03/09	12/03/09	01/05/10

OFFICIAL RECORD COPY

Letter to Thomas Joyce from Donnie J. Ashley dated January 5, 2010

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION REGARDING SCOPING OF
FIRE PROTECTION AND METAL FATIGUE FOR THE SALEM NUCLEAR
GENERATING STATION UNITS 1 AND 2 AND THE HOPE CREEK
GENERATING STATION

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DAshley

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MModes, RI

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RConte, RI

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Hope Creek Generating Station and
Salem Nuclear Generating Station,
Unit Nos. 1 and 2

cc:

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Hancocks Bridge, NJ 08038

Hope Creek Generating Station and
Salem Nuclear Generating Station,
Unit Nos. 1 and 2

- 2 -

cc:

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Mr. James Stavely
Manager, License Renewal Hope Creek
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Mr. Earl R. Gage
Salem County Administrator
Administration Building
94 Market Street
Salem, NJ 08079

**REQUEST FOR ADDITIONAL INFORMATION
REGARDING SCOPING OF METAL FATIGUE FOR
SALEM NUCLEAR GENERATING STATION, UNITS 1 AND 2, AND
HOPE CREEK GENERATING STATION
LICENSE RENEWAL APPLICATION (LRA)**

RAI S 4.4.3-1

In the Salem Nuclear Generating Station (Salem) LRA, the background information on leak-before-break (LBB) analysis in Section 4.4.3 does not contain enough information to evaluate the application for this analysis.

Please provide the following information:

1. References for the original LBB reports for the LBB-approved piping for both units.
2. Besides the primary loop piping, identify any other piping systems that have been approved for LBB for both units.

RAI S 4.4.3-2

On Page 4-49 of the Salem LRA, the applicant discussed 60-year LBB analyses which were based on the steam generator snubber elimination program, steam generator replacement, power uprate, Tav_g operating window, and the mechanical stress improvement process application.

Please provide the following information:

1. Reference the report that contains the 60-year analyses.
2. It is not clear whether the 60-year LBB analyses were performed following the same methodology as that of the original LBB analyses or were a study to determine the impact on the LBB piping from various load changes due to changes in operating conditions. Describe in detail the 60-year LBB analyses or submit the analyses for staff review.

RAI S 4.4.3-3

On page 4-50 of the Salem LRA, the applicant stated that the piping systems include cast austenitic stainless steel piping components. Identify each of the cast austenitic stainless steel piping components that are part of the LBB-approved piping.

RAI S 4.4.3-4

Nickel-based Alloy 600/82/182 material in the pressurized water reactor environment has been shown to be susceptible to primary water stress corrosion cracking (PWSCC).

ENCLOSURE

Please provide the following information:

1. Identify any Alloy 82/182 weld metal and Alloy 600 components used in the LBB-approved piping for both units.
2. If LBB piping, identified in the Salem LRA, contains Alloy 600/82/182 material, discuss any measures (such as weld overlays or mechanical stress improvement) that have been or will be implemented to reduce the susceptibility of PWSCC in the LBB piping components.
3. Discuss the inspection history and future inspection frequency of the Alloy 82/182 dissimilar metal butt welds.

RAI S 4.4.3-5

As part of reviewing the Salem Time-Limited Aging Analysis (TLAA) of the LBB-approved piping, please provide the following information regarding the maintenance of the structural integrity of the LBB piping:

1. Discuss the inspection history and results of the LBB-approved piping.
2. If indications or flaws are remained in service in the LBB piping, discuss how the indications and flaws are monitored to ensure the structural integrity of the pipe to the end of the period of extended operation.
3. Discuss future inspection schedules for each of the LBB pipes, including the inspection of the existing flaws.

RAI S 4.4.3-6

On page 4-50 of the Salem LRA, the applicant stated that the numbers of design cycles assumed in the LBB analyses bound the numbers of design cycles projected for 60 years of operation. Discuss how the design cycles assumed in the LBB analysis are verified to ensure that they bound the numbers of design cycles projected for 60 years of operation.

RAI S 4.4.3-7

On page 4-50 of the Salem LRA, under Disposition: Validation, the applicant stated that "...The [LBB] analyses remain valid for the period of extended operation..." Discuss how the LBB analyses are verified to demonstrate that they remain valid for the period of extended operation.