



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

December 20, 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 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".

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

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

**RAI B.2.1.22-03**

Background:

In request for additional information (RAI) B.2.1.22-02, the U.S. Nuclear Regulatory Commission (NRC or the staff) requested that the applicant justify their aging management plan for buried in-scope steel piping given that the site does not have any cathodic protection of buried steel piping. The applicant stated that inspections will occur every ten years starting ten years prior to the period of extended operation. The applicant also stated that three of four inspections of steel piping would occur in the auxiliary feedwater, service water, and compressed air systems, with the fourth inspection occurring in the fire protection system. The applicant further stated that because the inspections of the auxiliary feedwater, service water and compressed air systems will be performed on safety-related segments, they will be biased towards systems that perform more safety significant functions. The applicant stated that based on the original construction backfill specifications, recent inspection results which indicate no coating damage due to coarse backfill, and procedure requirements to document coating degradation, the planned inspections are adequate to detect potential degradation of buried piping and damage to coatings.

Issue:

The staff noted that the applicant has three instances of degradation of buried piping: (1) a 2004 fuel oil leak due to missing wrap on the pipe, (2) a 2010 control air line leak due to damaged coating, and (3) the 2010 identification of significant corrosion of auxiliary feedwater system piping. Given this plant-specific operating experience and the information provided in the RAI response, the staff lacks sufficient information to conclude that the applicant aging management strategy for buried steel piping will be sufficient to provide a reasonable assurance that in-scope buried will meet its current license basis function(s). Specifically, the staff is concerned with the following:

- a. Given an effective buried in-scope "population" of 350 feet of safety related auxiliary feedwater piping, 1700 (60 feet is safety-related) feet of service water piping, and 2350 (1700 feet is safety-related) feet of compressed air system piping, a sample size of three eight-foot excavated steel piping inspections every ten years starting ten years prior to the period of extended operation may not provide a reasonable basis for assurance that the piping will meet or exceed the minimum design wall thickness throughout the period of extended operation.
- b. It is not apparent that the applicant has informed its inspection quantities or locations with localized soil data (e.g., pH, composition of the soil, water table, chemical runoff probability, soil resistivity, potential for stray currents) or localized corrosion rates.

ENCLOSURE

Request:

*Although gray cast iron and ductile cast iron are included within the scope of the GALL Report Section IX definition of steel, the below request does not apply to piping segments constructed of these materials in the fire protection system.*

Respond to the following for buried in-scope steel piping:

- a. Provide details on plant-specific data of localized soil conditions (e.g., pH, composition of the soil, water table, chemical runoff probability, soil resistivity, potential for stray currents) and localized corrosion rates that will be utilized to inform the inspection population size and locations. If these data do not exist, state what samples will be taken and how they will be utilized in selecting inspection locations and population size.
- b. For the auxiliary feedwater, service water, and compressed air system piping, justify the basis of the inspection population size (i.e., linear feet of buried pipe) in relation to standard industrial sampling methods so as to provide a reasonable assurance that the pipe wall thickness will meet or exceed design minimum values throughout the period of extended operation.

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Sincerely,

/RA/

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

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Enclosure:  
As stated

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ADAMS Accession No.: ML103340449

\*concurrence via e-mail

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DATE	12/06/10	12/01/10	12/12/10	12/20/10

OFFICIAL RECORD COPY

Letter to T. Joyce from B. Brady dated December 20, 2010

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