



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

September 19, 2011

LICENSEE: PSEG Nuclear LLC

FACILITY: Salem Nuclear Generating Station, Unit Nos. 1 and 2

SUBJECT: SUMMARY OF SEPTEMBER 8, 2011, MEETING WITH PSEG NUCLEAR LLC TO DISCUSS PROPOSED LICENSE AMENDMENT REGARDING REACTOR COOLANT SYSTEM ACTIVITY FOR SALEM NUCLEAR GENERATING STATION, UNIT NOS. 1 AND 2 (TAC NOS. ME6895 AND ME6896)

On September 8, 2011, a Category 1 public meeting was held via teleconference between the U.S. Nuclear Regulatory Commission (NRC) and representatives of PSEG Nuclear LLC (PSEG or the licensee). The purpose of the meeting was to discuss a proposed license amendment for Salem Nuclear Generating Station, Unit Nos. 1 and 2. The proposed amendment would replace the current Technical Specification limits on primary coolant gross specific activity with limits on primary coolant noble gas activity. A list of conference call participants is provided as Enclosure 1.

During the meeting, PSEG provided an overview of the planned license amendment request as detailed on the licensee's slides provided as Enclosure 2. The licensee indicated that the technical basis for the proposed change would be consistent with the approach detailed in Technical Specification Task Force (TSTF) Change Traveler TSTF-490, Revision 1. Since this revision of TSTF-490 has not yet been endorsed by the NRC staff, the licensee originally planned to not reference the TSTF in the application. It was decided that a better approach would be for the licensee to reference TSTF-490, Revision 0, which has been endorsed by the NRC, and to address issues raised by the NRC staff in request for additional information questions for licensee submittals that were based on TSTF-490, Revision 0. The licensee anticipates submittal of the license amendment request in October 2011.

Members of the public were not in attendance. Public Meeting Feedback forms were not received.

Please direct any inquiries to me at 301-415-1420 or Rick.Ennis@nrc.gov.

A handwritten signature in black ink, appearing to read "RBE", with a stylized flourish extending from the end of the signature.

Richard B. Ennis, Senior Project Manager  
Plant Licensing Branch I-2  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Docket Nos. 50-272 and 50-311

Enclosures:  
As stated

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LIST OF CONFERENCE CALL PARTICIPANTS  
SEPTEMBER 8, 2011, MEETING WITH PSEG  
PROPOSED LICENSE AMENDMENT  
REGARDING REACTOR COOLANT SYSTEM ACTIVITY  
FOR SALEM NUCLEAR GENERATING STATION, UNIT NOS. 1 AND 2

<b>Name</b>	<b>Organization</b>
Rick Ennis	NRC
LaRay Benton	NRC
Paul Duke	PSEG Nuclear LLC
Emily Maguire	PSEG Nuclear LLC
Bill McTigue	PSEG Nuclear LLC
John Duffy	PSEG Nuclear LLC
Jeff Heavener	PSEG Nuclear LLC
Rebecca Novak	PSEG Nuclear LLC
Elliot Rosenfeld	New Jersey Department of Environmental Protection
Paul Schwartz	New Jersey Department of Environmental Protection



# LAR S11-02, Deletion of E Bar Definition and Revision to RCS Specific Activity Technical Specification

Salem Units 1 and 2

Pre-Application Meeting

September 8, 2011

**Salem**  
GENERATING STATION

## Overview of Proposed Change

### •Reactor Coolant System Specific Activity

- Replace the current Tech Spec limits on  $\bar{E}$  – Average Disintegration Energy with limits on noble gas activity.
- The noble gas activity would be based on DOSE EQUIVALENT XE-133 and would take into account the noble gas activity in the primary coolant.

### •License Amendment Request (LAR) Submittal Strategy

- The technical basis for the proposed change will be plant specific and consistent with the approach provided in TSTF 490, Rev. 1
- However, PSEG does not plan to reference the TSTF in the LAR.
- The LAR will maintain consistency with industry precedent.

# Current Licensing Basis

## TS Definitions

- 1.10 Dose Equivalent I-131
- 1.11  $\bar{E}$  – Average Disintegration Energy

## Reactor Coolant System Specific Activity

- LCO 3.4.8 (S1) & LCO 3.4.9 (S2)
  - Defines limits for specific activity of primary coolant to be:
    - $\leq 1.0 \mu\text{Ci/gm DOSE EQUIVALENT I-131}$ 
      - » Or less than the limit line as shown on Figure 3.4-1 for specific power levels
    - $\leq 100 / \bar{E} \mu\text{Ci/gm}$
  - Applicable in Modes 1, 2, 3, 4, and 5
- SR 4.4.8 (S1) & SR 4.4.9 (S2)
  - Provides Table 4.4-4 for sampling requirement frequencies to determine if the specific activity of the primary coolants is within allowable limits

# Proposed Licensing Basis

## •TS 1.10 (S1 & S2)

- Minor text changes to explicitly identify the source for the dose conversion factors (DCFs) to be used to calculate Dose Equivalent I-131
  - DCFs shall be the “Thyroid” Committed Dose Equivalent (CDE) inhalation dose conversion factors from Table 2.1 of Federal Guidance Report No. 11 (FGR-11), “Limiting Values of Radionuclide Intake and Air Concentration and Dose Conversion Factors for Inhalation, Submersion, and Ingestion,” 1988.

## •TS 1.11 (S1 & S2)

- Delete  $\bar{E}$  - Average Disintegration Energy definition and replace with definition for Dose Equivalent Xe-133
  - DCFs shall be the air submersion “Effective” dose conversion factors from Table III.1 of Federal Guidance Report No. 12, (FGR-12) “External Exposure to Radionuclides in Air, Water, and Soil,” EPA, 1993.

## •TS Figure 3.4-1 (S1 & S2)

- Delete figure

## •LCO 3.4.8 (S1) & LCO 3.4.9 (S2)

- Revise text to remove reference to Figure 3.4-1, and to replace it with a DEI primary coolant specific activity level of  $\leq 60 \mu\text{Ci/gm}$
- Replace 100/E Bar specific activity limit for primary coolant nuclides other than iodine with a dose equivalent Xe-133 specific activity limit of  $\leq 601 \mu\text{Ci/gm}$
- Change applicability requirements to Modes 1, 2, 3, and 4

## •SR 4.4.8 (S1) & SR 4.4.9 (S2)

- Revised based on industry precedent

## Effect on Safety

- **Limits on specific activity of the reactor coolant ensure that the offsite and control room doses are appropriately limited during analyzed transients and accidents.**
- **This change will implement a LCO that is consistent with the whole body radiological consequence analyses which are sensitive to the noble gas activity in the primary coolant.**

## Conclusion

- **No significant hazards consideration**

- No physical or plant operational changes
- Proposed change ensures consistency with assumptions in the safety analyses
- Proposed change will ensure the monitored values are bounded by the initial assumptions in the safety analyses

Please direct any inquiries to me at 301-415-1420 or Rick.Ennis@nrc.gov.

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Richard B. Ennis, Senior Project Manager  
Plant Licensing Branch I-2  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

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