



**JUN 06 2003**

**LR-N03-0092  
LCR S03-03**

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

Gentlemen:

**REQUEST FOR CHANGE TO TECHNICAL SPECIFICATIONS  
EXPLOSIVE GAS MIXTURE  
SALEM GENERATING STATION UNITS 1 AND 2  
FACILITY OPERATING LICENSES NOS. DPR-70 AND DPR-75  
DOCKET NOS. 50-272 AND 50-311**

Pursuant to 10 CFR 50.90, PSEG Nuclear LLC (PSEG) hereby requests a revision to the Technical Specifications (TS) for Salem Generating Station Units 1 and 2. In accordance with 10CFR50.91(b)(1), a copy of this submittal has been sent to the State of New Jersey.

The proposed amendment clarifies the Salem Units 1 and 2 TS 3/4.11.2.5 for the waste gas holdup system.

PSEG has evaluated the proposed changes in accordance with 10CFR50.91(a)(1), using the criteria in 10CFR50.92(c), and has determined this request involves no significant hazards considerations. An evaluation of the requested changes is provided in Attachment 1 to this letter. The marked up Technical Specification pages affected by the proposed changes are provided in Attachment 2.

PSEG requests approval of the proposed License Amendment by August 31, 2003 to be implemented within 60 days.

If you have any questions or require additional information, please contact Mr. Courtney Smyth at (856) 339-5298.

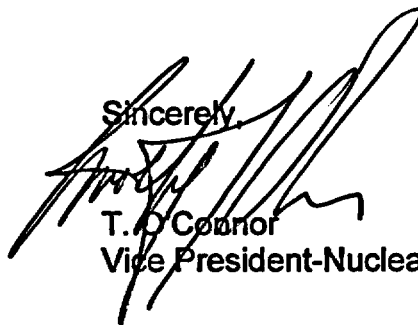
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JUN 06 2003

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

Executed on 6/6/03

Sincerely,

A handwritten signature in black ink, appearing to read 'T. O'Connor', is written over the word 'Sincerely,'.

T. O'Connor  
Vice President-Nuclear Operations

Attachments (2)

**JUN 06 2003**

**C: Mr. H. Miller, Administrator – Region I  
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**USNRC Senior Resident Inspector - Salem (X24)**

**Mr. K. Tosch, Manager IV  
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PO Box 415  
Trenton, New Jersey 08625**

**SALEM GENERATING STATION UNITS 1 AND 2  
FACILITY OPERATING LICENSES NOS. DPR-70 AND DPR-75  
DOCKET NOS. 50-272 AND 50-311**

**EVALUATION OF REVISIONS TO THE TECHNICAL SPECIFICATIONS  
EXPLOSIVE GAS MIXTURE**

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## REQUEST FOR CHANGE TO TECHNICAL SPECIFICATIONS

### 1. DESCRIPTION

The proposed amendment clarifies the Salem Generating Station (SGS) Unit 1 and 2 Technical Specification (TS) 3/4.11.2.5, Explosive Gas Mixture.

### 2. PROPOSED CHANGE

The following changes to the SGS Unit 1 and 2 TS are proposed:

- a. Add a footnote to the Limiting Condition for Operation (LCO) 3.11.2.5 APPLICABILITY as follows "\*\* Not applicable to portions of the Waste Gas System removed from service for maintenance provided that the portions removed for maintenance are isolated and purged of hydrogen to less than 4% by volume."
- b. Surveillance Requirement (SR) 4.11.2.5 is revised to delete reference to hydrogen which is not limited by the LCO.
- c. Conforming changes have been made to the bases page B 3/4 11-6.

The above changes are shown on the attached marked up pages (Attachment 2).

### 3. BACKGROUND

LCO 3.11.2.5 establishes a limit of 2% oxygen and is applicable "At all times". This LCO can be read to imply that the limits are applicable to waste gas components that have been removed from service. Therefore, a verbatim interpretation of the current Technical Specification appears to prohibit venting the waste gas system to atmosphere for maintenance. In addition, Surveillance Requirement (SR) 4.11.2.5 implies that a hydrogen monitor is required OPERABLE by Table 3.3-13. Table 3.3-13 does not specify an OPERABLE hydrogen monitor.

In 1996 PSEG submitted Licensee Event Report (LER) 311/96-002-01 (Reference 1). The LER corrective actions included submittal of PSEG letter dated August 15, 1996 (Reference 2), to request resolution of the administrative issues in TS 3/4.11.2.5. The changes proposed herein supersede our letter of August 15, 1996.

#### **4. TECHNICAL ANALYSIS**

The purpose of LCO 3.11.2.5 is to preclude an explosive combination of hydrogen and oxygen that would result in an uncontrolled radiological release from the waste gas system. The current LCO limits oxygen concentration at all times, presenting an apparent compliance issue when the system is removed from service for maintenance. The proposed change would continue to prevent oxygen and hydrogen concentration from exceeding the flammability limits but allow for maintenance on the system.

Surveillance Requirement 4.11.2.5 refers to oxygen and hydrogen monitors required operable by TS Table 3.3-13. The Salem Unit 1 and 2 waste gas analyzers measure oxygen and hydrogen concentrations, but hydrogen monitoring is not required by TS Table 3.3-13. Salem gaseous wastes contain significant concentrations of hydrogen, so explosive gas mixtures are precluded by monitoring and limiting oxygen concentration during system operation. Consistent with SR 4.11.2.5 as proposed, hydrogen concentration will be assumed to be greater than 4% when it is not measured. The proposed change to delete reference to the hydrogen monitor achieves consistency between TS sections and is administrative in nature.

#### **5. REGULATORY SAFETY ANALYSIS**

##### **5.1 No Significant Hazards Consideration**

PSEG Nuclear LLC (PSEG) has evaluated whether or not a significant hazards consideration is involved with the proposed amendment by focusing on the three standards set forth in 10 CFR 50.92, "Issuance of amendment" as discussed below:

- 1. Does the proposed change involve a significant increase in the probability or consequences of an accident previously evaluated?**

**Response: No.**

The proposed changes to the Technical Specifications (TS) 3/4.11.2.5, Explosive Gas Mixtures, would correct inconsistencies while continuing to preclude the combination of explosive concentrations of oxygen and hydrogen in the Salem Generating Station (SGS) Unit 1 and 2 waste gas system. The changes eliminate the potential for misinterpretation and achieve internal consistency between TS sections. No changes to the design of structures, systems, or components (SSC) are made and there are no effects on accident mitigation.

Therefore, the proposed change does not involve a significant increase in the probability or consequences of an accident previously evaluated.

2. Does the proposed change create the possibility of a new or different kind of accident from any accident previously evaluated?

**Response: No.**

Section 15.3.6 of the SGS Updated Final Safety Analysis Report (UFSAR) summarizes the results of a postulated non-mechanistic rupture of a waste gas decay tank. This postulated accident scenario is not affected by the proposed amendment, nor is any new accident scenario introduced by the proposed changes. The proposed administrative and editorial changes to the TS do not change the design function of or operation of any SSCs. The TS, as amended, would continue to limit explosive and flammable gas concentrations to prevent an uncontrolled release from the waste gas system.

Therefore, the proposed changes do not create the possibility of a new or different kind of accident from any previously evaluated.

3. Does the proposed change involve a significant reduction in a margin of safety?

**Response: No.**

The proposed changes are administrative and editorial changes to the TS that do not affect the ability of plant SSCs to perform their design basis accident functions. In addition, the change does not change the margin of safety since no SSCs are changed and the limits on explosive gas mixtures are maintained.

Therefore, the proposed change does not involve a significant reduction in a margin of safety.

Based on the above, PSEG concludes that the proposed changes present no significant hazards consideration under the standards set forth in 10 CFR 50.92(c), and accordingly, a finding of "no significant hazards consideration" is justified.

## **5.2 Applicable Regulatory Requirements/Criteria**

General Design Criterion (GDC) 60 of Appendix A to 10 CFR 50 stipulates in part that gaseous effluent releases be controlled during normal operation and anticipated operational occurrences. TS 3/4.11.2.5 supports this design objective by limiting hydrogen and oxygen concentrations to avoid their flammability limits to prevent an uncontrolled release of gaseous waste. The TS as amended by this request would continue to support compliance with GDC 60.

In conclusion, based on the considerations discussed above, (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public.

## **6. ENVIRONMENTAL CONSIDERATION**

PSEG has determined the proposed amendment relates to changes in a requirement with respect to installation or use of a facility component located within the restricted area, as defined in 10 CFR 20, or relates to changes in an inspection or a surveillance requirement. The proposed amendment does not involve (i) a significant hazards consideration, (ii) a significant change in the types or significant increase in the amounts of any effluents that may be released offsite, or (iii) a significant increase in individual or cumulative occupational radiation exposure. Accordingly, the proposed amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Therefore, pursuant to 10 CFR 51.22(b), an environmental assessment of the proposed change is not required.

## **7. REFERENCES**

- 1. Salem Generating Station Unit 2 Licensee Event Report (LER) 311/96-002-01, "Waste Gas Decay Tank Oxygen Concentration Exceeded Technical Specifications Limit," September 11, 1996**
- 2. PSEG letter to NRC LR-N96242, Amendment Discrepancy Resolution, Explosive Gas Mixture, Salem Generating Station Nos. 1 and 2, Facility Operating Licenses DPR-70 and DPR-75, dated August 15, 1996**



**SALEM NUCLEAR GENERATING STATION, UNITS 1 AND 2  
FACILITY OPERATING LICENSES DPR-70 AND DPR-75  
DOCKET NOS. 50-272 AND 50-311  
REVISIONS TO THE TECHNICAL SPECIFICATIONS**

**TECHNICAL SPECIFICATION PAGES WITH PROPOSED CHANGES**

The following Technical Specifications for Facility Operating License DPR-70 are affected by this change request:

<u>Technical Specification</u>	<u>Page</u>
3/4.11.2.5	3/4 11-15
Bases 3/4.11.2.5	B 3/4 11-6

The following Technical Specifications for Facility Operating License DPR-75 are affected by this change request:

<u>Technical Specification</u>	<u>Page</u>
3/4.11.2.5	3/4 11-15
Bases 3/4.11.2.5	B 3/4 11-6

## RADIOACTIVE EFFLUENTS

## EXPLOSIVE GAS MIXTURE

## LIMITING CONDITION FOR OPERATION

---

3.11.2.5 The concentration of oxygen in the waste gas holdup system shall be limited to less than or equal to 2% by volume.

APPLICABILITY: At all times. \*

### ACTION:

- a. With the concentration of oxygen in the waste gas holdup system greater than 2% by volume but less than or equal to 4% by volume, reduce the oxygen concentration to the above limits within 48 hours.
- b. With the concentration of oxygen in the waste gas holdup system greater than 4% by volume immediately suspend all additions of waste gases to the system and reduce the concentration of oxygen to less than or equal to 2% by volume without delay.
- c. The provision of Specifications 3.0.3 and 3.0.4 are not applicable.

## SURVEILLANCE REQUIREMENTS

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4.11.2.5 The concentration of ~~hydrogen and~~ oxygen in the waste gas holdup system shall be determined to be within the above limits by continuously monitoring the waste gases in the waste gas holdup system with the oxygen monitor required OPERABLE by Table 3.3-13. If hydrogen is not measured, the concentration of hydrogen shall be assumed to exceed 4% by volume.

\* Not applicable to portions of the Waste Gas System removed from service for maintenance provided that, the portions removed for maintenance are isolated, and purged of hydrogen to less than 4% by volume.


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## EXPLOSIVE GAS MIXTURE

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## RADIOACTIVE EFFLUENTS

### BASES

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#### 3/4.11.2.5 EXPLOSIVE GAS MIXTURE

This specification is provided to ensure that the concentration of potentially explosive gas mixtures contained in the waste gas holdup system is maintained below the flammability limits of hydrogen and oxygen. Maintaining the concentration of hydrogen and oxygen below the specified values their flammability limits provides assurance that the releases of radioactive materials will be controlled in conformance with the requirements of General Design Criterion 60 of Appendix A to 10 CFR Part 50.

This specification is not applicable to portions of the Waste Gas System Removed from service for maintenance, provided that the portions removed for maintenance are isolated from sources of hydrogen and purged of hydrogen to less than 4% by volume.

3/4.11.3 Deleted

## RADIOACTIVE EFFLUENTS

### BASES

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#### 3/4.11.2.5 EXPLOSIVE GAS MIXTURE

This specification is provided to ensure that the concentration of potentially explosive gas mixtures contained in the waste gas holdup system is maintained below the flammability limits of hydrogen and oxygen. Maintaining the concentration of ~~hydrogen and oxygen below~~ ~~the specified values their flammability limits~~ provides assurance that the releases of radioactive materials will be controlled in conformance with the requirements of General Design Criterion 60 of Appendix A to 10 CFR Part 50.

This specification is not applicable to portions of the Waste Gas System Removed from service for maintenance, provided that the portions removed for maintenance are isolated from sources of hydrogen and purged of hydrogen to less than 4% by volume.

3/4.11.3 Deleted