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INFORMATION

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LCR S04-08

PSEG Nuclear LLC

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

REQUEST FOR CHANGES TO TECHNICAL SPECIFICATIONS
DELETION OF REACTOR COOLANT SYSTEM VOLUME
SALEM NUCLEAR GENERATING STATION UNITS 1 and 2
FACILITY OPERATING LICENSES 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 (T/S) for the Salem Nuclear Generating Station, Units 1 and 2. In accordance with 10 CFR 50.91 (b)(1), a copy of this submittal has been sent to the State of New Jersey.

PSEG Nuclear proposes to revise the Salem Unit 1 and 2 Technical Specifications to reflect the deletion of Reactor Coolant System (RCS) Volume from Design Features Section 5.4.2. Information concerning the RCS Volume is included in the Salem Updated Final Safety Analysis Report (UFSAR), and any changes to the information are controlled in accordance with 10 CFR 50.59. By letter dated March 1, 2000 (TAC Nos. MA7756 and MA7757), Donald C. Cook Nuclear Plant has received NRC approval of a similar request.

PSEG has evaluated the proposed changes in accordance with 10 CFR 50.91 (a)(1), using the criteria in 10 CFR 50.92 (c), and has determined this request involves no significant hazards considerations. This amendment to the Salem T/S meets the criteria of 10 CFR 51.22 (c)(9) for categorical exclusion from an environmental impact statement.

The requested changes are provided in Attachment 1 to this letter. The proposed marked up Technical Specification pages are provided in Attachment 2.

Should you have any questions regarding this request, please contact Mr. Steve Mannon at 856-339-1129.

A001

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

Sincerely,

Executed on 02-15-2005

Michael P. Gallagher
Vice President-Eng/Tech Support

Attachments (2)

cc Mr. S. J. Collins, Administrator - Region I
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EVALUATION OF REVISIONS TO THE
TECHNICAL SPECIFICATIONS
DELETION OF RCS VOLUME

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

ATTACHMENT 1

EVALUATION OF REVISIONS TO THE
TECHNICAL SPECIFICATIONS
DELETION OF RCS VOLUME

LR-NO5-0036
ATTACHMENT 1

EVALUATION OF REVISIONS TO THE TECHNICAL SPECIFICATIONS DELETION OF RCS VOLUME

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EVALUATION OF REVISIONS TO THE TECHNICAL SPECIFICATIONS DELETION OF RCS VOLUME

1.0 DESCRIPTION

The amendment request deletes Technical Specification (T/S) 5.4.2, "Reactor Coolant System Volume," regarding the Reactor Coolant System (RCS) volume information. This information is not required to be in the T/S for compliance with 10 CFR 50.36(c)(4). Information concerning the RCS volume is included in the Salem Updated Final Safety Analyses Report (UFSAR), and any changes to the information are controlled in accordance with 10 CFR 50.59.

2.0 PROPOSED CHANGES

Specifically the proposed changes would revise the following:

2.1 Delete Section 5.4.2, Volume, located in Page 5-5 for Salem Unit 1 and
2.2 Delete Section 5.4.2, Volume, located in Page 5-4 for Salem Unit 2.

3.0 BACKGROUND

Unit 1 and Unit 2 T/S 5.4.2 lists the approximate, total combined RCS volume at a nominal T_{avg} of 573°F. T/S 5.4.2 also includes an adjustment to account for previously evaluated steam generator tube plugging limits. These nominal values do not reflect the actual RCS volumes that will exist when the unit is restarted following the Unit 2 steam generator replacement currently scheduled for 2008. Therefore, the T/S 5.4.2 values for RCS volume would need to be revised at a future date.

The UFSAR includes values for total RCS volume and RCS component and piping volumes that are more detailed and complete than the approximate RCS volumes listed in Unit 1 and Unit 2 T/S Section 5.4.2. These more detailed values are normally used as design inputs to the actual UFSAR Chapter 15 accident analyses, and include values for RCS volume at previously evaluated steam generator tube plugging limits. Therefore, T/S 5.4.2 is redundant to the UFSAR.

4.0 EVALUATION

10 CFR 50.36(c)(4) governs the contents of Technical Specification (T/S) Section 5.0, "Design Features." 10 CFR 50.36(c)(4) states, "Design features to be included are those features of the facility such as materials of construction and geometric arrangements, which, if altered or modified, would have a significant effect on safety and are not covered in categories described in paragraphs (c)(1), (2), and (3) of this section."

EVALUATION OF REVISIONS TO THE TECHNICAL SPECIFICATIONS DELETION OF RCS VOLUME

As stated in 10 CFR 50.36(c)(2)(ii)(B), the T/S limiting conditions for operation must be established for "process variables, design feature, or operating restriction that is an initial condition of a design basis accident or transient analysis that either assumes the failure of or presents a challenge to the integrity of a fission product barrier." T/S Section 3/4.4, "Reactor Coolant System," includes the limiting conditions for operation related to the RCS, and includes information either limiting changes to, or derived from, RCS volume.

Changes to the actual RCS volume can result from physical modifications to RCS components, changes to procedures affecting pressurizer pressures and levels, or by plugging of steam generator tubes. Changes to the facility and procedures are required to be evaluated in accordance with 10 CFR 50.59, which ensures that changes to RCS volume as a result of physical modifications and procedure changes are evaluated for impact on the plant accident analyses.

Since detailed RCS information already exists in the UFSAR (Ex. Table 5.1-1), and any method by which the RCS volume could be changed is required to be evaluated in accordance with 10 CFR 50.59, then including this information in the T/S is not necessary. RCS nominal T_{avg} is only included in T/S Section 5.4.2 as a reference value associated with RCS Volume and it's deletion does not represent a change to the RCS Temperature limitations which are included in other Sections of the Salem Technical Specifications.

The original Salem Technical Specifications were developed prior to the most recent guidance provided in NUREG-1431, "Standard Technical Specifications — Westinghouse Plants." NUREG-1431 does not include RCS volume information in T/S Section 4, "Design Features," as this information does not meet the criteria for inclusion in the T/S, and is not considered necessary for compliance with 10 CFR 50.36(c)(4).

The proposed change to remove this information from T/S does not affect any accident initiators or precursors. Elimination of the RCS volume information from the T/S does not change the methods for plant operation or actions to be taken in the event of an accident. The deletion of the RCS volume information from the T/S does not change the methods of plant operation or modify plant systems, structures, or components. No new methods of plant operation are created. As such, the proposed change does not affect any accident initiators or precursors or create new accident initiators or precursors. The deletion of the RCS volume, including the reference to RCS T_{avg} nominal value of 573° F, from the T/S does not affect safety limits or limiting safety system settings. The proposed change does not modify the quantity of radioactive material available for release in the event of an accident. As such, the proposed change will not

EVALUATION OF REVISIONS TO THE TECHNICAL SPECIFICATIONS DELETION OF RCS VOLUME

affect any previous safety margin assumptions or conditions. The actual volume of the RCS is not affected by the change, only the location of the text describing the volume. More detailed and complete RCS component and piping volume information is included in the UFSAR, and any changes to that information would be evaluated prior to implementation in accordance with 10 CFR 50.59.

5.0 REGULATORY SAFETY ANALYSIS

5.1 No Significant Hazards Consideration

As required by 10 CFR 50.91(a), PSEG provides its analysis of the no significant hazards consideration. According to 10 CFR 50.92(c), a proposed amendment to an operating license involves no significant hazards consideration if operation of the facility in accordance with the proposed amendment would not:

1. Involve a significant increase in the probability or consequences of an accident previously evaluated.

2. Create the possibility of a new or different kind of accident from any accident previously evaluated.

3. Involve a significant reduction in a margin of safety.

The determinations that the criteria set forth in 10 CFR 50.92 are met for this amendment request are indicated below:

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

   Response: No

   The proposed change to remove this information from T/S does not affect any accident initiators or precursors. Elimination of the RCS volume information from the T/S does not change the methods for plant operation or actions to be taken in the event of an accident. The quantity of radioactive material available for release in the event of an accident is not increased.

   Barriers to release of radioactive material are not eliminated or otherwise changed. More detailed RCS component and piping volume information is included in the Salem UFSAR, and changes to that in-

EVALUATION OF REVISIONS TO THE TECHNICAL SPECIFICATIONS DELETION OF RCS VOLUME

formation would be evaluated prior to implementation in accordance with 10 CFR 50.59.

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

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

   Response: No

   The deletion of the RCS volume information from the T/S does not change the methods of plant operation or modify plant systems, structures, or components. No new methods of plant operation are created. As such, the proposed change does not affect any accident initiators or precursors or create new accident initiators or precursors. More detailed and complete RCS component and piping volume information is included in the Salem UFSAR, and any changes to that information would be evaluated prior to implementation in accordance with 10 CFR 50.59.

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

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

   Response: No

   The deletion of the RCS volume information from the T/S does not affect safety limits or limiting safety system settings. Plant operational parameters are not affected. The proposed change does not modify the quantity of radioactive material available for release in the event of an accident. As such, the change will not affect any previous safety margin assumptions or conditions. The actual volume of the RCS is not affected by the change, only the location of the text describing the volume. More detailed and complete RCS component and piping volume information is included in the Salem UFSAR, and any changes to that information would be evaluated prior to implementation in accordance with 10 CFR 50.59.
   Therefore, the proposed change does not involve a significant reduction in a margin of safety.

EVALUATION OF REVISIONS TO THE TECHNICAL SPECIFICATIONS DELETION OF RCS VOLUME

Based on the above, PSEG concludes that the proposed amendment presents 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

10 CFR 50.36 Technical Specifications

(c) Technical specifications will include items in the following categories:

(4) *Design features*. Design features to be included are those features of the facility such as materials of construction and geometric arrangements, which, if altered or modified, would have a significant effect on safety and are not covered in categories described in paragraphs (c) (1), (2), and (3) of this section.

Response:

Since detailed RCS information already exists in the UFSAR, and any method by which the RCS volume could be changed is required to be evaluated in accordance with 10 CFR 50.59, then including this information in the T/S is not necessary to ensure that a significant effect on safety does not occur. In addition, since T/S Section 3/4.4 already includes the limiting conditions for operation related to the RCS, and includes information either limiting changes to, or derived from, RCS volume, then including RCS volume in T/S Section 5.0 is not required as allowed by 10 CFR 50.36(c)(4).

Summary

Based on the evaluation, PSEG believes that the proposed T/S changes do not reduce the level of safety currently maintained by the T/S, is consistent with NUREG-1431, and is in accordance with 10 CFR 50.36.

CONCLUSION

PSEG has concluded, based on the considerations discussed above, that: (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 amendments will not be inimical to the common defense and security or to the health and safety of the public.

EVALUATION OF REVISIONS TO THE TECHNICAL SPECIFICATIONS DELETION OF RCS VOLUME

6.0 ENVIRONMENTAL CONSIDERATION

Pursuant to 10 CFR 51.22 (b), PSEG has evaluated this license amendment request to determine whether or not it meets the criteria for categorical exclusion set forth in 10 CFR 51.22 (c)(9) of the regulations.

PSEG has concluded that implementation of this amendment will have no adverse impact upon Salem Units 1 and 2; neither will it contribute to any significant additional quantity nor the type of effluent being available for adverse environmental impact or personnel exposure. The change does not introduce any new effluents or significantly increase the quantities of existing effluents. As such, the change cannot significantly affect the types or amounts of any effluents that may be released offsite.

Therefore, it has been determined that there is:

1. No significant hazards consideration,
2. No significant change in the types, or significant increase in the amounts, of any effluents that may be released offsite, and
3. No significant increase in individual or cumulative occupational radiation exposures involved.

Therefore, this amendment request to the Salem Technical Specifications meets the criteria of 10 CFR 51.22 (c)(9) for categorical exclusion from an environmental impact statement.

7.0 REFERENCES

7.1 Code of Federal Regulations, 10CFR 50.36.
7.2 Improved Standard Technical Specifications for Westinghouse Plants, NUREG 1431.
7.3 PSEG Salem Units 1 and 2, Updated Final Safety Analysis Report.
7.4 PSEG Salem Units 1 and 2, Technical Specifications.
7.5 Issuance of Amendments-Donald C. Cook Nuclear Plant, Units 1 and 2 (TAC Nos. MA7756 and MA 7757, dated March 1, 2000) Deletion of T/S 5.4.2, RCS Volume from the Technical Specifications.

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

ATTACHMENT 2

MARKED-UP
TECHNICAL SPECIFICATIONS CHANGES
DELETION OF RCS VOLUME

SALEM NUCLEAR GENERATING STATION, UNITS 1 AND 2
FACILITY OPERATING LICENSES DPR-70 AND DPR-75
DOCKET NOS. 50-272 AND 50-311
REVISION TO TECHNICAL SPECIFICATIONS
DELETION OF RCS VOLUME

TECHNICAL SPECIFICATION PAGES WITH PROPOSED CHANGES

The following Technical Specifications for Facility Operating License No. DPR-70 are affected by this change request:

Technical Specification	Page
Index, Section 5.4	XVII
Section 5.4	5-5

The following Technical Specifications for Facility Operating License No. DPR-75 are affected by this change request:

Technical Specification	Page
Index, Section 5.4	XVII
Section 5.4	5-4

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DESIGN FEATURES

DELETE

a. In accordance with the code requirements specified in Section 4.1 of the FSAR, with allowance for normal degradation pursuant to the applicable Surveillance Requirements,

b. For a pressure of 2485 psig, and

c. For a temperature of 650EF, except for the pressurizer which is 680EF.

~~VOLUME~~

~~5.4.2 The total water and steam volume of the reactor coolant system is 12,446 ± 426 cubic feet at a nominal T_{avg} of 573°F.~~

DELETE

5.5 METEOROLOGICAL TOWER LOCATION

5.5.1 The meteorological tower shall be located as shown on Figure 5.1-1.

5.6 FUEL STORAGE

CRITICALITY

5.6.1.1 The new fuel storage racks are designed and shall be maintained with:

a. A maximum K_{eff} equivalent of 0.95 with the storage racks flooded with unborated water.

b. A nominal 21.0 inch center-to-center distance between fuel assemblies.

c. Unirradiated fuel assemblies with enrichments less than or equal to 4.25 weight percent (w/o) U-235 with no requirements for Integral Fuel Burnable Absorber (IFBA) pins.

Unirradiated fuel assemblies with enrichments (E) greater than 4.25 w/o U-235 and less than or equal to 5.0 w/o U-235 which contain a minimum number of Integral Fuel Burnable Absorber (IFBA) pins. This minimum number of IFBA pins shall have an equivalent reactivity hold-down which is greater than or equal to the reactivity hold down associated with N IFBA pins, at a nominal 2.35 mg B-10/linear inch loading (1.5X), determined by the equation below:

$$N = 42.67 \left(E \; B \; 4.25 \right)$$

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DESIGN FEATURES

DESIGN PRESSURE AND TEMPERATURE

5.2.2 The reactor containment is designed and shall be maintained for a maximum internal pressure of 47 psig. Containment air temperatures up to 351.3°F are acceptable providing the containment pressure is in accordance with that described in the UFSAR.

5.3 REACTOR CORE

FUEL ASSEMBLIES

5.3.1 The reactor core shall contain 193 fuel assemblies. Each assembly shall consist of a matrix of zircaloy or ZIRLO clad fuel rods with an initial composition of natural or slightly enriched uranium dioxide as fuel material. Limited substitutions of zirconium alloy or stainless steel filler rods for fuel rods, in accordance with NRC-approved applications of fuel rod configurations, may be used. Fuel assemblies shall be limited to those fuel designs that have been analyzed with applicable NRC staff approved codes and methods and shown by tests or analyses to comply with all fuel safety design bases. A limited number of lead test assemblies that have not completed representative testing may be placed in nonlimiting core regions.

CONTROL ROD ASSEMBLIES

5.3.2 The reactor core shall contain 53 full length and no part length control rod assemblies. The full length control rod assemblies shall contain a nominal 142 inches of absorber material. The nominal values of absorber material shall be 80 percent silver, 15 percent indium and 5 percent cadmium. All control rods shall be clad with stainless steel tubing.

5.4 REACTOR COOLANT SYSTEM

DESIGN PRESSURE AND TEMPERATURE

5.4.1 The reactor coolant system is designed and shall be maintained:

a. In accordance with the code requirement specified in Section 4.1 of the FSAR, with allowance for normal degradation pursuant to the applicable Surveillance Requirements,

b. For a pressure of 2485 psig, and

c. For a temperature of 650°F, except for the pressurizer which is 680°F.

~~VOLUME~~

~~5.4.2 The total water and steam volume of the reactor coolant system is 12,446 ± 426 cubic feet at a nominal T_{avg} of 573.0°F.~~

DELETE