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United States Nuclear Regulatory Commission
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**REQUEST FOR CHANGE TO TECHNICAL SPECIFICATIONS
REFUELING OPERATIONS AND SPECIAL TEST EXCEPTIONS
SALEM NUCLEAR GENERATING STATION, UNIT NOS. 1 AND 2
FACILITY OPERATING LICENSES DPR-70 AND DPR-75
DOCKET NOS. 50-272 AND 50-311**

In accordance with the requirements of 10 CFR 50.90, PSEG Nuclear LLC (PSEG) hereby transmits a request for amendment of the Technical Specifications (TS) for Salem Generating Station, Unit Nos. 1 and 2. Pursuant to the requirements of 10 CFR 50.91(b)(1), a copy of this request for amendment has been sent to the State of New Jersey.

A proposed TS change will delete the surveillance requirement to perform a channel functional test of the source range neutron flux monitor within 8 hours prior to the initial start of core alterations. Another proposed TS change would eliminate the requirement to subject each intermediate and power range channel to a channel functional test within 12 hours prior to initiating physics tests. These changes will eliminate extraneous and unnecessary performance of the surveillance requirements.

Attachment 1 provides an evaluation of the proposed changes. Attachment 2 provides the existing TS pages marked up to show the proposed changes.

PSEG requests implementation within 60 days of receipt of the approved amendment. Approval of this change is requested by September 1, 2006 to support Salem Generating Station, Unit No. 2 refueling outage 2R15.

If you have any questions concerning this request, please contact Mr. Paul Duke at (856) 339-1466.

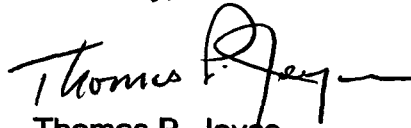
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I declare under penalty of perjury that the foregoing is true and correct.

Executed on 12/7/05
(Date)

Sincerely,

A handwritten signature in black ink, appearing to read "Thomas P. Joyce", followed by a horizontal line.

Thomas P. Joyce
Site Vice President
Salem Generating Station

Attachments (2)

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**SALEM GENERATING STATION – UNIT 1 AND UNIT 2
FACILITY OPERATING LICENSES NOS. DPR-70 AND DPR-75
DOCKET NO. 50-272 AND 50-311**

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Table of Contents

1.	DESCRIPTION	1
2.	PROPOSED CHANGE	1
3.	BACKGROUND	1
4.	TECHNICAL ANALYSIS	3
5.	REGULATORY SAFETY ANALYSIS	4
5.1	No Significant Hazards Consideration.....	4
5.2	Applicable Regulatory Requirements/Criteria.....	5
6.	ENVIRONMENTAL CONSIDERATION	6
7.	REFERENCES	6

CHANGES TO TECHNICAL SPECIFICATIONS

1. DESCRIPTION

The purpose of this amendment is to delete the surveillance requirement (SR) to perform a channel functional test of the source range neutron flux monitor within 8 hours prior to the initial start of core alterations. Another proposed TS change will eliminate the requirement to subject each intermediate and power range channel to a channel functional test within 12 hours prior to initiating physics tests. These changes will eliminate extraneous and unnecessary performance of the surveillance requirements.

2. PROPOSED CHANGE

A change is proposed to delete SR 4.9.2.b that requires performance of a **CHANNEL FUNCTIONAL TEST** of each source range neutron flux monitor within 8 hours prior to the initial start of **CORE ALTERATIONS**. An associated administrative change is made to renumber current SR 4.9.2.c as SR 4.9.2.b.

SR 4.10.3.2 and SR 4.10.4.2 require each intermediate and power range channel be subjected to a **CHANNEL FUNCTIONAL TEST** within 12 hours prior to initiating physics tests. Changes are proposed to eliminate the restriction of performing the SR within 12 hours prior to initiating physics tests. SR 4.10.4.2 also requires that a **CHANNEL FUNCTIONAL TEST** be performed on the power range and intermediate range monitors within 12 hours prior to initiating startup. A change is proposed to eliminate the restriction of performing the SR within 12 hours prior to initiating startup.

The proposed changes are shown on the attached proposed changed pages (Attachment 2).

3. BACKGROUND

The nuclear reactor of a power plant requires monitoring of its power level in order to maintain reactor safety. By placing detectors at selected locations adjacent to the reactor, neutron flux level fluctuations present during an increasing, decreasing, or operating power level are detected. The Nuclear Instrumentation System (NIS) is comprised of source range, intermediate range, and power range neutron flux monitors and are used to monitor the neutron flux from a completely shutdown condition to 120 percent of full power. All monitors are located external to the reactor vessel. The source range monitors are used primarily when the core is subcritical and during special subcritical modes of operation. The NIS intermediate range detectors measure neutron flux between the source range and power range extremes. The NIS power range detectors are capable of recording overpower excursions up to 200 percent of full power. Each range of instrumentation (source, intermediate, and power) provides the

necessary overpower reactor trip protection required during operation in that range. The overlap of instrument ranges provides reliable continuous protection beginning with source level through the intermediate and low power level. As the reactor power increases, the overpower protection level is increased by administrative procedures after satisfactory higher range instrumentation operation is obtained. Automatic reset to more restrictive trip protection is provided when reducing power.

The neutron flux covers a wide range. Therefore, monitoring with several ranges of instrumentation is necessary. The lowest range (source range) covers six decades of neutron flux. The next range (intermediate range) covers eight decades. Detectors and instrumentation are chosen to provide overlap between the higher portion of the source range and the lower portion of the intermediate range. The highest range of instrumentation (power range) covers approximately two decades of the total instrumentation range. This is a linear range that overlaps with the higher portion of the intermediate range.

A CHANNEL FUNCTIONAL TEST is performed on these monitors in accordance with SR 4.3.1.1.1. SR 4.3.1.1.1 is performed for the power range monitors at least once every 92 days while the unit is in MODES 1, 2, or 3 or with the reactor trip system (RTS) breakers closed and the control rod drive system capable of rod withdrawal. SR 4.3.1.1.1 is performed for the intermediate range monitors prior to each reactor startup (if not performed in previous 31 days) while the unit is in MODES 1 or 2 or with the RTS breakers closed and the control rod drive system capable of rod withdrawal.

SR 4.10.3.2 requires that a CHANNEL FUNCTIONAL TEST be performed on the power range and intermediate range monitors within 12 hours prior to initiating PHYSICS TESTS, even though SR 4.3.1.1.1 has been performed on the required frequency. SR 4.10.4.2 requires that a CHANNEL FUNCTIONAL TEST be performed on the power range and intermediate range monitors within 12 hours prior to initiating startup or PHYSICS TESTS, even though SR 4.3.1.1.1 has been performed on the required frequency.

The redundant testing required by SRs 4.10.3.2 and 4.10.4.2 is addressed by Industry/Technical Specification Task Force (TSTF) Traveler 108, "Eliminate the 12 hour Channel Operational Test (COT) on Power Range and Intermediate Range Channels for Physics Test Exceptions." TSTF-108, Revision 1, was approved by the NRC on May 2, 1997 (ADAMS Accession No. ML040480061) and removes the 12 hour restriction so that the testing performed for SR 4.3.1.1.1 may be used to satisfy SRs 4.10.3.2 and 4.10.4.2. Additionally, NUREG-1431, "Standard Technical Specifications, Westinghouse Plants," addressed deleting SR 4.9.2 to perform a CHANNEL FUNCTIONAL TEST within 8 hours prior to the initial start of CORE ALTERATIONS. Therefore, the changes proposed by this request eliminate extraneous and unnecessary performance of these SRs that have been previously approved by the NRC for NUREG-1431.

The NRC has approved a similar license amendment for the Sequoyah Nuclear Plant, Units 1 and 2, when it issued Amendment Nos. 295 and 285 on September 20, 2004 (TAC NOS. MC2446 and MC2447).

4. TECHNICAL ANALYSIS

SRs 4.10.3.2 and 4.10.4.2 require that a CHANNEL FUNCTIONAL TEST be performed on the power range and intermediate range monitors within 12 hours prior to initiating PHYSICS TESTS regardless of whether the CHANNEL FUNCTIONAL TEST has been performed within its required frequency. Initiation of PHYSICS TESTS does not impact the ability of the monitors to perform their required function, does not affect the trip setpoints or RTS trip capability, and does not invalidate previous SRs. Therefore, an additional SR to perform prior to this event is an extraneous and unnecessary performance of a SR. SR 4.10.4.2 also requires that a CHANNEL FUNCTIONAL TEST be performed on the power range and intermediate range monitors within 12 hours prior to initiating startup regardless of whether the CHANNEL FUNCTIONAL TEST has been performed within its required frequency. Initiation of startup does not impact the ability of the monitors to perform their required function, does not affect the trip setpoints or RTS trip capability, and does not invalidate previous SRs. Therefore, an additional SR to perform prior to this event is an extraneous and unnecessary performance of a SR.

SRs 4.10.3.2 and 4.10.4.2 are not related to any Limiting Condition for Operation (LCO) requirement and has no appropriate ACTION requirement to take upon failure to meet the SR. Therefore, deletion of the "within 12 hours" from SRs 4.10.3.2 and 4.10.4.2 and reliance on the CHANNEL FUNCTIONAL TEST required by SR 4.3.1.1.1 enhances the proper utilization of Technical Specifications. The required frequency of SR 4.3.1.1.1 has been determined to be sufficient for verification that the power range and intermediate range monitors are properly functioning.

SR 4.9.2 requires that a CHANNEL FUNCTIONAL TEST be performed on the source range monitors within 8 hours prior to initial start of CORE ALTERATIONS regardless of whether the CHANNEL FUNCTIONAL TEST has been performed within its required frequency. SR 4.9.2 also requires a CHANNEL FUNCTIONAL TEST be performed on the source range monitors before entering MODE 6 and at least once per 7 days. Therefore, a CHANNEL FUNCTIONAL TEST would have been performed within the previous 7 days of initial start of CORE ALTERATIONS. Initiation of CORE ALTERATIONS does not impact the ability of the source range monitors to perform their required function, does not affect the trip setpoints or RTS trip capability, and does not invalidate previous SRs. Therefore, an additional SR to perform prior to this event is an extraneous and unnecessary performance of a SR.

A CHANNEL FUNCTIONAL TEST of the source range monitors will have been performed prior to entering MODE 6 because the APPLICABILITY of LCO 3.9.2 is MODE 6. In addition, SR 4.9.2 must be current during MODE 6. An additional performance of this SR prior to initial start of CORE ALTERATIONS is an unnecessary verification that the source range monitors are OPERABLE.

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 do not affect the design, operational characteristics, function, or reliability of the source range, intermediate range, or power range monitors. A CHANNEL FUNCTIONAL TEST for the source range, intermediate range, or power range monitors will continue to be performed at a frequency that has been determined to be sufficient for verification that the monitors are properly functioning. The proposed changes eliminate extraneous and unnecessary performance of a CHANNEL FUNCTIONAL TEST for the source range, intermediate range, or power range monitors. A CHANNEL FUNCTIONAL TEST for the source range, intermediate range, or power range monitors is not a precursor to, or assumed to be an initiator of any analyzed accident. Therefore, these proposed changes do not involve a significant increase in the probability of an accident.

The consequences of accidents previously evaluated in the Updated Final Safety Analysis Report are unaffected by the proposed changes because no change to any equipment response or accident mitigation scenario has resulted. The proposed changes will have no adverse effect on the availability, operability, or performance of the safety-related systems and components assumed to actuate in the event of a design basis accident or transient. Because the source range, intermediate range, and power range monitors will remain capable of performing their design function, the proposed changes do not involve a significant increase in the consequences of an accident previously evaluated.

Therefore, the proposed changes do 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.

The proposed changes do not create the possibility of a new or different kind of accident from any accident previously evaluated in the Updated Final Safety Analysis Report. No new accident scenarios, failure mechanisms, or limiting single failures are introduced as a result of the proposed changes. Specifically, no new hardware is being added to the plant as part of the proposed change, no existing equipment design or function is being modified, and no significant changes in operations are being introduced. No new equipment performance burdens are imposed.

Therefore, the proposed changes do 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 proposed changes will not alter any assumptions, initial conditions, or results of any accident analyses. The ability of operators to monitor the reactor power level during all operating conditions and modes of operation with the source range, intermediate range, or power range monitors is unchanged by these proposed changes. Therefore, the proposed changes do 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

The following regulatory requirements are applicable:

10 CFR 50, Appendix A, GDC 13 – Instrumentation and control.

Instrumentation shall be provided to monitor variables and systems over their anticipated ranges for normal operation, for anticipated operational occurrences, and for accident conditions as appropriate to assure adequate safety, including those variables and systems that can affect the

fission process, the integrity of the reactor core, the reactor coolant pressure boundary, and the containment and its associated systems. Appropriate controls shall be provided to maintain these variables and systems within prescribed operating ranges.

There are no changes to the source range, intermediate range, or power range monitors design that impact this general design criterion. The evaluation performed in Section 4.0 (Technical Analysis) concludes that the proposed change will continue to comply with this regulatory requirement.

In conclusion, based on the considerations discussed above:

There is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner;

Such activities will be conducted in compliance with the Commission's regulations; and

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. However, 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 impact statement or environmental assessment of the proposed change is not required.

7. REFERENCES

1. The NRC has approved a similar license amendment for the Sequoyah Nuclear Plant, Units 1 and 2, when it issued Amendment Nos. 295 and 285 on September 20, 2004 (TAC NOS. MC2446 and MC2447).
2. NUREG-1431, "Standard Technical Specifications, Westinghouse Plants."

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>
4.9.2	3/4 9-2
4.10.3.2	3/4 10-3
4.10.4.2	3/4 10-4

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

<u>Technical Specification</u>	<u>Page</u>
4.9.2	3/4 9-2
4.10.3.2	3/4 10-4
4.10.4.2	3/4 10-5

REFUELING OPERATIONS

INSTRUMENTATION

LIMITING CONDITION FOR OPERATION

3.9.2 As a minimum, two source range neutron flux monitors shall be operating, each with continuous visual indication in the control room and one with audible indication in the containment and control room.

APPLICABILITY: MODE 6.

ACTION:

With the requirements of the above specification not satisfied, immediately suspend all operations involving CORE ALTERATIONS or positive reactivity changes. The provisions of Specification 3.0.3 are not applicable.

SURVEILLANCE REQUIREMENTS

4.9.2 Each source range neutron flux monitor shall be demonstrated OPERABLE by performance of:

- a. A CHANNEL FUNCTIONAL TEST at least once per 7 days, and
- b. A CHANNEL FUNCTIONAL TEST within 8 hours prior to the initial start of CORE ALTERATIONS, and
- c. A CHANNEL CHECK at least once per 12 hours during CORE ALTERATIONS.

DELETE

SPECIAL TEST EXCEPTIONS

PHYSICS TESTS

LIMITING CONDITION FOR OPERATION

3.10.3 The limitations of Specifications 3.1.1.4, 3.1.3.1, 3.1.3.4, and 3.1.3.5 may be suspended during the performance of PHYSICS TESTS provided:

- a. The THERMAL POWER does not exceed 5% of RATED THERMAL POWER, and
- b. The reactor trip setpoints on the OPERABLE Intermediate and Power Range Nuclear Channels are set at $\leq 25\%$ of RATED THERMAL POWER.

APPLICABILITY: MODE 2.

ACTION:

With the THERMAL POWER $> 5\%$ of RATED THERMAL POWER, immediately open the reactor trip breakers.

SURVEILLANCE REQUIREMENTS

4.10.3.1 The THERMAL POWER shall be determined to be $< 5\%$ of RATED THERMAL POWER at least once per hour during PHYSICS TESTS.

4.10.3.2 Each Intermediate and Power Range Channel shall be subjected to a CHANNEL FUNCTIONAL TEST within 12 hours prior to initiating PHYSICS TESTS.

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SPECIAL TEST EXCEPTION

NO FLOW TESTS

LIMITING CONDITION FOR OPERATION

3.10.4 The limitations of Specification 3.4.1.1 may be suspended during the performance of startup and PHYSICS TESTS, provided:

- a. The THERMAL POWER does not exceed the P-7 Interlock Setpoint, and
- b. The Reactor Trip Setpoints on the OPERABLE Intermediate and Power Range Channels are set $\leq 25\%$ of RATED THERMAL POWER

APPLICABILITY: During operation below the P-7 Interlock Setpoint.

ACTION:

With the THERMAL POWER greater than the P-7 Interlock Setpoint, immediately open the reactor trip breakers.

SURVEILLANCE REQUIREMENTS

4.10.4.1 The THERMAL POWER shall be determined to be less than P-7 Interlock Setpoint at least once per hour during startup and PHYSICS TESTS.

4.10.4.2 Each Intermediate, Power Range Channel and P-7 Interlock shall be subjected to a CHANNEL FUNCTIONAL TEST within 12 hours prior to initiating startup or PHYSICS TESTS.

done

REFUELING OPERATIONS

3/4.9.2 INSTRUMENTATION

LIMITING CONDITION FOR OPERATION

3.9.2 As a minimum, two source range neutron flux monitors shall be operating, each with continuous visual indication in the control room and one with audible indication in the containment and control room.

APPLICABILITY: MODE 6.

ACTION:

- a. With one of the above required monitors inoperable, immediately suspend all operations involving CORE ALTERATIONS or positive reactivity changes.
- b. With both of the required monitors inoperable, determine the boron concentration of the reactor coolant system at least once per 12 hours.
- c. The provisions of Specification 3.0.3 are not applicable.

SURVEILLANCE REQUIREMENTS

4.9.2 Each source range neutron flux monitor shall be demonstrated OPERABLE by performance of:

- a. A CHANNEL CHECK at least once per 12 hours, and
- b. A CHANNEL FUNCTIONAL TEST within 8 hours prior to the initial start of CORE ALTERATIONS, and
- c. A CHANNEL FUNCTIONAL TEST at least once per 7 days.

DELETE

SPECIAL TEST EXCEPTIONS

PHYSICS TESTS

LIMITING CONDITION FOR OPERATION

3.10.3 The limitations of Specifications 3.1.1.3, 3.1.1.4, 3.1.3.1, 3.1.3.4 and 3.1.3.5 may be suspended during the performance of PHYSICS TESTS provided:

- a. The THERMAL POWER does not exceed 5% of RATED THERMAL POWER,
- b. The reactor trip setpoints on the OPERABLE Intermediate and Power Range Nuclear Channels are set at less than or equal to 25% of RATED THERMAL POWER, and
- c. The Reactor Coolant System lowest operating loop temperature (T_{avg}) is greater than or equal to 531°F.

APPLICABILITY: MODE 2.

ACTION:

- a. With the THERMAL POWER greater than 5% of RATED THERMAL POWER, immediately open the reactor trip breakers.
- b. With a Reactor Coolant System operating loop temperature (T_{avg}) less than 531°F, restore T_{avg} to within its limit within 15 minutes or be in at least HOT STANDBY within the next 15 minutes.

SURVEILLANCE REQUIREMENTS

4.10.3.1 The THERMAL POWER shall be determined to be less than or equal to 5% of RATED THERMAL POWER at least once per hour during PHYSICS TESTS.

4.10.3.2 Each Intermediate and Power Range Channel shall be subjected to a CHANNEL FUNCTIONAL TEST within 12 hours prior to initiating PHYSICS TESTS.

4.10.3.3 The Reactor Coolant System temperature (T_{avg}) shall be determined to be greater than or equal to 531°F at least once per 30 minutes during PHYSICS TESTS.

SPECIAL TEST EXCEPTIONS

NO FLOW TESTS

LIMITING CONDITION FOR OPERATION

3.10.4 The limitations of Specification 3.4.1.1 may be suspended during the performance of startup and PHYSICS TESTS, provided:

- a. The THERMAL POWER does not exceed the P-7 Interlock Setpoint, and
- b. The Reactor Trip Setpoints on the OPERABLE Intermediate and Power Range Channels are set less than or equal to 25% of RATED THERMAL POWER

APPLICABILITY: During operation below the P-7 Interlock Setpoint.

ACTION:

With the THERMAL POWER greater than the P-7 Interlock Setpoint, immediately open the reactor trip breakers.

SURVEILLANCE REQUIREMENTS

4.10.4.1 The THERMAL POWER shall be determined to be less than P-7 Interlock Setpoint at least once per hour during startup and PHYSICS TESTS.

4.10.4.2 Each Intermediate, Power Range Channel and P-7 Interlock shall be subjected to a CHANNEL FUNCTIONAL TEST within 12 hours prior to initiating startup or PHYSICS TESTS.

DELETE