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LR-N06-0263  
LCR S05-09



United States Nuclear Regulatory Commission  
Document Control Desk  
Washington, DC 20555

**SUPPLEMENT TO LICENSE CHANGE REQUEST S05-09:  
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**

References: (1) Letter from PSEG to NRC: "Request for Change to Technical Specifications, Refueling Operations and Special Test Exceptions, Salem Nuclear Generating Station, Units 1 and 2, Facility Operating Licenses DPR-70 and DPR-75, Docket Nos. 50-272 and 50-311", dated December 7, 2005

In accordance with the requirements of 10 CFR 50.90, PSEG Nuclear LLC (PSEG) previously submitted License Change Request (LCR) S05-09 to amend the Technical Specifications (TS) for Salem Generating Station Unit 1 and Unit 2 (Reference 1). Following additional review and discussion with the NRC Staff, PSEG proposes to modify the amendment request as discussed below. 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.

The original amendment request contained two changes: (1) deletion of 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, and (2) elimination of the surveillance requirement to subject each intermediate and power range channel to a channel functional test within 12 hours prior to initiating physics tests. These changes were proposed to eliminate extraneous and unnecessary performance of the surveillance requirements, consistent with TSTF 108, "Eliminate the 12 hour Channel Operational Test (COT) on Power Range and Intermediate Range Channels for Physics Test Exceptions," and NUREG-1431, "Standard Technical Specifications, Westinghouse Plants."

Discussion with the NRC Staff identified that, while the proposed changes submitted were consistent with the TSTF and NUREG, the submitted changes were not comprehensive in alignment with the NUREG. Specifically, the required frequencies of the Channel Functional Testing that would continue to be required for the Intermediate Range, Source Range, and Power Range Monitors were not consistent with the NUREG. These differences, and the proposed changes to LCR S05-09, are tabulated below.

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**Differences between the Original LCR S05-09 Submittal and NUREG-1431 for Channel Functional Testing**

Monitor	Original LCR S05-09 Submittal Requirement	NUREG-1431 Requirement and Proposed Revision to LCR S05-09
Intermediate Range	Start-up - if not performed within the previous 31 days	<p>-----NOTE----- Only required when not performed within previous 184 days<sup>1</sup></p> <p>----- Prior to reactor startup AND [Twelve] hours after reducing power below P-10 for power and intermediate range instrumentation AND Every 184 days thereafter</p> <p>This Surveillance shall include verification that interlocks P-6 and P-10 are in their required state for existing unit conditions.</p>
Source Range	Quarterly AND Start-up - if not performed within the previous 31 days	<p>-----NOTE----- Only required when not performed within previous 184 days<sup>1</sup></p> <p>----- Prior to reactor startup AND Four hours after reducing power below P-6 for source range instrumentation AND Every 184 days thereafter</p> <p>This Surveillance shall include verification that interlocks P-6 and P-10 are in their required state for existing unit conditions.</p>
Power Range	Quarterly	<p>-----NOTE----- Only required when not performed within previous 184 days<sup>1</sup></p> <p>----- Prior to reactor startup AND [Twelve] hours after reducing power below P-10 for power and intermediate range instrumentation AND Every 184 days thereafter</p> <p>This Surveillance shall include verification that interlocks P-6 and P-10 are in their required state for existing unit conditions.</p>

<sup>1</sup> Note that Salem uses the calendar nomenclature of "6 Months" or "Semi-Annual (SA)" versus 184 days

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PSEG has evaluated these differences and has concluded that alignment with NUREG-1431 is appropriate for these surveillance requirements at Salem. Therefore, we have made the additional required changes to the TS and are submitting them for your review and approval (Attachment 1).

PSEG has determined that the No Significant Hazards Evaluation originally submitted for this License Change Request remains applicable for these additional changes; these additional changes only align the surveillance testing to the frequencies and requirements of NUREG-1431.

If you have any questions concerning this request, please contact Mr. Jamie Mallon at (610) 765-5507.

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

Executed on 7/19/06  
(Date)

Sincerely,



Thomas P. Joyce  
Site Vice President  
Salem Generating Station

Attachments 1

C Mr. S. Collins, Administrator – Region I  
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U. S. Nuclear Regulatory Commission  
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**TECHNICAL SPECIFICATION PAGES WITH PROPOSED CHANGES**

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

<b><u>Technical Specification</u></b>	<b><u>Page</u></b>
Table 4.3-1	3/4 3-11, 3/4 3-13, and 3/4 3-13a

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

<b><u>Technical Specification</u></b>	<b><u>Page</u></b>
Table 4.3-1	3/4 3-11, 3/4 3-13, and 3/4 3-13a

TABLE 4.3-1

REACTOR TRIP SYSTEM INSTRUMENTATION SURVEILLANCE REQUIREMENTS

<u>FUNCTIONAL UNIT</u>	<u>CHANNEL CHECK</u>	<u>CHANNEL CALIBRATION</u>	<u>CHANNEL FUNCTIONAL TEST</u>	<u>MODES IN WHICH SURVEILLANCE REQUIRED</u>
1. Manual Reactor Trip Switch	N.A.	N.A.	R <sup>(9)</sup>	1, 2, and *
2. Power Range, Neutron Flux	S	D <sup>(2)</sup> , M <sup>(3)</sup> and Q <sup>(6)</sup>	<u>Note 15</u>	1, 2, and 3*
3. Power Range, Neutron Flux, High Positive Rate	N.A.	R <sup>(6)</sup>	Q	1, 2
4. Power Range, Neutron Flux, High Negative Rate	N.A.	R <sup>(6)</sup>	Q	1, 2
5. Intermediate Range, Neutron Flux	S	R <sup>(6)</sup>	<u>Note 15</u>	1**, 2*** and *
6. Source Range, Neutron Flux	S <sup>(7)</sup>	R <sup>(6)</sup>	<u>Note 15</u>	2****, 3, 4, 5 and *
7. Overtemperature ΔT	S	R	Q	1, 2
8. Overpower ΔT	S	R	Q	1, 2
9. Pressurizer Pressure--Low	S	R	Q	1, 2
10. Pressurizer Pressure--High	S	R	Q	1, 2
11. Pressurizer Water Level--High	S	R	Q	1, 2
12. Loss of Flow - Single Loop	S	R	Q	1

TABLE 4.3-1 (Continued)

NOTATION

- \* With the reactor trip system breakers closed and the control rod drive system capable of rod withdrawal.
- \*\* Below the P-10 (Power Range Neutron Flux) interlocks.
- \*\*\* Above the P-6 (Intermediate Range Neutron Flux) interlocks.
- \*\*\*\* Below the P-6 (Intermediate Range Neutron Flux) interlocks.

- (1) - If not performed in previous 31 days.
- (2) - Heat balance only, above 15% of RATED THERMAL POWER.
- (3) - Compare incore to excore axial offset above 15% of RATED THERMAL POWER. Recalibrate if absolute difference  $\geq$  3 percent.
- (4) - Manual SSPS functional input check every 18 months. \*\*
- (5) - Each train or logic channel shall be tested at least every 62 days on a STAGGERED TEST BASIS.
- (6) - Neutron detectors may be excluded from CHANNEL CALIBRATION.
- (7) - Below P-6 (Block of Source Range Reactor Trip) setpoint.
- (8) - Deleted
- (9) - The CHANNEL FUNCTIONAL TEST shall independently verify the OPERABILITY of the Undervoltage and Shunt Trip mechanism for the Manual Reactor Trip Function.  
  
The Test shall also verify OPERABILITY of the Bypass Breaker Trip circuits.
- (10) - DELETED
- (11) - The CHANNEL FUNCTIONAL TEST shall independently verify the OPERABILITY of the Reactor Trip Breaker Undervoltage and Shunt Trip mechanisms.
- (12) - DELETED

\*\* A one time extension to this surveillance requirement which is satisfied by performance of the Manual SI test is granted during fuel cycle thirteen allowing Unit 1 operations to continue to the thirteenth refueling outage (1R13). The surveillance testing is to be completed at the appropriate time during the 1R13 outage, prior to the unit returning to Mode 4 upon outage completion.

TABLE 4.3-1 (Continued)

NOTATION

- (13) - Verify operation of Bypass Breakers Shunt Trip function from local pushbutton while breaker is in the test position prior to placing breaker in service.
- (14) - Perform a functional test of the Bypass Breakers U.V. Attachment via the SSPS.

(15) NOTE - Only required when not performed within previous 6 months

Prior to reactor startup

AND

Twelve hours after reducing power below P-10 for power and intermediate range instrumentation

AND

Four hours after reducing power below P-6 for source range instrumentation

AND

Every 6 months thereafter

This Surveillance shall include verification that interlocks P-6 and P-10 are in their required state for existing unit conditions.



TABLE 4.3-1

REACTOR TRIP SYSTEM INSTRUMENTATION SURVEILLANCE REQUIREMENTS

<u>FUNCTIONAL UNIT</u>	<u>CHANNEL CHECK</u>	<u>CHANNEL CALIBRATION</u>	<u>CHANNEL FUNCTIONAL TEST</u>	<u>MODES IN WHICH SURVEILLANCE REQUIRED</u>
. Manual Reactor Trip Switch	N.A.	N.A.	R <sup>(9)</sup>	1, 2, and *
. Power Range, Neutron Flux	S	D <sup>(2)</sup> , M <sup>(3)</sup> and Q <sup>(6)</sup>	<u>Note 15</u>	1, 2 and 3*
. Power Range, Neutron Flux, High Positive Rate	N.A.	R <sup>(6)</sup>	Q	1, 2
. Power Range, Neutron Flux, High Negative Rate	N.A.	R <sup>(6)</sup>	Q	1, 2
. Intermediate Range, Neutron Flux	S	R <sup>(6)</sup>	<u>Note 15</u>	1**, 2*** and *
i. Source Range, Neutron Flux	S <sup>(7)</sup>	R <sup>(6)</sup>	<u>Note 15</u>	2****, 3, 4, 5 & *
. Overtemperature ΔT	S	R	Q	1, 2
. Overpower ΔT	S	R	Q	1, 2
. Pressurizer Pressure--Low	S	R	Q	1, 2
.0. Pressurizer Pressure--High	S	R	Q	1, 2
.1. Pressurizer Water Level--High	S	R	Q	1, 2
.2. Loss of Flow - Single Loop	S	R	Q	1

TABLE 4.3-1 (Continued)

NOTATION

- \* With the reactor trip system breakers closed and the control rod drive system capable of rod withdrawal.
- \*\* Below the P-10 (Power Range Neutron Flux) interlocks.
- \*\*\* Above the P-6 (Intermediate Range Neutron Flux) interlocks.
- \*\*\*\* Below the P-6 (Intermediate Range Neutron Flux) interlocks.
- (1) - If not performed in previous 31 days.
- (2) - Heat balance only, above 15% of RATED THERMAL POWER.
- (3) - Compare incore to excore axial offset above 15% of RATED THERMAL POWER. Recalibrate if absolute difference  $\geq$  3 percent.
- (4) - Manual SSPS functional input check every 18 months.
- (5) - Each train or logic channel shall be tested at least every 62 days on a STAGGERED TEST BASIS.
- (6) - Neutron detectors may be excluded from CHANNEL CALIBRATION.
- (7) - Below P-6 (Block of Source Range Reactor Trip) setpoint.
- (8) - Deleted
- (9) - The CHANNEL FUNCTIONAL TEST shall independently verify the OPERABILITY of the Undervoltage and Shunt Trip mechanism for the Manual Reactor Trip Function.  
The Test shall also verify OPERABILITY of the Bypass Breaker Trip circuits.
- (10) - DELETED
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TABLE 4.3-1 (Continued)

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- (13) - Verify operation of Bypass Breakers Shunt Trip function from local pushbutton while breaker is in the test position prior to placing breaker in service.
- (14) - Perform a functional test of the Bypass Breakers U.V. Attachment via the SSPS.

(15) NOTE - Only required when not performed within previous 6 months

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AND

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AND

Every 6 months thereafter

This Surveillance shall include verification that interlocks P-6 and P-10 are in their required state for existing unit conditions.