



APR 28 2009

10CFR50.59(d)(2)

LR-N09-0098

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

Salem Nuclear Generating Station Units 1 and 2
Facility Operating License Nos. DPR-70 and 75
NRC Docket Nos. 50-272 and 50-311

Subject: Report of Changes, Tests and Experiments

Pursuant to the requirements of 10CFR50.59(d)(2), PSEG Nuclear LLC (PSEG) forwards a summary of changes, tests and experiments implemented at Salem Units 1 and 2 during the period May 1, 2007, through May 1, 2009.

There are no regulatory commitments contained in this letter. Should you have any questions regarding this transmittal, please contact E. H. Villar at (856) 339-5456.

Sincerely,

A handwritten signature in black ink, appearing to read "R. Braun", written over a horizontal line.

Robert C. Braun
Salem Site - Vice President

Attachments (1)

JEV
NAR

APR 28 2009

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Attachment 1
SUMMARY OF CHANGES TESTS AND EXPERIMENTS
SALEM UNITS 1 AND 2

Steam Generator Supports (DCP 80083663)

The Design Change Package (DCP) was prepared as part of the overall Steam Generator Replacement Project for Salem Unit 2. This DCP provided the design information required for: the removal of the Original Steam generators (OSG) and installation of the Replacement Steam Generators (RSG) as related to the steam generator lower lateral support (LLS); the removal of the existing upper lateral support (ULS) from the OSG; and the installation of the replacement ULS on the RSG. The package also provided for the temporary support of the LLS structure during removal of the OSG and installation of the RSG.

Steam Generator Replacement (DCP 80083522)

Salem Unit 2 was operating with Westinghouse Series 51 steam generators installed at the time of plant construction. The RSG are AREVA NP SAS (hereafter referred to AREVA NP) Model 61/19T. This evaluation activity provided the justification for plant operation, design, and licensing of the RSGs, including the following:

- Documentation that replacement of the OSGs with RSGs did not adversely impact the existing plant design and licensing basis.
- Provided acceptance criteria for the post-installation testing of the RSGs.
- Documentation that the replacement of the OSGs with the RSGs did not adversely impact interfacing systems.

No construction or installation related activities were included within this DCP. However, instrument rescaling, recalibration and steam generator performance acceptance criteria for testing are included. The details of these tests are contained in the plant procedures referenced in DCP 80083522 (Supplement 12) or the test plan developed under NUCP Order 80091187.

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Steam Generator Moisture Carryover Test

This activity involved a special test to determine moisture carryover in the steam produced by the RSG installed during the 2R16 refueling outage. The RSG are AREVA NP model 61/19T designed to generate steam quality of 0.999 or better. The Steam Generator Moisture Carryover procedure requires injection of a non-radioactive chemical tracer (LiOH – enriched in Li-6) in the feedwater heater system through a drain valve on the downstream side of the No. 6 high pressure feedwater heaters, and sampling the main steam, blowdown, condensate and feedwater, and moisture separator reheater drain fluids. The procedure defined equipment and system interfaces, plant conditions and sampling methods. The grab samples were collected utilizing the existing plant sampling system and analyzed by an outside vendor. Grab samples were obtained from representative points on the system piping, as well as vent valves on the main steam piping downstream of the main steam isolation valves. Temporary coolers to condense/cool the sample lines were used.

Implementation of the Equivalent Closure Device to TS 3/4.9.4 and Containment Closure for Loss of RHR Events During 2R16

The design of the existing outage equipment hatch was conservative and it did not support the steam generator transfer system installed during the refueling outage S2R16. This design change request (DCR) issued the calculation and supporting design documents for installation of an equivalent closure device that was designed consistent with the functional requirements and compatible with the steam generator transfer system. This DCR addressed the outage equipment hatch closure device during S2R16 only.

This activity determined the technical requirements for an equivalent closure device for TS LCO 3.9.4.a and containment closure for loss of residual heat removal (RHR) during Modes 5 and 6 during Unit 2 steam generator replacement activities. The activity focused on requirements related to a fuel handling accident (FHA) and a loss of RHR (shutdown cooling) during Modes 5 and 6.

The FHA requirements are already specified in Technical Specification 3/4.9.4. The requirements for an “equivalent closure device” described in TS Basis section 3/4.9.4 are that “any equivalent closure device used to satisfy the requirement of Technical Specification 3/4.9.4.a will be designed, fabricated, installed, tested, and utilized in accordance with established procedures to ensure that the design requirements for

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mitigation of a FHA during refueling operations are met.” The containment closure requirements following a loss of RHR in Modes 5 and 6 were not defined for an equivalent device in lieu of the containment hatch (i.e., the inner containment door). Therefore, the 50.59 evaluation provided clarity and specific requirements.

Calculation methodology change for determining RHR pump NPSHa during post LOCA recirculation operation

The proposed activity was a change to the UFSAR for determining RHR pump available net positive suction head (NPSHa) during post Loss of Coolant Accident recirculation operation. The methodology was described in UFSAR Appendix 3A, PSEG Positions on USNRC Regulatory Guides, Regulatory Guide 1.1.

Upon completion of this 10CFR50.59 evaluation, PSEG determined that a license amendment was needed to implement the activity. Accordingly, PSEG submitted to the NRC a license amendment request on August 15, 2007. The NRC issued its approval of the LAR on November 15, 2007, via Amendments 285 and 268 for Salem Units 1 and 2 respectively.