



**PSEG**

Public Service Electric and Gas Company P.O. Box 236 Hancocks Bridge, New Jersey 08038-0236

Nuclear Business Unit

**APR 15 1997**

LR-N970259

U.S. Nuclear Regulatory Commission  
Document Control Desk  
Washington, DC 20555

Attn: Document Control Desk

MONTHLY OPERATING REPORT  
SALEM NO. 2  
DOCKET NO. 50-311

In compliance with Section 6.9.1.6, Reporting Requirements for the Salem Technical specifications, the original monthly operating report for the month of March is being sent to you.

Sincerely yours,  
*David F. Garchow*  
David F. Garchow  
General Manager -  
Salem Operations

RAR:tcp  
Enclosures

C Mr. H. J. Miller  
Regional Administrator USNRC, Region 1  
475 Allendale Road  
King of Prussia, PA 19046

*JE241*

220054  
9704220155 970331  
PDR ADDCK 05000311  
R PDR

The power is in your hands.



The following items were evaluated in accordance with the provisions of the Code of Federal Regulations 10CFR50.59. The Station Operations Review Committee has reviewed and concurs with these evaluations

**ITEM**

**SUMMARY**

**DESIGN CHANGE PACKAGE**

DCP 2EE-0281, Pkg. 1, Rev. 2  
Bearing Safety Evaluation S96-  
129 Lubrication Pressure Relief  
Valve (2SC16) Replacement  
Circulating Water System

The proposal involves the replacement of a relief valve in the circulating water pump bearing lube water section of the Circulating Water System. The modification is within the Circulating Water System and is not addressed in the Technical Specifications or "Bases". The effects on the reactor and its associated margins of safety due to postulated pipe breaks is not addressed in the basis of any Technical Specification section. Therefore, the proposed modification does not reduce the margin of safety as defined in the basis for any Technical Specifications.

**SORC:** 97-031

Design Change Package DCP  
2EC-3590, Package 1, Revision  
2, Addition of Thermal  
Overpressure Device on CFCU  
Return Piping

This design change package proposes to install a relief valve upstream of SW223 (outside containment), with the discharge directed to the common service water header downstream of valves SW223 and SW76 for No. 21 and No. 22 header. The SW76 valves will be bypassed for the case when the LOCA/MSLB and LOOP transient occurs coincident with a CFCU being out of service. Under this scenario, the applicable CFCU will already be declared inoperable, the SW76 valve will be tagged closed, and the relief valve will discharge to the service water piping downstream of SW76.

**SORC:** 97-034

Design Change Packages (DCPs)  
2EC-3590, Packages 4&5,  
Service Water Column  
Separation Protection #21 & 22  
Nuclear Supply Header

These packages will provide new service water piping and valves within the Penetration Area for future connection to a proposed accumulator, which will be located outside the Penetration Area. The piping installed under these packages for the Service Water No. 21 & 22 Nuclear Header supply piping to the CFCUs. These packages will provide for the main 10" diameter injection piping and the 2" diameter accumulator fill piping (pump suction) within the Penetration Area and terminating just outside the Penetration Area west wall. The piping beyond this point, to the accumulators will be installed in Package 3 of this DCP(2EC-3590) along with the accumulators.

**SORC:** 97-042

The following items were evaluated in accordance with the provisions of the Code of Federal Regulations 10CFR50.59. The Station Operations Review Committee has reviewed and concurs with these evaluations

**ITEM**

**SUMMARY**

**DESIGN CHANGE PACKAGE**

Safety Evaluation #97-063 DCP  
2EC-3590, Pkg. 12, Rev. 1,  
CCHX Inlet Valve SW122  
Volume Booster

This proposal brings the SW122 valves into conformance with the SW System parameters used in the accident analysis. This proposal does not change the SW System acceptance criteria or accident assumptions pertaining to the SW System or any other system. It is, therefore, concluded that this proposal does not reduce the margin of safety as defined in the basis for any Technical Specifications, including Technical Specifications Section 3/4.7.4 (Service Water System), Section 3/4.6.2.3 (Containment Cooling System) or 3/4.3.2 (Engineered Safety Feature Actuation System Instrumentation), as proposed in LCR 96-013.

SORC: 97-048

Safety Evaluation #97-098 2EC-  
3590, Pkg. 10, Service Water  
Accumulator Tanks, Electrical  
Conduit and Concrete  
Penetrations

This modification installs conduit through corebores to the Auxiliary Building walls and routes conduit through these walls. The conduit is used in support of other packages of this design change. The 10CFR50.59 determined that this modification does not increase the probability or consequence of any malfunction of equipment or any accident scenarios.

SORC: 97-044

Safety Evaluation #S97-095 DCP  
2EC-3546, Pkg. 2, Rev. 0,  
10CFR50 Appendix R Rewire of  
MOV Control Circuits

This modification addresses concerns regarding the Alternate Shutdown Methodology at Salem in the event of a Control Room evacuation due to fire in the Control Room, Relay Room, or ceiling area of 460/230 Volt Switchgear Room, which calls for the use of electrical wiring modifications and jumpers. Motor Control Center and control panel circuits for 10 valves will be modified to include local switches which isolate component wiring

SORC: 97-048

The following items were evaluated in accordance with the provisions of the Code of Federal Regulations 10CFR50.59. The Station Operations Review Committee has reviewed and concurs with these evaluations

**ITEM**

**SUMMARY**

**DESIGN CHANGE PACKAGE**

Safety Evaluation S97-070 DCP  
2EC-3620 Pkg. 1, Pressurizer  
Heater Circuit Breaker Setpoint  
Change

This modification does not reduce the margin of safety as defined in the basis for Technical Specification 3/4.8.3, Electrical Equipment Protective Devices, Containment Penetration Conductor Overcurrent Protective Devices, rather it increases the safety margin. Technical Specification 3.8.3.1 requires that "All containment penetration conductor overcurrent devices required to provide thermal protection of penetration shall be operable." Improving the coordination of the electrical devices protecting containment penetrations improves the electrical design.

**SORC:** 97-033

Safety Evaluation S97-072 DCP  
2EC-3546, Pkg. 1, Rev. 0,  
10CFR50 Appendix R Alternate  
Shutdown Methodology -  
Installation of Transfer Switches

This modification addresses concerns regarding the Alternate Shutdown Methodology at Salem in the event of a Control Room evacuation due to fire in the Control Room, Relay Room, or ceiling area of 460/230 Volt Switchgear Room, which calls for the use of electrical wiring modifications and jumpers. Motor Control Center and control panel circuits for 10 valves will be modified to include local switches which isolate component wiring from the above stated areas.

**SORC:** 97-039

Safety Evaluation S97-094  
Design Change Package (DCP)  
2EC-3617, Package 1, Revision  
0PORVs Controls Modifications

This DCP will modify the existing control actuation circuitry for the Unit 2 PORVs. The proposed modification will provide separation/isolation of safety from non-safety related functions to prevent a single failure from affecting both PORVs.

**SORC:** 97-046

Safety Evaluation S97-100 DCP  
2EC-3590, Pkgs. 3, 6, 11 & 17,  
Rev. 0, Generic Letter 96-06  
Modifications

The proposed modifications bring the SW system into conformance with the assumptions in the safety and accident analyses and the applicable Technical Specifications with regard to the potential for waterhammer. The proposed modifications do not change any SW system acceptance criteria or the function of the SW system.

**SORC:** 97-044

The following items were evaluated in accordance with the provisions of the Code of Federal Regulations 10CFR50.59. The Station Operations Review Committee has reviewed and concurs with these evaluations

**ITEM**

**SUMMARY**

**MISCELLANEOUS**

Operability Determination 97-012 Unit 2 Over-stress Condition on Steam Generator Water Level Instrument Lines

This Operability Determination justifies operation in Mode 4 prior to correcting the piping configuration of the Unit 2 Steam Generator Water Level Instrument Lines. The Operability Determination shows that operation in Mode 4 is acceptable as long as RCS temperature is maintained less than 240F degrees. Below this temperature, the pipe stress conditions meet design basis requirements.

**SORC:** 97-035

**PROCEDURE**

Procedure S2.OP-PM.CC-0022(Q) - Revision 9, 22 Component Cooling Heat Exchanger High Flow Flush and Alignment

The revision was necessary to permit accurate setting of throttle valves that limit the maximum flow through the heat exchangers during accident conditions; however, the revision did not change the actual flow values during accident conditions. The safety evaluation was necessary because the FSAR stated that the maximum flow through the CC heat exchangers would be limited to a nominal value of 10,000 gpm, but made no mention of the need to have higher flows during throttle valve setting/position verification.

**SORC:** 97-042

Safety Evaluation # S97-078 TS2.SE-SU.ZZ-0001(Q), Startup and Power Ascension Sequencing Procedure

Performance of this sequencing procedure and all the STPs and plant manual procedures identified by this sequence procedure will not reduce the margin of safety as defined in the basis for any Technical Specification because all equipment and systems will be operated IAW the Technical Specifications at all times.

**SORC:** 97-038

The following items were evaluated in accordance with the provisions of the Code of Federal Regulations 10CFR50.59. The Station Operations Review Committee has reviewed and concurs with these evaluations

ITEM

SUMMARY

TEMPORARY MODIFICATION

Safety Evaluation S97-027/Temporary Modification #97-001 Revision 2, Installation of Blind Spacers in the No. 21 SW Nuclear Header CFCU Supply/Return and the SW Supply/Return to the No. 21 and No. 22 CFCUs

This temporary modification 1) isolates the No.21 SW Nuclear Header 16" supply/return piping to/from the CFCUs to prevent SW flow and 2) if required, the provision to isolate the NO. 21 CFCU and No. 22 CFCU 10" SW supply/return piping to/from containment to maintain containment integrity while DCP 2EC-3590 is being worked. The service water supply to all other users of the No. 21SW Nuclear Supply Header will not be impacted once this temporary modification is installed.

SORC: 97-042

Safety Evaluation S97-028/Temp Mod 97-002, Rev 2, Installation of Blind Spacers in the No. 22 SW Nuclear Header CFCU Supply/Return and the SW Supply/Return to the No. 23, 24, and 25 CFCUs.

These spacers may be in place simultaneously in Mode 5 or 6, isolating the service water supply to all five CFCUs. However, only one spacer is permitted to be in place when in MODE 4, providing for the availability of at least two CFCUs to maintain containment air temperature when in Mode 4.

SORC: 97-042

Temporary Modification 97-007 Unit 2 Relay Room Pressure Relief (During Maintenance Mode of CEACS/EACS Operation)

This modification secures open a fire/security door in the Unit 2 Relay Room allowing excess air from the Relay Room to be relieved to the adjoining stairwell during the maintenance mode of operations. This will lower the pressure in the Relay Room and allow for the required differential pressure of 0.125 inwc between the CRE and the Relay Room to be achieved.

SORC: 97-035

OPERATING DATA REPORT

Completed by: Robert Phillips

Docket No: 50-311  
 Date: 04/10/97  
 Telephone: 339-2735

Operating Status

1. Unit Name	<u>Salem No. 2</u>	<u>Notes</u>
2. Reporting Period	<u>March 1997</u>	
3. Licensed Thermal Power (MWT)	<u>3411</u>	
4. Nameplate Rating (Gross MWe)	<u>1170</u>	
5. Design Electrical Rating (Net MWe)	<u>1115</u>	
6. Maximum Dependable Capacity (Gross MWe)	<u>1149</u>	
7. Maximum Dependable Capacity (Net MWe)	<u>1106</u>	
8. If Changes Occur in Capacity Ratings (items 3 through 7) since Last Report, Give Reason <u>N/A</u>		

9. Power Level to Which Restricted, if any (Net MWe) N/A

10. Reasons for Restrictions, if any N/A

	<u>This Month</u>	<u>Year to Date</u>	<u>Cumulative</u>
11. Hours in Reporting Period	<u>744</u>	<u>2160</u>	<u>136311</u>
12. No. of Hrs. Rx. was Critical	<u>0</u>	<u>0</u>	<u>78083.6</u>
13. Reactor Reserve Shutdown Hrs.	<u>0</u>	<u>0</u>	<u>0</u>
14. Hours Generator On-Line	<u>0</u>	<u>0</u>	<u>75229.5</u>
15. Unit Reserve Shutdown Hours	<u>0</u>	<u>0</u>	<u>0</u>
16. Gross Thermal Energy Generated (MWH)	<u>0</u>	<u>0</u>	<u>187781005</u>
17. Gross Elec. Energy Generated (MWH)	<u>0</u>	<u>0</u>	<u>78648898</u>
18. Net Elec. Energy Gen. (MWH)	<u>-7465</u>	<u>-23197</u>	<u>78625701</u>
19. Unit Service Factor	<u>0</u>	<u>0</u>	<u>54.6</u>
20. Unit Availability Factor	<u>0</u>	<u>0</u>	<u>54.6</u>
21. Unit Capacity Factor (using MDC Net)	<u>0</u>	<u>0</u>	<u>49.0</u>
22. Unit Capacity Factor (using DER Net)	<u>0</u>	<u>0</u>	<u>48.6</u>
23. Unit Forced Outage Rate	<u>100</u>	<u>100</u>	<u>32.6</u>

24. Shutdowns scheduled over next 6 months (type, date and duration of each)

Refueling extension.

25. If shutdown at end of Report Period, Estimated Date of Startup:

Second quarter of 1997.

AVERAGE DAILY UNIT POWER LEVEL

Docket No.: 50-311  
Unit Name: Salem #2  
Date: 04/10/97  
Telephone: 339-2735

Completed by: Robert Phillips

Month March 1997

Day Average Daily Power Level  
(MWe-NET)

Day Average Daily Power Level  
(MWe-NET)

1 0  
2 0  
3 0  
4 0  
5 0  
6 0  
7 0  
8 0  
9 0  
10 0  
11 0  
12 0  
13 0  
14 0  
15 0  
16 0

17 0  
18 0  
19 0  
20 0  
21 0  
22 0  
23 0  
24 0  
25 0  
26 0  
27 0  
28 0  
29 0  
30 0  
31 0





Refueling Information  
Month: March, 1997

Docket No. 50-311  
Unit Name: Salem 2  
Contact: D. Tisdell  
Telephone: 609-339-1538

Month: March, 1997

1. Refueling information has changed from last month: Yes: X No:
2. Scheduled date for next refueling: Currently in outage.
3. Scheduled date for restart following refueling: To Be Determined
3. a. Will Technical Specification changes or other license amendments be required?  
Yes: X No: Not Determined to Date:
- b. Has the reload fuel design been reviewed by the Station Operating Review Committee?  
Yes: X (for upcoming cycle) No: If no, when is it scheduled?
4. Scheduled date (s) for submitting proposed licensing action: N/A - previously submitted
5. Important licensing considerations associated with refueling:


6. Number of Fuel Assemblies:
  - a. Incore: 193
  - b. In Spent Fuel Storage: 584
7. Present Licensed spent fuel storage capacity: 1632  
Future spent fuel storage capacity: 1632
8. Date of last refueling that can be discharged to the spent fuel pool assuming the present licensed capacity: October, 2016

SALEM GENERATING STATION  
MONTHLY OPERATING SUMMARY - UNIT 2  
MARCH 1997

SALEM UNIT 2

The unit remained shutdown for the entire period. According to commitments from PSE&G and a subsequent confirmatory action letter from the NRC, the unit will remain shutdown pending completion of the following actions:

- Appropriately address long standing equipment reliability and operability issues.
- After the work is completed, conduct a restart readiness review to determine for ourselves the ability of the unit to operate in a safe, event free manner.
- After the restart review, meet with the NRC and communicate the results of that review.