PSEG

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

Nuclear Business Unit

August 15, 1996

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 copy of the monthly operating report for the month of July is being sent to you.

Sincerely yours,

For

David F. Garchow
General Manager -
Salem Operations

RH:vls
Enclosures

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

200050

IE24 1/1

The power is in your hands.

OPERATING DATA REPORT

Docket No: 50-311
Date: 08/10/96
Completed by: Robert Phillips
Telephone: 339-2735

Operating Status

1.	Unit Name	Salem No. 2	Notes
2.	Reporting Period	July 1996	
3.	Licensed Thermal Power (MWt)	3411	
4.	Nameplate Rating (Gross MWe)	1170	
5.	Design Electrical Rating (Net MWe)	1115	
6.	Maximum Dependable Capacity(Gross MWe)	1149	
7.	Maximum Dependable Capacity (Net MWe)	1106	

8. If Changes Occur in Capacity Ratings (items 3 through 7) since Last Report, Give Reason N/A

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

10. Reasons for Restrictions, if any N/A

	This Month	Year to Date	Cumulative
11. Hours in Reporting Period	744	5111	129744
12. No. of Hrs. Rx. was Critical	0	0	78083.6
13. Reactor Reserve Shutdown Hrs.	0	0	0
14. Hours Generator On-Line	0	0	75229.5
15. Unit Reserve Shutdown Hours	0	0	0
16. Gross Thermal Energy Generated (MWH)	0	0	187781005.0
17. Gross Elec. Energy Generated (MWH)	0	0	78648898
18. Net Elec. Energy Gen. (MWH)	-2985	-21070	74719984
19. Unit Service Factor	0	0	58.0
20. Unit Availability Factor	0	0	58.0
21. Unit Capacity Factor (using MDC Net)	0	0	52.1
22. Unit Capacity Factor (using DER Net)	0	0	51.7
23. Unit Forced Outage Rate	100	100	28.2

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

Forced Outage extension of a refueling outage.

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

To be determined.

AVERAGE DAILY UNIT POWER LEVEL

Docket No.: 50-311
Unit Name: Salem #2
Date: 08/10/96
Completed by: Robert Phillips
Telephone: 339-2735

Month July 1996

Day	Average Daily Power Level (MWe-NET)	Day	Average Daily Power Level (MWe-NET)
1	0	17	0
2	0	18	0
3	0	19	0
4	0	20	0
5	0	21	0
6	0	22	0
7	0	23	0
8	0	24	0
9	0	25	0
10	0	26	0
11	0	27	0
12	0	28	0
13	0	29	0
14	0	30	0
15	0	31	0
16	0		

UNIT SHUTDOWN AND POWER REDUCTIONS
REPORT MONTH June 1996

DOCKET NO.: 50-311
UNIT NAME: Salem #2
DATE: 08-10-96
COMPLETED BY: Robert Phillips
TELEPHONE: 609-339-2735

NO.	DATE	TYPE[1]	DURATION (HOURS)	REASON[2]	METHOD OF SHUTTING DOWN REACTOR	LICENSE EVENT REPORT #	SYSTEM CODE[4]	COMPONENT CODE[5]	CAUSE AND CORRECTIVE ACTION TO PREVENT RECURRENCE
3859	07-01-96	F	744	F,C	4	----------	ZZ	ZZZZ	Refueling Schedule Exceeded

1
F: Forced
S: Scheduled

2
Reason
A-Equipment Failure (explain)
B-Maintenance or Test
C-Refueling
D-Requlatory Restriction
E-Operator Training & License Examination
F-Administrative
G-Operational Error (Explain)
H-Other (Explain)

3
Method:
1-Manual
2-Manual Scram
3-Automatic Scram
4-Continuation of Previous Outage
5-Load Reduction
9-Other

4
Exhibit G - Instructions for Preparation of Data Entry Sheets for Licensee Event Report (LER) File (NUREG-0161)

5
Exhibit 1 - Same Source

10CFR50.59 EVALUATIONS
MONTH: JULY 1996

DOCKET NO: 50-311
UNIT NAME: SALEM 2
CONTACT: R. HELLER
TELEPHONE: 609-339-5162

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

1. Design Change Packages (DCP)

2EC-3349, Pkg. 1

"2A Emergency Diesel Generator (EDG) Starting Air & Turbo Boost Upgrades" Rev. 1 - This DCP upgrades the existing carbon steel piping and components in both the safety related and non-safety related portions of the 2A Emergency Diesel Generator (EDG) starting air and turbo boost systems. The modifications do not change the EDG starting requirements, loading on the EDG, or the required number of EDGs assuming a single failure. Therefore the changes do not reduce the margin of safety as defined in the basis for any Technical Specification. (SORC 96-064)

2EC-3377, Pkgs. 1&2

"Emergency Diesel Generator (EDG) Jacket Water Piping Modification" Rev. 0 - These DCPs replace and reroute jacket water instrument piping/tubing and valves DA43, DA44, DA45 and DA46 to reduce the vibration induced stresses to within acceptable limits. To accomplish this, the systems were tuned so that the significant system natural frequencies were not resonant with dominant diesel generator vibrations. In addition, these DCPs add flexhose, tubing, and valve supports, and bleed valves to each of the instrument process lines. These modifications mitigate Jacket Water system instrument line vibrations, thereby increasing reliability and availability of the EDGs. These modifications do not affect the load on the EDGs, the EDG output capacity, or the number of EDGs that are available for service. Therefore, there is no reduction in the margin of safety as defined in the basis for any Technical Specification. (SORC 96-020)

10CFR50.59 EVALUATIONS
MONTH: JULY 1996

DOCKET NO: 50-311
UNIT NAME: SALEM 2
CONTACT: R. HELLER
TELEPHONE: 609-339-5162

(Cont'd)

ITEM	SUMMARY
2EC-3384, Pkgs. 1-4	"S/G Primary Manway Bolt Replacement & Hole Restorations" Rev. 0 - This DCP upgrades the primary manway bolting on the Salem Unit 2 Steam Generators No. 21 - 24. The installation of helical coil inserts in the steam generator primary manway bolt holes, and the use of longer bolts with washers, ensures that reactor coolant system integrity continues to be maintained. Design, procurement and installation activities associated with the helical coil inserts satisfy all of the requirements of ASME Code Case N-496, and load capacity assessments of the inserts, replacement bolts, washers and manway reinforcement area verify that these components have adequate structural capacity for both normal and abnormal operating conditions. Therefore, there is no reduction in the margin of safety as defined in the basis for any Technical Specification. (SORC 96-013)
2EC-3387, Pkg. 1	"2A Diesel Generator Circuit Breaker Voltage Permissive Relay Installation and Indication Modification" Rev. 0 - This DCP installs two new voltage sensing relays and an auxiliary relay to monitor the output voltage of Emergency Diesel Generator (EDG) 2A. The setpoints of the new voltage sensing relays are at a higher voltage than the existing relays and will prohibit the EDG main circuit breaker from closing when the diesel generator output is less than the required voltage. This DCP also installs indicating lights on the Generator Control Panel (GCP) which identifies when the voltage and speed permissive are satisfied. There is no reduction in the margin of safety as defined in the basis for any Technical Specification. (SORC 96-051)
2EC-3403, Pkg. 1	"EDG 2A Fuel Oil Day Tank Level Switch Setpoint" Rev. 0 - This DCP raised the EDG 2A Fuel Oil Day Tank low level alarm and back-up pump start setpoint on 2LD7050 from 18" to 27". It also, lowered the setpoints on the

ITEM	SUMMARY
	regular/back-up stop switch 2LD7051 from 46" to 43" and the regular/back-up high level alarm/stop switch 2LD7053 form 47" to 45". This change is in the conservative direction for the back-up pump start and low level alarm setpoint so the margin of safety is increased by this DCP. The margin of safety for the primary stop setpoint for the transfer pumps and the secondary stop setpoint for the transfer pumps high tank level alarm is unaffected. (SORC 96-050)
2EC-3404, Pkg. 1	"Modify 2B Emergency Diesel Generator (EDG) to Increase Vibration Tolerance" Rev. 0 - This DCP increases the vibration tolerance characteristics of the 2B EDG and associated equipment to make the diesel more resistant to vibration related degradation. Modifications involve adding and replacing flex hoses, isolating components from sources of vibration, providing additional flexibility between components, providing additional supports and bracing and removing the engine and generator mounted vibration switches. The installation of flexhose, clamping, bracing and strengthening components susceptible to vibration mitigate the problems associated with the vibration of safety related components, thus, increasing the reliability of the EDG. There is no reduction in the margin of safety as defined in the basis for any Technical Specification. (SORC 96-029)
2EC-3442, Pkg. 1	"Emergency Diesel Generator (EDG) 2A Crankcase Exhauster Piping Modification" Rev. 0 - This DCP: 1) replaced and relocated existing crankcase exhaust piping (4 inch) in the Day Tank room with 6-inch piping and added a pipe support; 2) core bored through the roof of the Day Tank room and the roof of the concrete missile enclosure to allow the relocated piping to be routed up and into the diesel generator main exhaust concrete missile enclosure; 3) sealed the existing roof penetration, routed the crankcase exhaust piping up through the enclosure (including adding pipe supports) and exited through the new

ITEM	SUMMARY
	opening in the concrete missile enclosure roof. There is no reduction in the margin of safety as defined in the basis for any Technical Specification. (SORC 96-059)
2EC-3456, Pkg. 1	"2C EDG Starting and Turbo-Boost Air Compressor Start/Stop Pressure Switches" Rev. 0 - This DCP replaced pressure control switches for EDG 2C starting and turbo-boost air compressors 2DAE41, 2DAE42, and 2DAE35. There is no reduction in the margin of safety as defined in the basis for any Technical Specification. (SORC 96-035)
2EC-3457, Pkg 1	"Installation of Stabilizers in Unit 2 Steam Generators" Rev. 3 - This DCP is for the stabilization of the Unit 2 Steam Generator (S/G) tubes. The scope includes the installation of 0.700 inch diameter segmented solid rod stabilizers to isolate a piece of tube inadvertently left in the steam generator during the tube pulling. This modification to 24 S/G precludes the possibility of a loose tube ring damaging an adjacent tube. There is no reduction in the margin of safety as defined in the basis for any Technical Specification. (SORC 96-041)
2EC-3506, Pkg. 1	"Turbo-Boost Low Pressure (LP) Alarm" Rev. 0 - This modification revises the setpoint for the emergency diesel generators 2A/2B/2C turbo boost air receiver low pressure alarm. This modification is necessary to: 1) minimize spurious turbo boost alarms; 2) ensure adequate margin exists to allow for operator response, and 3) establish a design basis for the alarm. The margin of safety as defined in the basis to any Technical Specification is not reduced as a result of raising the setpoint of the pressure switches associated with the diesel turbo boost air system. This DCP increases the availability to the turbo boost system by providing an earlier warning of low air receiver pressure and provides additional assurance that the emergency diesel generator will start and accept load to mitigate accident

ITEM	SUMMARY
	consequences. There is no reduction in the margin of safety as defined in the basis for any Technical Specification. (SORC 96-051)
2EC-3508, Pkg. 1	"Control Room Annunciator Modifications" Rev. 0 - Th is DCP for the Annunciator Verification System (AVS) includes the installation of two new distributed annunciator controllers (DACs) to provide output from the existing DAC trains "A" and "B". The system logic is provided via the installation of one programmable logic controller (PLC) which is programmed to automatically perform a periodic surveillance test. If Overhead Annunciator (OHA) system failures are detected, the AVS will provide a rapid indication of the problem to the operators via a new console bezel associated with the 2CC1 console group alarm. The system provides information to allow the operators to determine whether the failure is due to a loss of OHA system operability, or whether the failure is due to loss of system capability or redundancy. A means of testing the independent annunciator verification system for proper operation will also be installed. There is no reduction in the margin of safety as defined in the basis for any Technical Specification. (SORC 96-087)
2EE-0096 Pkg. 1	"Containment Airlock Equalizing Valve Replacement" Rev. 0 - This DCP replaced the existing equalizing valves for the Unit 2 containment personnel air locks (2RCE35 and 2RCE36) with equivalent replacements; there are 2 per airlock, for a total of 4 valves. In addition, this DCP added a filter element to protect the valve seats and balls from damaging debris. This DCP also replaced the existing 3" ball valves (used to equalization of pressure between the airlock doors) with valves more suited for high radiation/high temperature service. There is no reduction in the margin of safety as defined in the basis for any Technical Specification. (SORC 96-020)

EVALUATIONS
MONTH: JULY 1996

DOCKET NO: 50-311
UNIT NAME: SALEM 2
CONTACT: R. HELLER
TELEPHONE: 609-339-5162

(Cont'd)

ITEM	SUMMARY

2. Procedures and Revisions

S2.IC-GP.GBD-0001 "21-24 GB4 Interlock Defeat - Drain Down Steam Generators" - This provides an I&C maintenance procedure which permits defeating the Auxiliary Feedwater Pump Start auto close interlock for the 21-24 Steam Generator Drains Isolation GB-4 valves. This will permit draining the steam generators by controlling the GB-4 valves from the Control Room when Auxiliary Feedwater Pump work is ongoing. This applies only in Modes 5,6, or undefined. There is no reduction in the margin of safety as defined in the basis for any Technical Specification. (SORC 96-087)

3. Safety Evaluations

S/E for 2EC-3178-01 "Analog Feedwater Control System Replacement," Pkg. 1, Rev. 4 - This addresses modifications to convert the Salem Unit 2 existing analog feedwater control system to a microprocessor-based digital feedwater control system. A review of the Technical Specifications did not identify any safety limits, limiting safety system settings, setpoints, operational limit or design limit whose margins of safety are impacted by this modification. (SORC 96-095)

REFUELING INFORMATION
MONTH: JULY 1996

DOCKET NO: 50-311
UNIT NAME: SALEM 2
CONTACT: R. HELLER
TELEPHONE: 609-339-5162

MONTH: JULY 1996

1. Refueling information has changed from last month: YES . ____ . NO . X .

2. Scheduled date for next refueling: (currently in refueling)

   Scheduled date for restart following refueling: (to be determined)

3. a. Will Technical Specification changes or other license amendments be required?

   YES . ____ . NO . ____ .

   NOT DETERMINED TO DATE . X .

   b. Has the reload fuel design been reviewed by the Station Operating Review Committee?

   YES . ____ . NO . X .

   If no, when is it scheduled? (to be determined)

5. Scheduled date(s) for submitting proposed licensing action: . n/a .

6. Important licensing considerations associated with refueling:

7. Number of Fuel Assemblies:
   a. Incore . 0 .
   b. In Spent Fuel Storage . 777 .

8. Present licensed spent fuel storage capacity: . 1632 .

   Future spent fuel storage capacity: . 1632 .

9. Date of last refueling that can be discharged to the spent fuel pool assuming the present licensed capacity: March 2012

SALEM GENERATING STATION
MONTHLY OPERATING SUMMARY - UNIT 2
JULY 1996

SALEM UNIT NO. 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 each Unit to operate in a safe, event free manner
- After the restart review, meet with the NRC and communicate the results of that review