PSE&G

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

Salem Generating Station

December 10, 1993

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

Dear Sir:

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 reports for the month of November 1993 are being sent to you.

Average Daily Unit Power Level
Operating Data Report
Unit Shutdowns and Power Reductions
Safety Related Maintenance
10CFR50.59 Evaluations
Operating Summary
Refueling Information

Sincerely yours,

General Manager -
Salem Operations

RH:pc

cc: Mr. Thomas T. Martin
Regional Administrator USNRC
Region I
631 Park Avenue
King of Prussia, PA 19046

Enclosures

8-1-7.R4

IE24
1/1

AVERAGE DAILY UNIT POWER LEVEL

Docket No.: 50-311
Unit Name: Salem #2
Date: 12-10-93
Telephone: 339-2122

Completed by: Mark Shedlock

Month NOVEMBER 1993

Day	Average Daily Power Level (MWe-NET)	Day	Average Daily Power Level (MWe-NET)
1	1014	17	1127
2	1120	18	1134
3	1140	19	1130
4	1139	20	1131
5	1122	21	1131
6	1123	22	1115
7	1116	23	996
8	1114	24	860
9	1119	25	944
10	1120	26	1008
11	1120	27	1127
12	1132	28	1124
13	1135	29	1053
14	805	30	1023
15	1076	31	
16	1133		

OPERATING DATA REPO

Docket No: 50-311
Date: 12/10/93
Completed by: Mark Shedlock Telephone: 339-2122

Operating Status

1.	Unit Name	Salem No. 2	Notes
2.	Reporting Period	November 1993	
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 NONE

	This Month	Year to Date	Cumulative
11. Hours in Reporting Period	720	8016	106369
12. No. of Hrs. Rx. was Critical	720	5442.11	69207.71
13. Reactor Reserve Shutdown Hrs.	0	0	0
14. Hours Generator On-Line	720	5259.21	66817.67
15. Unit Reserve Shutdown Hours	0	0	0
16. Gross Thermal Energy Generated (MWH)	2375899.2	17136708	162232397.8
Gross Elec. Energy Generated (MWH)	811230	5760570	70468058
18. Net Elec. Energy Gen. (MWH)	778308	5478233	67064209
19. Unit Service Factor	100	65.6	62.8
20. Unit Availability Factor	100	65.6	62.8
21. Unit Capacity Factor (using MDC Net)	97.7	61.8	57
22. Unit Capacity Factor (using DER Net)	96.9	61.3	56.5
23. Unit Forced Outage Rate	0	11.6	22.1

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

NONE

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

N/A

UNIT SHUTDOWN AND POWER REDUCTIONS
REPORT MONTH NOVEMBER 1993

DOCKET NO.: 50-272
UNIT NAME: Salem #2
DATE: 12/10/93
COMPLETED BY: Mark Shedlock
TELEPHONE: 339-2122

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
044	11-14-93	F	5.9	A	5	-------	CH	HTEXCH	NUCLEAR STEAM GENERATOR INTERNAL PROBLEMS
045	11-23-93	F	25.38	A	5	-------	HF	PUMPXX	CIRCULATING WATER PUMPS
046	11-28-93	F	6.73	A	5	-------	EG	RELAYX	SWITCHYARD OR HIGH VOLTAGE SYSTEM PROBLEMS

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)

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Exhibit 1 - Same Source

SAFETY RELATED MAINTENANCE
MONTH: - NOVEMBER 1993

DOCKET NO: 50-311
UNIT NAME: SALEM 2
DATE: DECEMBER 10, 1993
COMPLETED BY: R. HELLER
TELEPHONE: (609)339-5162

WO NO	UNIT	EQUIPMENT IDENTIFICATION
931025097	2	VALVE 22SW4
		FAILURE DESCRIPTION: SERVICE WATER LEAK ON THE PIPING AT THE WELD TO 22SW4 - REPAIR
931029130	2	VALVE 26SW3
		FAILURE DESCRIPTION: HANDWHEEL BROKEN OFF DURING TAGGING - REPLACE
931103095	2	VALVE 23SW58
		FAILURE DESCRIPTION: 23SW58 HAS NO FLOW - OPEN AND INSPECT
931112110	2	2A DIESEL GENERATOR
		FAILURE DESCRIPTION: THE BRANCH PIPE TO HEADER JACKET WATER IS LEAKING - REWORK BY CHANGING OUT GASKETS

10CFR50.59 EVALUATIONS
MONTH: - NOVEMBER 1993

DOCKET NO: 50-311
UNIT NAME: SALEM 2
DATE: DECEMBER 10, 1993
COMPLETED BY: 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

A. Design Change Packages

2EC-3202 Pkg 1

"CW-0008 Circulating Water Electrical Upgrade Unit 2 (Outage)" - This DCP performs the following work: 1.) This DCP completes the electrical tie-in of the new Unit 2 Circ. Water 460V substation and demolished the existing substation. The substation was installed previously on its foundation by DCP 1SC-2298. A new splice/pull box is installed on the existing foundation to perform the cable splices. The substation is tested and re-energized; 2.) The 230 VAC motor control center, transformer, control equipment and lighting panels are located in a metal building ("Control House"). This control house is dismantled and replaced. All existing electrical equipment is reused. New ventilation, sump pump and piping is provided for the cable manhole; 3.) This DCP refurbished panels 360-2 and TS-2. Panels 670-2A, 670-2B and 670-2C are replaced, and 4.) Three of the four screen wash pump motors (No. 21, 23, 24) have been replaced over time as the old motors failed. When the motors were replaced, they were upgraded from 125 horsepower to 150 horsepower. The remaining 125 HP motor (No. 22) is replaced by this DCP. Cabling to all four screen wash pumps is replaced to accommodate the increased motor size. This DCP does not reduce the margin of safety as defined in the basis for any Technical Specification. There are no requirements directly specified for the operation or performance of any circulating water system equipment in the Technical Specifications. This modification increases the circulating water system reliability and availability. (SORC 93-101)

2EC-3081 Pkg 1

"Penetration Area Welding Receptacles" Rev. 1 - This DCP provides three new 460V welding receptacles, one in the Chilled Water Pump Area, El. 100, at column lines BC-16.2, one in the Main Steam Penetration

(cont'd)

ITEM	SUMMARY
	Area, El. 100, near column lines FF-16.8, and one in Personnel Hatch Area, El. 100, near column lines GG-16.8. These receptacles are in a common circuit fed from a new circuit breaker, I2118-21X, in the 2E1 460-230 Volt Control Center. With this installation, welding receptacles will be available to power welding machines in these areas with no need to breach wall penetrations for power cables. This will provide the capability for TIG welding, as well as SMAW welding, in each of these areas without the need to breach wall penetrations. This DCP will not reduce the margin of safety as defined in the basis for any Technical Specification because the new welding machine receptacles will be on a circuit powered from a non-vital bus, the 2EL 460-230V Control Center. The control center has the spare capacity to take the additional circuit and there will be no effect on any other part of the power distribution system, vital or non-vital. There is no increase in load on the control center or the group bus as far as the Load Management Study is concerned because the welding receptacles are intermittent loads. Activities pertaining to the affected penetrations will be conducted in accordance with approved procedures. (SORC 93-103)
B. Safety Evaluations (S/E)	
CN 93-24	"SGS-UFSAR Section 3.6.5.12.5 Revisions" - DEF #DES-93-00660 identified that SGS-UFSAR Section 3.6.5.12.5 which applies only to Unit 2 does not address moderate energy pipe failure in the 10 Ton CO2 Room and the Diesel Fuel Storage Tank areas. SGS-UFSAR Section 3.1.3 identifies that the NRC required that a Moderate - Energy Break Analysis (MEBA) be performed for Unit 2. The proposal revises SGS-UFSAR Section 3.6.5.12.5 to address the 10 Ton CO2 room, the Diesel Fuel Storage Tank areas, and the entrance to these areas on the basis of a revised MEBA (Design Calculation S-C-ZZ-SDC-1203) as follows: "The 10 Ton CO2 Room, the Diesel Fuel Storage Tank areas, and the entrance to these areas contain service water, fuel oil, and carbon dioxide

(cont'd)

ITEM	SUMMARY

fire protection MEL piping in addition to diesel fuel oil storage and transfer system equipment. The areas do not contain floor drainage, hence service water or fuel oil piping failure could cause flooding of the areas and the adjoining fuel transfer pump rooms. therefore, flooding of diesel fuel oil storage and transfer system equipment can occur. Spray damage can also occur. However, because blackout coincident with service water or fuel oil piping failure is not a design basis condition at Salem Generating Station, diesel fuel oil storage and transfer equipment are not required to function to mitigate the consequences of such piping failure. Protection against the effects of service water or fuel oil piping failure is not required for diesel fuel oil storage and transfer system equipment. No changes are being made to any component, system or structure. There is no effect on plant operation. The only change is the addition of a description of the facility in SGS-UFSAR Section 3.6.5.12.5, which is changed on the basis of a revised MEBA (Design Calculation S-C-ZZ-SDC-1203). There is no reduction in the margin of safety as defined in the basis for any Technical Specification. (SORC 93-101)

SALEM GENERATING STATION
MONTHLY OPERATING SUMMARY - UNIT 2
NOVEMBER 1993

SALEM UNIT NO. 2

The Unit began the period operating at full power and continued to operate at essentially full power until November 14, 1993, when load was reduced to 50% for repairs to repair #21 steam generator feed pump. The Unit was restored to full power on November 15, 1993, and continued to operate at that level until November 23, 1993, when power was reduced to 79% due to jamming of the travelling screen for 23A circulator. The repairs were completed and a power escalation commenced later the same day. Power was held at 86% due to governor swings on #21 steam generator feed pump. Power was increased to 100% on November 26, 1993. A load reduction to 80% was required on November 29, 1993 due to forced cooling problems on the main transformer. The cooling was restored and power increased to 100% later in the day. The Unit continued to operate at 100% power through the remainder of the period.

REFUELING INFORMATION
MONTH: - NOVEMBER 1993

DOCKET NO: 50-311
UNIT NAME: SALEM 2
DATE: DECEMBER 10, 1993
COMPLETED BY: R. HELLER
TELEPHONE: (609)339-5162

MONTH NOVEMBER 1993

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

2. Scheduled date for next refueling: SEPTEMBER 24, 1994

3. Scheduled date for restart following refueling: NOVEMBER 22, 1994

4. 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?: OCTOBER 94

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 193
   b. In Spent Fuel Storage 464

8. Present licensed spent fuel storage capacity: 1170

   Future spent fuel storage capacity: 1170

9. Date of last refueling that can be discharged to the spent fuel pool assuming the present licensed capacity: March 2003

8-1-7.R4