



PSEG

H. J. Midura
19016 FILE

Public Service Electric and Gas Company P.O. Box 168 Hancocks Bridge, New Jersey 08038

Salem Nuclear Generating Station

July 12, 1978

Director, Office of Inspection and Enforcement
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

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Dear Sir:

MONTHLY OPERATING REPORT
SALEM NO. 1
DOCKET NO. 50-272

In compliance with section 6.9, Reporting Requirements for the Salem Technical Specifications, 10 copies of the following monthly operating reports for the month of June 1978 are being sent to you.

Average Daily Unit Power Level
Operating Data Report
Unit Shutdowns and Power Reductions
Major Plant Modification
Summary of Safety Related Maintenance
Operating Summary
Refueling Information

Sincerely yours,

H. J. Midura

H. J. Midura
Manager - Salem Generating Station

LKM:jcm

cc: Mr. Boyce H. Grier
Director of U. S. NRC
Office of Inspection and Enforcement
Region I
631 Park Avenue
King of Prussia, Pa. 19406

Director, Office of Management
Information and Program Control
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555



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Page 1 of 16
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AVERAGE DAILY UNIT POWER LEVEL

DOCKET NO. 50-272

UNIT Salem 1

DATE 7-12-78

COMPLETED BY L. K. Miller

TELEPHONE 609-365-7000 X507

MONTH June, 1978

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

DAY AVERAGE DAILY POWER LEVEL

(MWE-NET)

17	20
18	164
19	346
20	695
21	806
22	946
23	507
24	197
25	1029
26	971
27	964
28	747
29	873
30	930
31	- - -

OPERATING DATA REPORT

DOCKET NO.: 50-272

DATE : 7-12-78

COMPLETED BY: L. K. Miller

TELEPHONE: 609-365-7000 Ext. 507

OPERATING STATUS

1. Unit Name: Salem No. 1
2. Reporting Period: June 1978
3. Licensed Thermal Power (Mwt): 3338
4. Nameplate Rating (Gross MWe): 1135
5. Design Electrical Rating (Net MWe): 1090
6. Maximum Dependable Capacity (Gross MWe): 1124
7. Maximum Dependable Capacity (Net MWe): 1079
8. If Changes Occur in Capacity Ratings (Items Number 3 Through 7) Since Last Report, Give Reason:
None

Notes:

9. Power Level To Which Restricted, If Any (Net MWe): None
10. Reasons For Restrictions, If Any: None

	This Month	Year to Date	Cumulative
11. Hours In Reporting Period	<u>720</u>	<u>4,343</u>	<u>8,784</u>
12. Number Of Hours Reactor Was Critical	<u>412.8</u>	<u>1935.5</u>	<u>4,478.7</u>
13. Reactor Reserve Shutdown Hours	<u>0</u>	<u>0</u>	<u>0</u>
14. Hours Generator On-Line	<u>307.2</u>	<u>1767.3</u>	<u>4,197.9</u>
15. Unit Reserve Shutdown Hours	<u>0</u>	<u>0</u>	<u>0</u>
16. Gross Thermal Energy Generated (MWH)	<u>729,895.2</u>	<u>5,235,374.2</u>	<u>11,930,594.2</u>
17. Gross Electrical Energy Generated (MWH)	<u>235,140</u>	<u>1,783,640</u>	<u>3,969,950</u>
18. Net Electrical Energy Generated (MWH)	<u>213,632</u>	<u>1,680,791</u>	<u>3,739,009</u>
19. Unit Service Factor	<u>42.7</u>	<u>40.7</u>	<u>47.8</u>
20. Unit Availability Factor	<u>42.7</u>	<u>40.7</u>	<u>47.8</u>
21. Unit Capacity Factor (Using MDC Net)	<u>27.5</u>	<u>35.9</u>	<u>39.5</u>
22. Unit Capacity Factor (Using DER Net)	<u>27.2</u>	<u>35.5</u>	<u>39.1</u>
23. Unit Forced Outage Rate	<u>57.3</u>	<u>59.3</u>	<u>33.4</u>

24. Shutdowns Scheduled Over Next 6 Months (Type, Date, and Duration of Each):

None

25. If Shut Down At End of Report Period, Estimated Date of Startup: -

26. Units In Test Status (Prior to Commercial Operation):

	Forecast	Achieved
INITIAL CRITICALITY	<u>9/30/76</u>	<u>12/11/76</u>
INITIAL ELECTRICITY	<u>11/1/76</u>	<u>12/25/76</u>
COMMERCIAL OPERATION	<u>12/20/76</u>	<u>6/30/77</u>

UNIT SHUTDOWNS AND POWER REDUCTIONS

REPORT MONTH JuneDOCKET NO.: 50-272UNIT NAME: Salem 1DATE: 7-12-78COMPLETED BY: L. K. MillerTELEPHONE: 609-365-7000 ext507

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
78-40	3-15-78	F	335.40	B	1 (A)	- - -	HA	Turbine	High vibration in No. 3 bearing of main turbine. Unit outage to make required turbine repairs.
78-41	6-15-78	F	26.01	A	3	- - -	HB	Filter	Feed water flow transient from condensate pump strainers resulting in steam generator high level turbine trip.
78-42	6-16-78	F	0	A	4 (A)	- - -	HA	Turbine	Turbine break in prior to planned overspeed trip.
78-43	6-16-78	F	29.95	A	1	- - -	HC	HTEXCH	Condenser Tube Leak.
78-44	6-17-78	F	0	A	4 (A)	- - -	CG	Valve	Valve 1CV35 diverting flow to waste hold-up tanks.
78-45	6-19-78	F	0	A	4 (A)	- - -	HC	Filter	Clean condensate pump suction strainers.

1

F: Forced
S: Scheduled

2

Reason:
A-Equipment Failure(Explain)
B-Maintenance or Test
C-Refueling
D-Regulatory 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-Other (Explain)

4

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

5

Exhibit I-Same
Source

UNIT SHUTDOWNS AND POWER REDUCTIONS

REPORT MONTH June, 1978DOCKET NO.: 50-272UNIT NAME: Salem 1DATE: 7-12-78COMPLETED BY: L. K. MillerTELEPHONE: 609-365-7000 ext.507

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
78-46	6-20-78	F	0	A	4 (A)	- - -	HA	Turbine	High Turbine Vibration
78-47	6-20-78	F	0	A	4 (A)	- - -	HA	Turbine	High Turbine Vibration
78-48	6-21-78	F	0	A	4 (A)	- - -	HH	Filter	Clean condensate pump suction strainers
78-49	6-22-78	F	0	A	4 (A)	- - -	HH	Filter	Clean condensate pump suction strainers
78-50	6-23-78	F	21.40	A	3	- - -	ZZ	ZZZZZZ	Turbine trip from 11 steam generator high level. No. 11 feed flow control in manual during instrument surveillance
78-51	6-26-78	F	0	A	4 (A)	- - -	HH	Filter	Clean condensate pump suction strainers.
78-52	6-27-78	F	0	A	4 (A)	- - -	HH	Filter	Clean condensate pump suction strainers
78-53	6-28-78	F	0	A	4 (A)	- - -	HH	Filter	Clean condensate pump suction strainers
78-54	6-28-78	F	0	A	4 (A)	- - -	HH	Filter	Clean 12 condensate pump suction strainers
78-55	6-28-78	F	0	A	4 (A)	- - -	HH	Filter	Clean condensate Pump suction strainers.

UNIT SHUTDOWNS AND POWER REDUCTIONS

REPORT MONTH June, 1978DOCKET NO.: 50-272UNIT NAME: Salem 1DATE: 7-12-78COMPLETED BY: L. K. MillerTELEPHONE: 609-365-7000 ext 507

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
78-56	6-28-78	F	0	A	4 (A)	- - -	HH	Filter	Clean 11 & 12 steam gen. feed pump strainers
78-57	6-29-78	F	0	A	4 (A)	- - -	HH	Filter	Clean condensate pump suction strainers
78-58	6-29-78	F	0	A	4 (A)	- - -	HH	Filter	Clean condensate pump suction strainers
78-59	6-30-78	F	0	A	4 (A)	- - -	HH	Filter	Clean 12 Heater Drain Pump suction strainers
78-60	6-30-78	F	0	A	4 (A)	- - -	HH	Filter	Clean condensate and 12 Heater drain pump suction strainers.

*DCR NO.	PRINCIPLE SYSTEM	SUBJECT
EX-0011	500KV	Energize Main Power Transformer for Test
ED-0148	P.O.P. System	Impliment Revision 4 to Remove Redundant Air Regulators
ED-0268	Service Water	Install Spool Pieces at Fan Coil Units
ED-0297	Diesel Generators 1A and 1C	Modify Fuel Lines
ED-0302	Aux. Feed	Replace AFP Recirc Orifices
ED-0357	Reactor Coolant Inst.	Rework Low Flow Panels to meet Seismic Requirements
ED-0370	Main Turbine Lube Oil	Extend Oil Lift to No. 8 Bearing
EC-0374	Main Turbine	Remove Equalizing Line
EX-0381	Service Water	Adjust 15 S.W. Pump Coupling Gap
EC-0383	CVCS	Restore Normal Air Supply to 1CV4
EX-0391	Condensate	Install Modified Suction Strainer
MD-0093	Condensate	Install Split Bearing in 12 Condensate Pump
MD-0094	Boric Acid	Install Improved Mechanical Seals in BAT Pumps
MD-0107	Rad Waste	Install Truck Connection for Evaporator Bottoms
MD-0108	Rad Waste	Install Truck Connection for Spent Resin
MD-0130	Main Turbine Lube Oil	Modify Low Level Alarm
MD-0137	C.A.R.	Supply Vacuum Pumps from TAC System
MD-0138	P.L. Rods	Mount Unlatching Tool
OD-0019	CVCS - B.A. Recovery	Install Check Valve to Prevent Backflow
OD-0020	Waste Liquid	Install Check Valve to Prevent Backflow
OD-0061	Cont. Pressure Alarm	Reset to T/S Value
PD-0125	Nitrogen	Replace 1NT31 with Larger Capacity Valve

*DCR NO.	10CFR50.59. SAFETY EVALUATION
EX-0011	While the unit is in cold shut-down a test is to be performed on the main step-up transformer. This test is to last approximately two weeks and upon completion, the test connections will be removed and the system will be restored to normal conditions. Criteria for an unreviewed safety question are not met.
ED-0148	This system effectively adds parallel logic to the opening signal for the pressurizer relief valves. Consequences of any presently performed safety analyses are not changed, and the probability of presently analyzed accidents (small loca, cap) is not significantly altered. The Bases of the Tech. specs remain unchanged and valid.
ED-0268	This design change does not affect any presently performed safety analyses nor does it create any new safety hazards. The bases of the technical specifications are not affected.
ED-0297	This modification will not reduce the margin of safety in any Technical Specification, cause an accident or malfunction not previously analyzed in the FSAR, nor increase the probability of occurrence or consequences of such an accident.
ED-0302	This modification will not reduce the margin of safety in any Technical Specification, cause an accident or malfunction not previously analyzed in the FSAR, nor increase the probability of occurrence or consequences of such an accident.
ED-0357	This is a change to meet original design commitments. Criteria for an unreviewed safety question are not met.
ED-0370	Functional operation is unchanged. Design change will improve reliability. Criteria for an unreviewed safety ques. are not met.

*DCR NO.	10CFR50.59. SAFETY EVALUATION
EC-0374	This design change does not affect any presently performed safety analysis nor does it create any new safety hazards. The basis of the Technical Specifications are not affected. The system involved is non-nuclear, non-safety related.
EX-0381	The experiment is being conducted to utilize an adjustment capability in the pump design which was provided as a mechanism to improve pump performance. An unreviewed safety question is not involved.
EC- 383	The containment isolation function and fail safe design of valve LCV4 is not affected by this change. The 10 second closure time will be maintained and verified by testing.
EX-0391	This experiment does not affect any presently performed safety analyses nor does it create any new safety hazards. The bases of the Tech. Spec's are not affected.
MD-0093	Criteria for an unreviewed safety question are not met.
MD-0094	An unreviewed safety question is not involved.
MD-0107	System is non safety related. This design change does not affect any presently performed safety analyses nor does it create any new safety hazards. The base of the Tech. Specs. are not affected.
MD-0108	The piping affected is non-safety related. This design change does not affect any presently performed safety analyses nor does it create any new safety hazards. The bases of the Technical Specifications are not affected.

*DCR NO.	10CFR50.59 SAFETY EVALUATION
MD-0130	Not safety related, does not affect any safety related equipment or Tech. Spec., and does not require a safety analysis to be performed.
MD-0137	Systems are non-safety related. This design change does not affect any presently performed safety analyses nor does it create any new safety hazards. The bases if the Tech. Specs. are not affected.
MD-0138	This design change will not affect a previously performed safety analysis. Thr bracket is to be used during refueling outages and will not affect the safe operation of the plant.
OD-0019	This design change involves the addition of a check valve to prevent reverse flow in a primary water flush line. Criteria for an unreviewed safety question are not met.
OD-0020	This change involves the addition of a check valve to prevent reverse flow in Primary Water line. Criteria for an unreviewed safety question are not met.
OD-0061	This change will increase the margin of safety as defined in the Technical Specification 3.6.1.4. Required in order to meet Tech. Spec. Setpoint Requirements with change - safety analyses are not affected.
PD-0125	This change is requested to protect regulator valve 1NT31 when nitrogen is supplied through valve 1NT54. This portion of the system is not safety related nor is the system fuction altered. Consequently, this change does not: (1) increase probability of or consequences of an accident, (2) create a possibility for same, or (3) reduce a previously defined margin of safety.

MONTHLY SAFETY RELATED WORK ACTIVITIES

June 1978

W. O. NUMBER	EQUIPMENT	FAILURE DESCRIPTION	CORRECTIVE ACTION
OD-9019	No. 15 & 16 S.W. Pump Screens	Screen Δ P's High	Cleaned out level indication bubbler tubes
OD-9027	1CV2 Valve	Repair valve bonnet leak	Replaced bonnet gaskets, seat gaskets and body studs
OD-9057	1WL12 Valve	Valve failed to operate	Installed jump on valve relay to allow operation. D.C.R. submitted for permanent change.
OD-9099	No. 13 charging pump	cooling flow indication to pump not working	Freed up indicator
OD-9105	No. 15 S.W. Pump Strain.	Strainer Packing leak	Repacked Strainer
OD-9109	No. 11 S.W. Pump Screens	No auto or manual operation	Recalibrated PD-2713
OD-9114	No. 11 Fan Coil Unit	Low speed breaker won't discharge	Removed Breaker and made adjustments to control device and tripping springs.
OD-9124	Aux. Feed	No flow indication for flow to No. 14 Steam Generator	Repaired leaking instrument valve.
OD-9129	Aux. Feed Pumps	No. 11 & 12 Aux. Feed Pumps did not start when No. 11 & 12 S.G. F.P. Tripped.	Replaced faulty relay in No. 11 S.G.F.P. Controls.
OD-9147	No. 14 & 15 S.W. Pump strainers	Packing leaks	Repaired Packing leaks
OD-9199	13RC16 Valve	Packing Leak	Replaced packing and tightened nut.
OD-9215	12SW24 Valve	Valve operator not working	Installed new operator diaphragm.
OD-9219	No. 11 S.W. Pump Screen	No auto or manual operation	Repaired leaky tube fitting on pressure cont.

MONTHLY SAFETY RELATED WORK ACTIVITIES

June 1978

W. O. NUMBER	EQUIPMENT	FAILURE DESCRIPTION	CORRECTIVE ACTION
MD-2498	4KV. ACB's	Inspect for cracked welds	Inspected.
MD-2723	ICI 125V. Batt. Chgr.	Will not carry rated load	Replaced two Diodes, SCR's and cards
MD-2746	1CVZ Valve	Replace body and Bonnet studs	Replaced Studs
MD-2773	15 SW. Pump Strainer	Strainer Drive Shaft Bent	Straightened & Aliened shaft. Replaced Flanges
OD-007027	12SW122 Valve	12SW122 Did not operate during testing.	Reset Valve limit switch.
OD-008160	11MS 171 Valve	Valve leaking through	Replaced valve stem, seat and gaskets.
OD-008806	No. 11 Aux. Bldg. Supply Fan	Repair & change filter	Changed both sets of filters
OD-008941	12 Bat. Tank	Level Indication failed	Unplugged high side bubbler tube
OD-008953	11RTD bypass loop	Locate & repair valve leaks	Replaced valve gaskets
OD-008956	CAAl & 1CH74	Dampers & valve did not position during testing	Adjusted CAAl and 1CH74 limit switches.
OD-8888	11 RH 18 Valve	No open indication	Adjusted Limit Switch
OD-8949	1WG36 Valve	Valve does not control Pressure Properly.	Calibrated valve controller
OD-8977	Control Rm. Ventilation	Rolimatic Filter not moving in auto or manual	Replaced Drive Chain and tightened motor hold down bolts
OD-8986	No. 11 Saft. injection Pump	Pump Flow Indication not working.	Rebuilt flow rator
OD-8988	No. 11 Accumulator level	Redundant channels do not agree	Vented all accumulator reference bellows
OD-8995	No. 15 Switch gear ventila tion	Damper indication not working	Rebuild solenoid SV-1036 & adjusted limit switch

MONTHLY SAFETY RELATED WORK ACTIVITIES

June 1978

W. O. NUMBER	EQUIPMENT	FAILURE DESCRIPTION	CORRECTIVE ACTION
OP-0344	15 S.W. Pump	Adjust motor coupling	Adjusted coupling gap from .075" to .040"
PD-4778	No. 11 Accumulator level	level indication out of spec.	Recalibrated indicator & level alarm points
PD-4779	1CV2 Valve	Restroke valve 1CV2	Restroke valve, adjusted limit switches.
PD-4782	ROP Control	Replace Blown Fuse & S.C.R. in 11BD Cabinet	Replaced fuse and S.C.R.
PD-4787	No. 11 Δ T Channel	Channel out of spec. on functional test.	Recalibrated channel.
PD-4794	No. 12 R.H.P. Pump	Cooling flow indication to pump not working	Repaired flow rator stem checked setpoint & operation.
PD-4805	ROD Control	Urgent failure in 11AC & 12BD Cabinet	Replaced 3 Master cycle cards.
PD-4819	14MS18 Valve	Valve will not open.	Replaced ruptured operator diaphragm.
RE-142	Incore Flux Mapping sys.	Repair sticky drive Unit	Remove Paint from drive unit reel.

MONTHLY OPERATING SUMMARY

SALEM I

JUNE, 1978

- 6-10 The reactor was taken critical seven times during the day for operator training.
- 6-14 The reactor was taken critical at 1502. The unit was synchronized at 2324 and a slow power increase was started.
- 6-15 The unit tripped at 0224. The cause was 13 Steam Generator high high level initiated by clogging of a condensate pump suction strainers and the subsequent starting of another condensate pump. The reactor was taken critical at 2225.
- 6-16 The unit was synchronized at 0425 and power was slowly raised to about 18% for an eight hour turbine "soak" prior to a planned overspeed trip. At 1043 power was decreased and the unit taken off the line due to leaking condenser tubes and to perform the turbine overspeed test.
- 6-17 The unit was synchronized at 1640 and a slow power increase was started. The unit reached 20% at 2200.
- 6-18 The unit operated at 20% power all day.
- 6-19 During the day unit load increased from 20% to 55%.
- 6-20 Load was increased to 70% and the unit operated here the majority of the day.
- 6-21 During the day load increased to 85%.
- 6-22 Power was decreased to 70% to clean condensate pump suction strainers. The unit began a load increase reaching full load at 2000.
- 6-23 A reactor trip occurred at 1126 from 100% power due to 11 Steam Generator high-high level. The trip occurred following the performance of a regularly scheduled surveillance procedure for #11 Steam Generator level control.

- 6-24 The reactor was taken critical at 0435 and the unit was synchronized at 0850. During the day unit load increased to 70%.
- 6-25 The unit reached full load at 0855. A load decrease was started at 1725 in order to clean condensate pump suction strainers.
- 6-26 At 0248 a power increase was started from 70% power. The unit reached full load at 2000.
- 6-27 At 1500 a load decrease was started in order to clean condensate pump suction strainers. The unit reached 70% power at 1900. At 2200 a load increase was started.
- 6-28 At 0125 a load decrease was started from 90% in order to clean condensate pump suction strainers. At 0352 the unit reached 70%. At 0443 a load increase began until 0900 when the unit reached 93%. At 0948 a load decrease of approximately 30%/HR, was started due to problems with 12 Heater Drain Pump and clogging of condensate pump suction strainers. The unit reached 64% at 1054. At 2135 load was decreased to 50% in order to clean steam generator feed pump suction strainers.
- 6-29 At 0330 a load increase was started. The unit reached 100% load at 1000. Load was later decreased in order to clean condensate pump strainers.
- 6-30 At 0223 a load increase was started. The unit reached 100% load at 0030. At 1112 a load decrease to 90% was started to clean a heater drain pump suction strainer. At 1800 a load decrease to 70% was started to clean condensate pump suction strainers.

REFUELING INFORMATION

DOCKET NO.: 50-272

UNIT: Salem No. 1

DATE: 7-12-78

COMPLETED BY: L. K. Miller

TELEPHONE: 609-365-7000
Ext. 507

MONTH: June 1978

1. Refueling information has changed from last month:

YES _____ NO x

2. Scheduled date of next refueling: April 1, 1979

3. Scheduled date for restart following refueling: May 29, 1979

4. A. Will Technical Specification changes or other license
amendments be required? YES _____ NO _____

NOT DETERMINED TO-DATE June, 1978

B. Has the reload fuel design been reviewed by the Station Operating
Review Committee? YES _____ NO x

If no, when is it scheduled? January, 1979

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

February, 1979 if required

6. Important licensing considerations associated with refueling:

7. Number of Fuel Assemblies:

A. In-Core 193

B. In Spent Fuel Storage 0

8. Present licensed spent fuel storage capacity: 264

Future spent fuel storage capacity: 1,170

9. Date of last refueling that can be discharged to the spent fuel
pool assuming the present licensed capacity: April, 1982