



PSEG

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. 1
DOCKET NO. 50-272

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

The Energy People

9312200005 931130
PDR ADOCK 05000272
R PDR

IE24
11

ERAGE DAILY UNIT POWER LEVEL

Docket No.: 50-272
Unit Name: Salem #1
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	<u>0</u>
2	<u>0</u>
3	<u>0</u>
4	<u>0</u>
5	<u>0</u>
6	<u>0</u>
7	<u>0</u>
8	<u>0</u>
9	<u>0</u>
10	<u>0</u>
11	<u>0</u>
12	<u>0</u>
13	<u>0</u>
14	<u>0</u>
15	<u>0</u>
16	<u>0</u>

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

OPERATING DATA REPORT

Completed by: Mark Shedlock

Docket No: 50-272
 Date: 12/10/93
 Telephone: 339-2122

Operating Status

1. Unit Name	<u>Salem No. 1</u>	<u>Notes</u>
2. Reporting Period	<u>November 1993</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 NONE

	<u>This Month</u>	<u>Year to Date</u>	<u>Cumulative</u>
12. Hours in Reporting Period	<u>720</u>	<u>8016</u>	<u>143953</u>
12. No. of Hrs. Rx. was Critical	<u>0</u>	<u>5949.99</u>	<u>95131.97</u>
13. Reactor Reserve Shutdown Hrs.	<u>0</u>	<u>0</u>	<u>0</u>
14. Hours Generator On-Line	<u>0</u>	<u>5747.43</u>	<u>91887.84</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>18573705.6</u>	<u>290772314</u>
17. Gross Elec. Energy Generated (MWH)	<u>0</u>	<u>6162980</u>	<u>96535970</u>
18. Net Elec. Energy Gen. (MWH)	<u>-1053</u>	<u>5869548</u>	<u>91941207</u>
19. Unit Service Factor	<u>0</u>	<u>71.7</u>	<u>63.8</u>
20. Unit Availability Factor	<u>0</u>	<u>71.7</u>	<u>63.8</u>
21. Unit Capacity Factor (using MDC Net)	<u>0</u>	<u>66.2</u>	<u>57.7</u>
22. Unit Capacity Factor (using DER Net)	<u>0</u>	<u>65.7</u>	<u>57.3</u>
23. Unit Forced Outage Rate	<u>0</u>	<u>12.6</u>	<u>21</u>

24. Shutdowns scheduled over next 6 months (type, date and duration of each)
The Unit is presently in a refueling outage scheduled to last
72 days.

25. If shutdown at end of Report Period, Estimated Date of Startup:
December 16, 1993.

UNIT SHUTDOWN AND POWER REDUCTIONS
REPORT MONTH NOVEMBER 1993

DOCKET NO.: 50-272
UNIT NAME: Salem #1
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
134	10-02-93	S	1440.88	C	1	-----	RC	FUELXX	NUCLEAR NORMAL REFUELING

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-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

SAFETY RELATED MAINTENANCE
MONTH: - NOVEMBER 1993

DOCKET NO: 50-272
UNIT NAME: SALEM 1
DATE: DECEMBER 10, 1993
COMPLETED BY: R. HELLER
TELEPHONE: (609)339-5162

WO NO	UNIT	EQUIPMENT IDENTIFICATION
920524002	1	12 SERVICE WATER PUMP FAILURE DESCRIPTION: PULL AND REPLACE WITH SPARE REBUILT PUMP
920909153	1	VALVE 11RH8 FAILURE DESCRIPTION: BONNET LEAK - REPLACE BONNET GASKET
920921177	1	VALVE 12CS36 FAILURE DESCRIPTION: BONNET LEAKS - OPEN, INSPECT & REPAIR
921030169	1	RADIATION MONITOR 1R18 FAILURE DESCRIPTION: 1R18 READS HIGH - REPLACE
921117162	1	VALVE 11MS44 FAILURE DESCRIPTION: LEAK AT DRAIN FLANGE - REPLACE GASKET
921125078	1	VALVE 11SW36 FAILURE DESCRIPTION: 11SW36 CHECK VALVE INSTALLED IN VERTICAL POSITION - CORRECT
921208154	1	1A DIESEL GENERATOR FAILURE DESCRIPTION: 1A DIESEL GENERATOR - SLOW ENGINE RESPONSE - TROUBLESHOOT
930708104	1	VALVE 11SJ134 FAILURE DESCRIPTION: OPEN, INSPECT & REPAIR AS REQUIRED
931013155	1	11 AUXILIARY BUILDING SUPPLY FAN FAILURE DESCRIPTION: REPLACE SUPPLY FAN BREAKER WITH A SPARE

SAFETY RELATED MAINTENANCE
MONTH: - NOVEMBER 1993

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TELEPHONE: (609) 339-5162

(cont'd)

WO NO	UNIT	EQUIPMENT IDENTIFICATION
931111135	1	VALVE 1SJ53 FAILURE DESCRIPTION: CONTROL ROOM HAS NO INDICATION FOR 1SJ53 - INVESTIGATE
931113057	1	12 FUEL HANDLING BUILDING EXHAUST FAN FAILURE DESCRIPTION: FAN BREAKER TRIPPED AND FLAMES SHOT FROM MOTOR - REPLACE MOTOR
931114062	1	NUCLEAR INSTRUMENT N31 FAILURE DESCRIPTION: N31 IS CONTINUOUSLY SPIKING - ALL WELDING IN THE AUX. BUILDING AND THE CONTAINMENT WERE STOPPED BUT THIS DID NOT STOP THE SPIKING - INVESTIGATE
931127101	1	1C 460VAC CONTROL POWER BREAKER FAILURE DESCRIPTION: CONTROL POWER BREAKER/BOLTS LOOSE - TIGHTEN
931130142	1	VALVE 1PR1 FAILURE DESCRIPTION: 1PR1 STROKED CLOSE AND FAILED TO REOPEN - INVESTIGATE AND REPAIR AS REQUIRED

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 (DCPs)

1EC-3297 Pkg 1

"Stabilize and then Plug S/G 13 Tube R14C39" - The purpose of this design change is to install a stabilizer in the hot leg side of Steam Generator (S/G) 13 Tube R14C39 (and plug both ends of the tube). The stabilizer installation will be done in accordance with the new appendix VI to Westinghouse Procedure MRS.2.3.2PSEG-13 which will be incorporated into the Salem ISI Procedure VSC.SS-IS.RCE-0036(Q). Stabilization will preclude the possibility of the tube becoming severed and interacting with an adjacent active tube, which could result in a primary to secondary leakage event. The stabilizer is sized such that the difference between the diameter of the stabilizer and the inside diameter of the tube is less than the distance between adjacent tubes. There is no reduction in the margin of safety as defined in the basis for any Technical Specification. The pressure boundary integrity and function of the steam generator are not adversely altered. Steam generator tube plugging up to a level consistent with the current analyzed level (10%) will not affect current LOCA analyses. (SORC 93-098)

1EC-3296 Pg 1

"Turbine Bypass Sparger Repair and Improvement" - The purpose of this design change is to repair damaged turbine bypass spargers by replacing damaged baffle plates and adding a sparger pipe cap. Piping external to the condenser will be modified by the addition of a sediment leg to the existing drain connection upstream of the turbine dump valves prior to entering the steam trap assembly piping. The Technical Specifications do not reference the turbine bypass system. There is no reduction in the margin of safety as defined in the basis for any Technical Specification. (SORC 93-099)

(cont'd)

ITEM

SUMMARY

1EA-1050 Pkg 1

"Addition of Sample Lines to DM Plant P&ID" - This DCP covers a Workbook No. 5 to document an as-built condition on P&ID No. 205213 (UFSAR Figure No. 9.2-11) involving a total of seventeen (17) existing sample lines from various points in the Makeup Demineralization System to the existing Sample Sink on Elevation 100' in the Unit No. 1 Turbine Building. Several previously unnumbered sample line isolation valves were found during the walkdowns and are also being added to the P&ID. MMIS and TRIS data sheets have been prepared for these valves. P&ID No. 205223 (Building and Equipment Drains - Conventional) will also be revised to provide a better representation of the drain from the Sample Sink to the No. 15 Sump. No physical work or process changes are involved. This is an as-built change only and will close out DEF DES-91-00470. This DCP does not impact either the Fire Protection Program or the Radioactive Waste Treatment Systems. The Demineralized Water Makeup system is non-safety related. No physical changes are being made to the system. The changes to the P&ID do not reduce the margin of safety as defined in the basis for any Technical Specification. (SORC 93-100)

1EC-3245 Pkg 1

"Replace Garret/SCI Emergency Lighting Inverters" Rev. 1 - This project replaces the three Garret/SCI Emergency Lighting Inverters with higher rated and more efficient Cyberex Inverters. Existing Garret/SCI Emergency Lighting Inverters are experiencing end of life and age related fatigue failure. These inverters are also experiencing overloading conditions. The inverters efficiencies are very low. Replacement parts are expensive and difficult to obtain. The Technical Specifications do not specifically discuss the emergency lighting system. There is no reduction in the margin of safety as defined in the basis for any Technical Specification. (SORC 93-100)

1EC-3243 Pkg 1

"SGFP/Condensate Pump/Feedwater Heaters: System Design Press Modifications" Rev. 2 - This DCP will provide a high pressure trip setpoint for the

10CFR50.59 EVALUATIONS
MONTH: - NOVEMBER 1993

DOCKET NO: 50-272
UNIT NAME: SALEM 1
DATE: DECEMBER 10, 1993
COMPLETED BY: R. HELLER
TELEPHONE: (609)339-5162

(cont'd)

ITEM	SUMMARY
	<p>11 and 12 SGFP turbines at 1620 psig. Two new transmitters will be installed on the discharge piping of each feedwater pump and by modifying the existing trip circuitry, the feed pump will trip (2/2 logic) on a high feed pump discharge pressure. The system pressure will be monitored by the P-250 computer. High & Low alarm limits will be installed to notify the operator when conditions have approached a pump trip pressure or a transmitter failure, respectively. Setpoint corrections of 5000 gpm and 5500 gpm will be made to the 11, 12 and 13 condensate pump recirculation flow control loops to ensure a maximum sustained pressure of approximately 625 psig during a cold startup. during installation of cable thru penetration seals in the east wall of the Auxiliary Building, flood protection will be compromised. During this installation, Operations can contact the National Weather Service of Wilmington Airport in Delaware via telephone, as necessary, to obtain information on meteorological conditions which may cause flooding. At that time, work will be stopped and a temporary barrier installed. Therefore, this proposal does not reduce the margin of safety as defined in the basis for any Technical Specification. (SORC 93-103)</p>

B. Procedures and Revisions

NC.NA-AP.ZZ-0052(Q) "Water Chemistry Control Program" Rev. 1 - This is a full revision to the procedure. Changes are identified with revision bars. The following changes have been made: 1.) Statements have been added to Attach. 3 which permit judgement on reducing station power and temperature based on the specific corrosion concern and the most rapid means to effect cleanup; 2.) Statement recommends confirmatory sampling/analysis prior to reporting exceeding of an Action Level (step 5.4.2) and increased chemistry sampling and analysis

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ITEM	SUMMARY
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frequency for short term trending during transients (step 5.6.1); 3.) Attach 3, PWR Secondary Chemistry Corrective Actions: The Action Level 2 power reduction time requirement has been increased from 4 to 8 hours after initiation of Action Level 2. This is IAW Revision 3 of the PWR Secondary Water Chemistry Guidelines, and 4.) Other minor editorial changes. Vendor and industry primary and secondary chemistry guidelines protect the RCS components and steam generators by assuring good water chemistry. This change does not reduce the margin of safety as defined in the basis for any Technical Specification. (SORC 93-098)

C. Safety Evaluations (S/E)

NFS 93-630

"Salem Unit 1 Cycle 12 Core Loading Pattern and Safety Evaluation for Refueling and Operation in Modes 5 - 1" - During the Salem Unit 1 Cycle 11/12 refueling, 63 fuel assemblies will be replaced with 2 once burned Region 10, 2 twice burned Region 10 fuel assemblies, 7 twice burned Region 9 fuel assemblies, 32 fresh Region 14A fuel assemblies, and 20 fresh Region 14B fuel assemblies. Fuel assembly K24 has been reconstituted with a stainless steel filler rod in pin location K-10. Fuel assembly K41R has also been reconstituted with one stainless steel filler rod in location N-16. Furthermore, fuel assembly K41R has been recaged with a VANTAGE 5H (V5H) skeleton. In addition to the reconstituted assemblies, the Cycle 12 loading pattern also contains 768 Zircaloy-4 rodlets arranged in clusters. These Zircaloy damper rodlets are inserted in burnt V5H assemblies located adjacent to the baffle in order to reduce the possibility of flow induced vibration causing fuel rod fretting. Cycle 12 also includes the use of assembly K28 which requires special handling due to a folded vane segment in one of its grids. Also new for Salem Unit 1 cycle 12 is a revised

(cont'd)

ITEM	SUMMARY
D. SAR Change	<p>V5H assembly grid axial orientation on feed fuel (Region 14). For Region 14 V5H assemblies, alternate grids are rotated 90 degrees clockwise in order to minimize the susceptibility of flow induced fuel assembly vibration. There is no physical change to the grids or their axial positions. There is no reduction in the margin of safety as defined in the basis for any Technical Specification. The Cycle 12 reload core design meets all applicable design criteria and ensures that all pertinent licensing basis criteria are met. It has been determined that the Salem Unit 1 V5H reload design and safety analysis limits remain applicable, and that these limits are supported by the applicable Salem Unit 1 Technical Specifications for Cycle 12. (SORC 93-100)</p>
SCN 93-53	<p>"SAR Change Notice" - The proposed change associated with this Safety Evaluation involves an update to the Salem UFSAR section 7.5.3.2, Regulatory Guide 1.97 Compliance Levels, to revise the following statement: "Regulatory Guide 1.97 variables will be displayed on the Safety Parameter Display System (SPDS)" to read as follows: "Most of the Regulatory Guide 1.97 variables are displayed on the Safety Parameter Display System (SPDS)". There is no reduction in the margin of safety as defined in the basis for any Technical Specification. (SORC 93-103)</p>
SCN 93-55	<p>"SAR Change Notice" - The proposed change associated with this Safety Evaluation involves an update to the Salem UFSAR, Table 7.2-2 to correct the function description of the permissive P-7 from "Blocks Reactor Trip on Pressurizer High Pressure" to "Blocks Reactor trip on Pressurizer High Level". There is no reduction in the margin of safety as defined in the basis for any Technical Specification. (SORC 93-103)</p>

SALEM GENERATING STATION
MONTHLY OPERATING SUMMARY - UNIT 1
NOVEMBER 1993

SALEM UNIT NO. 1

The Unit remained shutdown throughout the entire period for the eleventh refueling outage.

REFUELING INFORMATION
MONTH: - NOVEMBER 1993

DOCKET NO: 50-272
UNIT NAME: SALEM 1
DATE: DECEMBER 10, 1993
COMPLETED BY: R. HELLER
TELEPHONE: (609) 339-5162

MONTH NOVEMBER 1993

1. Refueling information has changed from last month:
YES X NO _____
2. Scheduled date for next refueling: OCTOBER 2, 1993
3. Scheduled date for restart following refueling: DECEMBER 16, 1993
4. a) Will Technical Specification changes or other license amendments be required?:
YES _____ NO X
NOT DETERMINED TO DATE _____
b) Has the reload fuel design been reviewed by the Station Operating Review Committee?:
YES X NO _____
If no, when is it scheduled?: _____
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 732
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: September 2001