



**PSEG**

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

**Nuclear Business Unit**

**APR 14 1999**

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

Attn: Document Control Desk

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

Gentlemen:

In compliance with Section 6.9.1.6, Reporting Requirements for the Salem Technical Specifications, the original Monthly Operating report for March 1999 is attached.

Sincerely,

D. F. Garchow  
General Manager -  
Salem Operations

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/rbk  
Enclosures

C Mr. H. J. Miller  
Regional Administrator USNRC, Region 1  
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PDR ADOCK 05000272  
R PDR

The power is in your hands.

DOCKET NO.: 50-272  
 UNIT: Salem 1  
 DATE: 4/15/99  
 COMPLETED BY: R. Knieriem  
 TELEPHONE: (609) 339-1782

Reporting Period: March 1999

**OPERATING DATA REPORT**

Design Electrical Rating (MWe-Net)  
 Maximum Dependable Capacity (MWe-Net)

No. of hours reactor was critical  
 No. of hours generator was on line (service hours)

Unit reserve shutdown hours  
 Net Electrical Energy (MWH)

| 1115   |              |            |
|--------|--------------|------------|
| 1106   |              |            |
| Month  | Year-to-date | Cumulative |
| 689    | 2083         | 106463     |
| 670    | 2064         | 102452     |
| 0      | 0            | 0          |
| 678810 | 2196592      | 102333135  |

**UNIT SHUTDOWNS**

| NO. | DATE                   | TYPE<br>F=FORCED<br>S=SCHEDULED | DURATION<br>(HOURS) | REASON<br>(1) | METHOD OF<br>SHUTTING<br>DOWN THE<br>REACTOR (2) | CORRECTIVE<br>ACTION/COMMENT                              |
|-----|------------------------|---------------------------------|---------------------|---------------|--|---|
| 1   | 3/1//99<br>-<br>3/4/99 | F                               | 73.6                | B             | 3  | Turbine Trip: Lube Oil<br>Incorrect valve<br>manipulation |

(1) 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

(2) Method

- 1 - Manual
- 2 - Manual Trip/Scram
- 3 - Automatic Trip/Scram
- 4 - Continuation
- 5 - Other (Explain)

Summary:

Salem Unit 1 began the month of March 1999, shutdown. The unit returned to full power on March 7, and continued full power operation until March 18, when power was reduced to 80% to perform maintenance on the 13B Circulator. Full power operation was restored on March 25, and continued through the end of the month.

DOCKET NO.: 50-272  
UNIT: Salem 1  
DATE: 4/15/99  
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TELEPHONE: (609) 339-1782

**SUMMARY OF CHANGES, TESTS, AND EXPERIMENTS**  
**FOR THE SALEM UNIT 1 GENERATING STATION**

**MONTH: March 1999**

The following items completed during **March 1999** have been evaluated to determine:

1. If the probability of occurrence or the consequences of an accident or malfunction of equipment important to safety previously evaluated in the safety analysis report may be increased; or
2. If a possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report may be created; or
3. If the margin of safety as defined in the basis for any technical specification is reduced.

The 10CFR50.59 Safety Evaluations showed that these items did not create a new safety hazard to the plant; nor did they affect the safe shutdown of the reactor. These items did not change the plant effluent releases and did not alter the existing environmental impact. The 10CFR50.59 Safety Evaluations determined that no unreviewed safety or environmental questions are involved.

**Design Changes - Summary of Safety Evaluations**

**Design Change Package (DCP) 1EE-0390, Service Water Traveling Screen Replacements**

This modification improved the reliability of the Service Water Traveling Screens by replacing the original copper-nickel, square-opening, basket material with 316 stainless steel, rectangular-opening, smooth-tex mesh.

Review of this modification under 10CFR50.59 was required because the improvements to the Service Water Traveling Screens constituted a change to the facility as described in the Safety Analysis Report (SAR). This modification did not constitute an Unreviewed Safety Question (USQ) because the modification did not increase the consequence or probability of an accident previously analyzed. The modification did not increase the probability or consequences of a malfunction of equipment important to safety. This modification would not create any new accidents or malfunctions since no new failure modes were introduced and failure modes considered applicable to this modification are within the existing design basis. In addition the Technical

Specification Bases were not affected and no changes to the Technical Specifications were required.

**Minor Modification S97-113, Removal Of The Positioner From Valve 13SW92, 13 Auxiliary Building Chiller**

This modification removed the positioner from the 13SW92 valve, removing its flow modulating capability. This valve is not used for flow modulation and is either fully open or fully closed. Valve operation to either the fully open or fully closed position will be accomplished pneumatically via a solenoid valve. The modification was implemented to improve the reliability of the respective Auxiliary Building Chiller by reducing the number of parts susceptible to failure or calibration drift.

Review of this modification under 10CFR50.59 was required because removal of the 13SW92 positioner constituted a change to the facility as described in the Safety Analysis Report (SAR). The review determined that because the change did not alter the functionality of the 13SW92 valve, the change did not increase the probability or consequences of an accident previously evaluated in the SAR, did not increase the probability or consequences of a malfunction of equipment important to safety, and did not create the possibility of an accident or malfunction of a different type from any previously evaluated. Because the change did not affect the existing analysis that forms the basis for the Technical Specifications, and did not violate Technical Specification and Updated Final Safety Analysis Report (UFSAR) requirements, the change did not reduce the margin of safety as defined in the basis for the Technical Specifications.

**Minor Modification S98-009, Salem Unit 1 Auxiliary Feedwater Storage Tank Nitrogen Blanket – Permanent Vent Orifice**

This modification provided a nitrogen purge/blanket system for the Salem Unit 1 Auxiliary Feedwater Storage Tank (AFST) in order to control the concentration of dissolved oxygen in the feedwater and therefore to reduce corrosion.

Review of this modification under 10CFR50.59 was required because installation of the orifice in the AFST vent constituted a change to the facility as described in the Safety Analysis Report (SAR). The review determined that the change did not increase the probability or consequences of an accident previously evaluated in the SAR, did not increase the probability or consequences of a malfunction of equipment important to safety, and did not create the possibility of an accident or malfunction of a different type from any previously evaluated. Because the change did not affect the existing analysis that forms the basis for the Technical Specifications, and did not violate Technical Specification and Updated Final Safety Analysis Report (UFSAR) requirements, the change did not reduce the margin of safety as defined in the basis for the Technical Specifications.

## **Temporary Modifications - Summary of Safety Evaluations**

There were no changes in this category implemented during March 1999.

## **Procedures - Summary of Safety Evaluations**

There were no changes in this category implemented during March 1999.

## **UFSAR Change Notices - Summary of Safety Evaluations**

### **UFSAR Change Notice S97-049, Steam Dump Radiological Consequences**

This UFSAR change incorporated the results of the reference design calculation, which updated the analysis discussed in the UFSAR section concerning the radiological consequences of a postulated steam release by the Main Steam Safety valves rather than by the Power-operated Relief valves.

Review of this change under 10CFR50.59 was required because the updated the analysis concerning the radiological consequences of a postulated steam release by the Main Steam Safety valves constituted a change to the facility as described in the Safety Analysis Report (SAR). The review determined that the change did not increase the probability or consequences of an accident previously evaluated in the SAR, did not increase the probability or consequences of a malfunction of equipment important to safety, and did not create the possibility of an accident or malfunction of a different type from any previously evaluated. Because the change did not affect the existing analysis that forms the basis for the Technical Specifications, and did not violate Technical Specification and Updated Final Safety Analysis Report (UFSAR) requirements, the change did not reduce the margin of safety as defined in the basis for the Technical Specifications.

### **UFSAR Change Notice S98-031, Addition Of Hand-Held Portable Lighting Units As Emergency Lighting For The Appendix R Safe Shutdown Program**

This UFSAR change added hand-held portable lights to function with the existing fixed lighting units as emergency lighting for the Appendix R Safe Shutdown program.

Review of this change under 10CFR50.59 was required because the installation of the portable hand-held lighting units constituted a change to the facility as described in the Safety Analysis Report (SAR). The review determined that the change did not increase the probability or consequences of an accident

previously evaluated in the SAR, did not increase the probability or consequences of a malfunction of equipment important to safety, and did not create the possibility of an accident or malfunction of a different type from any previously evaluated. Because the change did not affect the existing analysis that forms the basis for the Technical Specifications, and did not violate Technical Specification and Updated Final Safety Analysis Report (UFSAR) requirements, the change did not reduce the margin of safety as defined in the basis for the Technical Specifications.

#### **UFSAR Change Notice S99-004, Chemistry Department Reorganization**

This UFSAR change addressed the functional reorganization of the Salem and Hope Creek Chemistry Departments. This reorganization combined the Salem and Hope Creek Chemistry Departments into a single Nuclear Business Unit Chemistry Department under a single Manager – Chemistry.

Review of this change under 10CFR50.59 was required because the changes to the Salem and Hope Creek Chemistry department functional organization constituted a change to the facility as described in the Safety Analysis Report (SAR) and a change to procedures described in the SAR. The review determined that the change did not increase the probability or consequences of an accident previously evaluated in the SAR, did not increase the probability or consequences of a malfunction of equipment important to safety, and did not create the possibility of an accident or malfunction of a different type from any previously evaluated. Because the change did not affect the existing analysis that forms the basis for the Technical Specifications, and did not violate Technical Specification and Updated Final Safety Analysis Report (UFSAR) requirements, the change did not reduce the margin of safety as defined in the basis for the Technical Specifications.

#### **UFSAR Change Notice S99-008, On-line Main Steam Safety Valve Setpoint Verification Testing**

This UFSAR change addressed on-line testing of Main Steam Line Code Safety Valves (MSSV). The on-line testing procedure involves the installation of the Crosby Set Pressure Verification Device/Portable Computer Controller and testing of the MSSV while in Modes 1 - 3.

Review of this change under 10CFR50.59 was required because on-line testing of the MSSV constituted a change to the facility as described in the Safety Analysis Report (SAR), changed procedures described in the SAR, and involved a test not described in the SAR. The review determined that the change did not increase the probability or consequences of an accident previously evaluated in the SAR, did not increase the probability or consequences of a malfunction of equipment important to safety, and did not create the possibility of an accident or

malfunction of a different type from any previously evaluated. Because the change did not affect the existing analysis that forms the basis for the Technical Specifications, and did not violate Technical Specification and Updated Final Safety Analysis Report (UFSAR) requirements, the change did not reduce the margin of safety as defined in the basis for the Technical Specifications.

#### **UFSAR Change Notice S99-010, Fuel Handling Area Ventilation System – Removal Of The Requirement To Meet Single Failure Criteria**

This UFSAR change addressed the removal of the requirement to meet single failure criteria for the Fuel Handling Area Ventilation System (FHAVS) since the FHAVS has only one complete Engineered Safety Feature (ESF) Atmosphere Cleanup System air filtration train to filter the effluent from the building. The inability of the Salem FHAVS to meet single failure criteria was reviewed by the Office Of Nuclear Reactor Regulation (NRR) during its resolution of Unresolved Item 50-311/96-080-01; "Single Failure Licensing Basis Of Fuel Handling Ventilation System". In its disposition and closure of Unresolved Item 50-311/96-080-01, the Commission did not conclude that the FHAVS was required to meet single failure criteria.

Review of this change under 10CFR50.59 was required because the removal of the requirement to meet single failure criteria for the FHAVS constituted a change to the facility as described in the Safety Analysis Report (SAR). The review determined that the change did not increase the probability or consequences of an accident previously evaluated in the SAR, did not increase the probability or consequences of a malfunction of equipment important to safety, and did not create the possibility of an accident or malfunction of a different type from any previously evaluated. Because the change did not affect the existing analysis that forms the basis for the Technical Specifications, and did not violate Technical Specification and Updated Final Safety Analysis Report (UFSAR) requirements, the change did not reduce the margin of safety as defined in the basis for the Technical Specifications.

#### **UFSAR Change Notice S99-014, Outage Equipment Hatch (OEH)**

This UFSAR change addressed the use of an OEH as an alternate method to provide containment closure for the Salem Equipment Hatch in lieu of closing the Equipment Hatch Inner Door. The use of an alternate method to provide containment closure was reviewed by the Commission and approved in Salem Amendment Nos. 217 (Unit 1) and 199 (Unit 2) to Technical Specification 3/4.9.4, Refueling Operations – Containment Building Penetrations.

Review of this change under 10CFR50.59 was required because the use of the OEH constituted a change to the facility as described in the Safety Analysis Report (SAR). The review determined that the change did not increase the

probability or consequences of an accident previously evaluated in the SAR, did not increase the probability or consequences of a malfunction of equipment important to safety, and did not create the possibility of an accident or malfunction of a different type from any previously evaluated. Because the change did not affect the existing analysis that forms the basis for the Technical Specifications, and did not violate Technical Specification and Updated Final Safety Analysis Report (UFSAR) requirements, the change did not reduce the margin of safety as defined in the basis for the Technical Specifications.

**UFSAR Change Notice S99-019, H<sub>2</sub>O<sub>2</sub> Addition Plant Shutdown With A Bubble In The Pressurizer, H<sub>2</sub>O<sub>2</sub> Addition To The Refueling Cavity, And Reactor Coolant System H<sub>2</sub> Specification Change**

This UFSAR change considered the addition of H<sub>2</sub>O<sub>2</sub> to the Reactor Coolant System during plant shutdown with a steam bubble in the pressurizer. The change also addressed the addition of H<sub>2</sub>O<sub>2</sub> to the Refueling Cavity. Finally, this change addressed a change from 35 cc/kg to 50 cc/kg to the upper specification for Reactor Coolant System H<sub>2</sub> concentration.

Review of this change under 10CFR50.59 was required because the changes to the Reactor Coolant System chemistry control program constituted a change to the facility as described in the Safety Analysis Report (SAR) and changes to procedures described in the SAR. The review determined that the change did not increase the probability or consequences of an accident previously evaluated in the SAR, did not increase the probability or consequences of a malfunction of equipment important to safety, and did not create the possibility of an accident or malfunction of a different type from any previously evaluated. Because the change did not affect the existing analysis that forms the basis for the Technical Specifications, and did not violate Technical Specification and Updated Final Safety Analysis Report (UFSAR) requirements, the change did not reduce the margin of safety as defined in the basis for the Technical Specifications.

**Deficiency Reports - Summary of Safety Evaluations**

There were no changes in this category implemented during March 1999.

**Other - Summary of Safety Evaluations**

There were no changes in this category implemented during March 1999.