

U.S. NUCLEAR REGULATORY COMMISSION
REGION I

Report Nos. 50-272/85-08
50-311/85-09

Docket Nos. 50-272
50-311

License Nos. DPR-70
DPR-75 Priority -- Category C

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

Facility Name: Salem Units 1 and 2

Inspection At: Hancocks Bridge, New Jersey

Inspection Conducted: April 1 - 4, 1985

Inspectors: A. G. Krasopoulos
A. G. Krasopoulos, Reactor Engineer

5-9-85
date

Approved by: C. J. Anderson
C. J. Anderson, Chief
Plant Systems Section, DRS

5/29/85
date

Inspection Summary:

Inspection on April 1 - 4, 1985, (Combined Report Nos. 50-272/85-08 and 50-311/85-09)

Areas Inspected: Routine, announced inspection to follow-up unresolved items relating to the Fire Protection/Prevention Program and to review the corrective steps taken in response to violations in this area.

The inspection involved 31 inspector-hours on site and 10 inspector hours in office by one region based inspector.

Results: No violations or deviations were identified.

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DETAILS

1.0 Persons Contacted

1.1 Public Service Electric and Gas (PSE&G)

- *M. Banerjee, Lead Engineer, Nuclear Licensing
- P. Benini, Principal Engineer, Quality Assurance
- R. Braddick, Sr. Fire Protection Planning Engineer
- *P. Eldreth, Nuclear Fire and Safety Administrator
- *J. Leech, Principal Engineer - Nuclear Licensing
- *D. Perkins, Quality Assurance Engineer
- W. Reiber, Senior Engineer
- M. Rubano, NCS Field Engineer
- K. Sheeron, Nuclear Systems Engineering - Fire Protection
- *B. Smith, Associate Engineer, Technical Staff
- *T. Storey, Sr. Fire Protection Supervisor, PSE&G
- *J. Zupko, Jr., General Manager Salem Operations

1.2 Nuclear Regulatory Commission (NRC)

- *P. Phelan, Reactor Engineer
- *R. Summers, Resident Inspector

*Denotes those present at the exit interview.

2.0 Followup of Previous Inspection Findings

(Closed) Violation (82-27-01) Failure to Test Fire Detectors Per T.S. 3.3.3.6

This violation was identified because the licensee inadvertently omitted surveillance requirements of the fire detection instrumentation for Unit 1 and 2 in the Iodine Removal Systems and Pressure Relief Systems. The corrective action taken by the licensee included the posting of a fire watch as an interim compensatory measure and the establishment of new procedures that add the surveillance and testing requirements for the thermal detectors in the above mentioned systems.

The inspector reviewed procedure titled, "Functional and Circuitry Test of Iodine Removal and Containment Pressure Relief Charcoal Filter Thermistor Heat Detectors" No. SP (0) 4.3.3.6.2-1 Unit 1 and 2, Revision 0 and found this procedure adequate. In addition the inspector reviewed the licensee records to determine whether the required surveillances were performed within the required time intervals. No unacceptable conditions were identified. This item is resolved.

(Closed) Unresolved Item (81-14-04) Review Evaluation Concerning Period Tests of Fire Protection Dampers

The licensee committed to review the need to perform functional tests on the fire dampers. As a result of this review the licensee developed procedures 1 IC-14.3.015 and 2 IC-14.3.015, Revision 0, Fire Damper Functional Test to assure fire damper operability. These procedures establish the requirement of functional testing of all fire dampers every 18 months. The inspector reviewed these procedures and determined that the procedures are adequate and this item is resolved.

(Closed) Unresolved Items (50-272/81-29-05 and 50-272/83-37-16) Non-Functional Fire Doors

The licensee's difficulty to maintain fire barrier integrity dates back to 1981 when the problem was first identified, during a routine surveillance of the fire doors. The licensee has acknowledged the fire door problem and has established a program to upgrade and maintain all fire doors to functional status. In the interim the licensee has established compensatory measures such as fire watches to assure compliance with the Technical Specifications (T.S.). A T.S. requirement to submit a Special Report to the Commission when fire barriers are found to be non-functional was not satisfied and the licensee was found to be in violation during an inspection of the facility on December 15-21, 1984. (See NRC combined Report Nos. 50-272/84-46 and 50-311/84-46).

The licensee's program to upgrade the fire doors included an audit/inspection by Underwriters Laboratories (UL) to determine the extent of the degradation. The inspector reviewed the audit submitted by UL on the condition of the fire doors. Of the approximately 133 fire doors about 126 doors were found to be in various stages of degradation. The licensee subsequently determined that about (50) fifty fire doors may be repairable by resources available on site and the remainder will need to be replaced. The inspector reviewed the actions taken by the licensee in this area. These actions included the issuance of Specification S.C-M-200-MDS-038, "Supply of Fire Doors, Frames, Applicable Hardware and on Site Installation Consultant" the issuance of Purchase Order No. 937427 for the purchasing of the fire doors, and the issuance of work orders to fix doors that are repairable.

The fire doors ordered are scheduled to begin arriving at the facility by Mid April, 1985. With regard to door repairs the licensee has completed work on about 46 doors, (approximately 90% of the repair work). The inspector observed work in progress and found it acceptable.

These items (50-272/81-29-05 and 50-272/83-37-16) are resolved. The resolution is based on the actions taken by the licensee and described above. A future inspection shall verify the corrective action taken by the licensee in response to a violation concerning non functional fire barriers. The adequacy of all fire doors will be assessed during that inspection.

(Closed) Unresolved Items (50-272/84-46-01 and 50-311/84-46-01)
Inadequate Fire Brigade Member Drill Participations

This finding determined that although the licensee complied with FSAR and license commitments the fire brigade members did not adequately practice as a team. This problem had been recognized by the licensee and was caused by the inability of the brigade members to participate in the required number of drills, because of other job duties, rotating shifts, vacations, etc. The licensee addressed this problem by establishing a program to hire and train fire fighters whose site functions would be fire prevention, fire fighting and surveillance and maintenance of fire protection equipment. Presently, the licensee has hired (19) nineteen fire fighters all of whom have prior fire department experience and (6) six supervisors that are groomed to take over the brigade leaders function. These fire fighters are gradually phased in to take over the fire brigade function. The inspector verified thru the licensee's computerized training tracking system and fire drill attendance sheets that the recent fire brigade members are practicing as a team and meet all other training requirements such as participation in meetings, physical exam, "hands on" practice, etc.

This item is resolved.

(Closed) Unresolved Item (50-272/83-37-17) Impact of Recent Testing on 3M
Fire Barrier Materials Used in the Plant

This finding indicated a concern that the 3M material used as a cable tray and HVAC duct wrap may not fully satisfy the 1 hour fire rating criteria. The inspector reviewed documentation presented by the licensee in particular NRC letter dated March 18, 1981 from Mr. R. L. Tedesco, Assistant Director for Licensing to Mr. R. L. Mittl, General Manager, Licensing, PSE&G. Subject: Salem Cable Tray Fire Barrier Evaluation. That letter states that NRC has reviewed the fire test report for the material used as fire barrier and concludes by stating that the fire wrap used is acceptable.

This item is resolved.

(Closed) Unresolved Item (50-272/83-37-13) Alternate Shutdown Procedures
to be modified to ensure continued operation of support systems

The inspector verified that the licensee has revised the Salem Generating Station, Fire Related Alternate Shutdown Equipment Operating Instructions, Unit 1, Diesel Generator System and Chemical and Volume Control System, to include in the operating instructions a requirement that ensures the availability of service water to the diesel generators and component cooling water to the charging pumps. The above is accomplished by verification of each system's valve line up.

The actions taken by the licensee are acceptable and this item is resolved.

(Closed) Unresolved Item (83-37-12) Potential Security Door Access Problem

The licensee has issued key rings to plant operators that contain a security key to open card reader doors. A Procedure AD-37 Key Control Revision 1 has been established to ensure the security of locked equipment and also assure, that operators are able to open security doors if the door card reader system fails in the event of fire. The keys are inventoried by procedure P1/S-CM-2.

The actions taken by the licensee are adequate and this item is resolved.

(Closed) Unresolved Item (50-272/83-37-15) Surveillance for the Repair Materials

The inspector verified that the licensee maintains an inventory of tools necessary for alternate shutdown operations such as fuse pullers, electrical jumpers, etc. The licensee has also established a procedure to verify this inventory periodically (every 3 months). The procedure is titled: Sound Powered Phone Inventory No. P1/S-CM-2, Revision 1. The inspector verified that the required inventory checks were performed at the established frequency. The actions taken by the licensee are adequate.

This item is resolved.

(Open) Unresolved Items (50-272/84-46-02 and 50-311/84-46-02) Biennial QA Audits of the Fire Protection Program

Technical Specification (TS) 6.5.2.8h establishes the requirement to perform a Biennial QA audit for the fire protection program.

The licensee in lieu of performing one single audit on the fire protection program has included fire protection in the QA audit program of 10 CFR 50, Appendix B. As a result, the requirement of TS 6.5.2.8h is satisfied by the performance of several audits performed within the required time period. The inspector reviewed the applicable sections of the following QA audits to verify compliance with T.S. 6.5.2.8h.

- Audit No. S-82-34, Fire Protection, dated October 27, 1982
- Audit No. S-84-4, Nuclear Engineering Department, dated August 10, 1984.
- Audit No. S-84-30, Design Change Request, dated January 3, 1984
- Audit No. S-83-25, Nuclear Construction Support, dated January 18, 1984
- Audit No. S-83-2, Training, dated April 4, 1983
- Audit No. S-84-2, Training, dated May 30, 1984
- Audit No. S-83-4, Procurement and Material Control, dated June 2, 1983
- Audit No. S-83-19, Operations Department, dated February 2, 1984
- Audit No. S-83-7, Maintenance Department, dated June 3, 1983
- Audit No. S-84-18, Document Control, dated October 5, 1984
- Audit No. S-83-1, Corrective Action Program, dated June 15, 1983
- Audit No. S-83-12, Corrective Action Program, dated October 18, 1983
- Audit No. S-84-1, Corrective Action, dated March 21, 1984
- Audit No. S-84-13, Corrective Action, dated September 5, 1984

The inspector determined that although the licensee complies with the T.S. requirements, the QA audit should include certain elements unique to fire protection. The licensee agreed and committed to add in future QA audits, elements of design control, document control, fire protection training, and administrative procedures such as control of combustibles, ignition sources testing, surveillances, etc., that are unique to fire protection. This is an unresolved item pending review of future QA audits performed by the licensee.

3.0 Exit Interview

The inspector met with licensee management representatives (see Section 1.0 for attendees) at the conclusion of the inspection on April 4, 1985. The inspector summarized the scope and findings of the inspection at that time. The inspector also confirmed with the licensee that the documents reviewed by the team did not contain any proprietary information. The licensee agreed that the inspection report may be placed in the Public Document Room without prior licensee review for proprietary information (10 CFR 2.790).

At no time during this inspection was written material provided to the licensee by the inspector.