

U. S. NUCLEAR REGULATORY COMMISSION  
REGION I

Report No. 50-272/83-01  
50-311/83-01

Docket No. 50-272  
50-311

License No. DPR-70  
DPR-75

Category C

Licensee: Public Service Electric and Gas  
80 Park Place  
Newark, New Jersey 07107

Facility Name: Salem Nuclear Generating Station, Units 1 & 2

Inspection at: Hancock's Bridge, New Jersey and Corporate Office  
in Newark, New Jersey

Inspection Conducted: January 3-7, 1983

Inspectors: G. W. Meyer 2/11/83  
G. W. Meyer, Reactor Inspector date

P. Bissett 2/11/83  
P. Bissett, Reactor Inspector date

Approved by: D. L. Caperton 2/17/83  
D. L. Caperton, Chief, Management Programs Section, DETP date

Inspection Summary:

Inspection on January 3-7, 1982 (Combined Inspection Report No. 50-272/83-01;  
50-311/83-01

Areas Inspected: Routine, unannounced inspection by two region-based reactor inspectors of licensee action on previous inspection findings; quality assurance organization; audits; and quality control. The inspection involved 50 hours onsite and 27 hours at the corporate office.

Results: No violations in the three areas examined.

## DETAILS

### 1. Persons Contacted

- \*J. Driscoll, Assistant General Manager, Salem
- V. Gadzinski, Senior Maintenance Planning Supervisor
- \*J. Gallagher, Maintenance Manager
- J. Ketcham, Maintenance Supervisor
- B. Leap, Services and Support Supervisor
- A. Nassman, Manager, Quality Assurance (QA), Nuclear Operations
- A. Orticelle, Senior Instrumentation and Controls (I & C) Supervisor
- \*D. Perkins, Salem Station QA Engineer
- R. Rippe, Nuclear Review Board member
- G. Rowand, I & C Supervisor
- W. Schultz, Programs and Audits Engineer
- D. Tauber, Quality Control Supervisor
- R. Uderitz, Vice President, Nuclear

### USNRC

- L. Norrholm
- \*R. Summers

\*Present at exit interview

### 2. Licensee Action on Previous Inspection Findings

(Closed) Violations (272/82-22-04; 311/82-82-21-04). Ineffective corrective action for measuring and test equipment used in an out-of-calibration (OOC) condition. The inspector verified the corrective actions described in licensee letter dated November 19, 1982, including the following:

- Evaluation of the out-of-calibration (OOC) condition of decade box standard PD-193.
- Assignment of a new Instrumentation and Controls (I&C) supervisor whose primary responsibility is measuring and test equipment.
- Increased efforts to close out prior Deficiency Reports (DR's) for OOC test equipment. The inspector reviewed the DR Log and found that 91 DR's for OOC test equipment had been closed out since September 1, 1982.
- New administrative methods to aid timely evaluation of OOC test equipment. The inspector reviewed the new files in which copies of safety related Work Order (WO) cover sheets are filed for each piece of test equipment. This facilitates a timely assessment of the effect of any OOC test equipment without the need for recall of the affected WO's.

Further, the inspector noted that use of the above corrective actions had permitted prompt, effective corrective action for OOC test equipment.

Specifically, calibrations had been or were being performed again due to licensee technical concerns caused by OOC test equipment, including WO's 919808, 919809, and 927512 for test equipment PD-342, PO-294, and PD-366, respectively.

This item is closed.

(Closed) Violation (272/82-07-02; 311/82-06-02). Lack of evaluation statement regarding effectiveness in audit reports. The corrective actions of the licensee are detailed in a letter dated April 26, 1982. The inspector reviewed four audit reports issued subsequent to the licensee letter and found that all audit reports contained evaluation statements regarding the effectiveness of the audited quality program element.

This item is closed.

(Open) Violation (272/82-22-03; 311/82-21-03). Inadequate control of measuring and test equipment (M&TE) in the maintenance department. A licensee letter dated November 19, 1982 provides the corrective actions being taken and states that full compliance would be achieved by July 1, 1983. The inspector reviewed the corrective actions and identified the following problems:

1. Part of the violation was issued for multi-ampere meter M-137, which had a calibration sticker dated March 23, 1982, which was questionable due to calibration documentation which showed that meter M-137 had been returned in an "outside tolerance" condition. The licensee's response states that "The following corrective actions have been taken in response to the listed items:...Meter M-137 has been properly recalibrated." On January 7, 1983, the inspector found that meter M-137 had not been calibrated subsequent to the violation and, in fact, meter M-137 still had the March 23, 1982 calibration sticker. Further, the inspector found that the questionable calibration documentation had not been revised or in any way corrected. In discussions with the supervisor responsible for the corrective action, the supervisor stated that he had discussed the questionable calibration over the telephone with the contractor who had performed the calibration. The contractor had assured him that the calibration was acceptable. Therefore, the supervisor stated that he had concluded that the March 23, 1982 calibration had been a proper recalibration (i.e., periodic calibration). This conclusion appears to have formed the basis for the licensee's written response. In subsequent discussions with licensee management, the inspector stated that:
  - a. The corrective action statement in the licensee's response was a misrepresentation of what had been done, as no corrective action or recalibration had occurred, rather the prior questionable calibration had been judged to be acceptable.

- b. The consequences of the licensee's misrepresentation in this matter appeared to be small relative to safety because of the nature of the meter and because it has not been used subsequent to the questionable calibration. However, the licensee should evaluate their administrative control of formal communications to the NRC.
  - c. The corrective action measures taken for this condition adverse to quality were ineffective. Effective corrective action needs to be taken to resolve this problem and to determine if other similar problems exist. Objective evidence of corrective actions taken needs to be documented and reported to and reviewed by appropriate levels of management. The licensee's programmatic controls to assure this should be reviewed for adequacy.
2. At the time of the violation, the maintenance department maintained calibration control of measuring and test equipment used for troubleshooting. This additional administrative work abetted the problems which resulted in the violation. This has been revised, and currently, troubleshooting equipment is marked "No calibration required." However, the inspector stated that it is not clear how the use of the troubleshooting equipment on safety-related equipment will be controlled. The inspector noted that on Work Order 909780, completed November 16, 1982, breaker checks were performed on the 1B emergency diesel generator 4 kV breaker. During the checks, Simpson multimeter M-121 and 1000 V meggar M-27, both of which were marked "No calibration required," were used to verify that appropriate conditions existed prior to the breaker checks. The measurements taken with the multimeter and the meggar were recorded in the procedure.

The inspector questioned whether if "no calibration required" test equipment could be used to provide specific numerical values recorded in this procedure, then could "no calibration required" test equipment be used in other procedures where it would be technically inappropriate? The licensee representative stated that the proper use of "no calibration required" test equipment would be clarified and documented.

These violations remain open pending licensee action to establish administrative control of use of "no calibration required" test equipment and to resolve the questionable calibration of Meter M-137.

(Closed) Unresolved Item (272/82-07-01, 311/82-06-01). Documentation of close out of unreviewed safety question verifications in Nuclear Review Board (NRB) meeting minutes. The inspector reviewed NRB meeting minutes for meetings 82-13 and 82-14 on July 15, 1982 and August 25, 1982, respectively, and found that the unreviewed safety questions verified are listed according to the specific design change.

This item is closed.

(Closed) Unresolved Item (272/82-07-03; 311/82-06-03). Audit coverage and frequency. The licensee's corrective action is documented in a licensee letter dated April 26, 1982. The inspector verified the corrective actions, including an audit coverage matrix and initiation of separate corrective action audits. Further, review of audit coverage and frequency was performed during inspection of audits, described in paragraph 4.

This item is closed.

(Closed) Inspector Follow-up Item (272/82-07-04; 311/82-06-04). Revision of Administrative Procedure (AP)-17. The inspector reviewed the revision of AP-17, the station procedure covering the station quality assurance program, dated April 28, 1982.

This item is closed.

(Closed) Unresolved Item (272/82-07-05; 311/82-06-05). Follow-up action of outside audits of the licensee audit program. The inspector reviewed Quality Assurance Instruction (QAI) 18-3, "Audit of PSE&G QA Program by Outside Organizations", Revision 7, August 16, 1982 to verify that the procedure covers follow-up action. In addition, the inspector reviewed the follow-up actions for the Cooperative Management Audit of PSE&G dated December 2, 1982 to verify that the actions comply with the revised QAI.

This item is closed.

(Closed) Unresolved Item (272/82-07-06; 311/82-06-06). NRB review of audit program. The corrective actions are documented in a licensee letter dated April 26, 1982. The inspector reviewed revised NRB procedure NRBP-3, "Procedure for Administration of Audit Program," Revision 3, November 17, 1982 and interviewed the Audits Subcommittee Chairman of the NRB to verify the corrective actions.

This item is closed.

### 3. Quality Assurance Organization

#### a. Requirements

The requirements for the quality assurance (QA) organization are specified in the following documents:

- 10 CFR 50, Appendix B, Quality Assurance Criteria for Nuclear Power Plants
- Technical Specifications, Section 6, Administrative Controls

-- Regulatory Guide 1.33/ANSI 18.7 - 1976; Quality Assurance Program Requirement

b. Program Review

Effective January 3, 1983, the quality assurance organization for the Salem Station was revised to establish a separate operational quality assurance organization under the Manager, Quality Assurance - Nuclear Operations who reports directly to the Vice President, Nuclear. Previously, both operations and construction quality assurance functions were combined in an organization headed by the General Manager, Corporate Quality Assurance. The revised organization is performing the required quality assurance functions under the policies and procedures specified in the licensee's Quality Assurance Manual.

The inspector reviewed the revised organizational structure and staffing with the newly assigned management personnel based upon the organization charts issued for the revised organization.

c. Findings

1. The inspector identified no violations.
2. The licensee has identified in a memorandum to all QA personnel, dated December 29, 1982, that on an interim basis, the quality assurance support services (engineering review, supplier surveillance, and procurement review) will be performed by existing support groups without separating into operations and construction projects. However, the support groups will report to both the Engineering and Procurement Engineer for operations and the QA Services Engineer for construction. The inspector noted that there appeared to be no date by when this interim arrangement would be resolved. The Manager, QA-Nuclear Operations stated that final resolution of this interim arrangement was planned to be completed by early July, 1983. This item (272/83-01-01; 311/83-01-01) will be reviewed during a subsequent NRC:RI inspection.

4. Audits

a. Requirements

The requirements governing the performance of quality assurance audits of safety-related areas are specified in the following documents:

- 10 CFR 50, Appendix B, Quality Assurance Criteria for Nuclear Power Plants



- Technical Specifications, Section 6, Administrative Controls
- Regulatory Guide 1.33/ANSI 18.7 - 1976; Quality Assurance Program Requirements
- Regulatory Guide 1.144/ANSI N45.2.12; Auditing of Quality Assurance Program

b. Program Review

The above documents specify that audits achieve the following:

- The content of audit reports clearly defines the scope of the audit and communicates the results.
- Audits are conducted by trained personnel not having direct responsibility in the area being audited.
- Frequency of audits is in conformance with Technical Specifications and the QA program.
- Appropriate followup actions (including reaudit, if necessary) are being taken, are in progress or are being initiated.
- The audited organization's response to the audit findings is in writing, is timely, and adequately addresses the findings and recommendations.

The inspector reviewed the following procedures to verify that the licensee maintains an administration system to meet the above requirements.

- QAP-1, Organization
- QAP-18, Quality Audits
- QAI 18-1, Audits by the Quality Assurance Department
- QAI 18-2, Audit Plans and Checklist
- QAI 18-3, Audit of PSE&G QA Program by Outside Agents/Auditors
- QAI 18-5, Supplier Audits

c. Implementation

The inspector reviewed the following areas to verify compliance with the audit program requirements.

- Organization Chart, effective January 3, 1983

- 1983 Audit Schedule
- 1983 Audit Matrix
- Audit files, including checklist, report, and follow-up, for four audits (S-82-21, -30, -31, and -32)
- Cooperative Management Audit Program (CMAP) Report of PSE&G Audit, December 2, 1982
- Auditor certifications for four auditors
- Two Corrective Action Request (CAR) Compliance Status Reports

d. Findings

The inspector identified no violations.

5. Quality Control & Surveillance

a. Requirements

The requirements governing the quality assurance program for performance of quality control inspections and surveillances of safety-related areas are specified in the following documents:

- 10 CFR 50, Appendix B, Quality Assurance Criteria for Nuclear Power Plants
- Regulatory Guide 1.30/ANSI N45.2.4 - 1972, Quality Assurance Requirements for Inspection and Testing of Instrumentation and Electrical Equipment
- Regulatory Guide 1.33/ANSI N18.7 - 1972, Quality Assurance Program Requirements
- Regulatory Guide 1.58/ANSI N45.2.6 - 1973, Qualification of Inspection Personnel
- Regulatory Guide 1.116/ANSI N45.2.8 - 1975, Quality Assurance Requirements for Inspection and Testing of Mechanical Equipment

b. Program Review

The above documents specify that quality control (QC) work achieve the following:

- Inspections are performed by trained personnel, independent of the work being inspected and qualified for the applicable inspection



- Administrative procedures provide sufficient guidance to direct the overall inspector effort
- Detailed instructions are used to ensure thorough inspections
- Documentation exists for the results of the inspection

The inspector reviewed the following procedures to verify that the licensee maintains an administrative system to meet the above requirements:

- QAI 10-1, Inspection
- QAI 10-3, Surveillance Program

c. Implementation

The inspector reviewed the following areas to verify compliance with the quality control and surveillance program requirements:

- Organization chart for station QA/QC staff
- Inspection records for three Work Orders (909780, 990933, and 991044)
- Three QC Checklists (QCCL-1-0, -2-0, and -6-0)
- Work Order Log
- Operations and Maintenance Surveillance Report, October, 1982 and attached surveillance reports
- Deficiency Reports (DR's) for November (Report) and attached DR's

d. Findings

The inspector identified no violations.

6. Management Meetings

Licensee management was informed of the scope and purpose of the inspection at an entrance interview conducted on January 3, 1983. The findings of the inspection were periodically discussed with licensee representatives during the course of the inspection. An exit interview was conducted on January 7, 1983 (see Paragraph 1 for attendees) at which time the findings of the inspection were presented. In addition, the conclusions of the inspection were presented to the Vice President-Nuclear and Manager, QA-Nuclear Operations on January 6, 1983.