

U.S. NUCLEAR REGULATORY COMMISSION
REGION I

Report Nos. 50-272/84-38
50-311/84-37

Docket Nos. 50-272
50-311

License Nos. DPR-70
DPR-75

Licensee: Public Service Electric & Gas Company

P.O. Box 236

Hancocks Bridge, New Jersey 08038

Facility Name: Salem Unit 1 & 2

Inspection At: Hancocks Bridge and Salem, New Jersey

Inspection Conducted: October 15-19, 1984

Inspectors: J. Spraul for
J. Prevl, Reactor Engineer

11-14-84
date

Albert Aliba
A. Aliba, Reactor Engineer

11-14-84
date

Approved by: J. Spraul
J. Spraul, Acting Chief,
Management Programs Section

11-14-84
date

Inspection Summary: Routine Unannounced Combined Inspection Conducted on
October 15-19, 1984 (Report Nos. 50-272/84-38 and 50-311/84-37)

Areas Inspected: Unannounced inspection by two region-based inspectors (69 hours) to determine effectiveness of licensee's non-licensed training program. Areas inspected were maintenance, instrumentation and control, non-licensed operators, and shift technical advisors. The inspectors also reviewed the status of previous inspection findings.

Results: Four open items were closed and two unresolved items were identified.

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DETAILS

1. Persons Contacted

Public Service Electric and Gas (PSE&G)

- R. DeSanctis, Manager - Nuclear Procurement and Material Control
- R. Edmonds, Assistant Training Manager - Technical Skills
- * D. Hanson, Manager - Nuclear Training
- A. House, Training Supervisor - Licensed Operator Requalification
- D. Janson, Training Supervisor - Non-Licensed Operator
- T. King, Training Specialist
- H. Lowe, Supervisor - QA Audits
- W. Meyers, Principal Training Supervisor - Instrumentation and Control (I&C)
- L. Miller, Assistant General Manager Salem Operations
- * R. Patwell, Lead Engineer
- * D. Perkins, Site Quality Assurance Engineer
- R. Shaffer, Assistant Training Manager for Operations Group
- D. Thomas, Senior Maintenance Supervisor
- R. VanderDecker, Senior Planning Supervisor - I&C
- * J. Zupko, Jr., General Manager Salem Operations

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- R. Summers, Resident Inspector
 - * J. Linville, Senior Resident Inspector
- * Denotes those present at the exit meeting on October 19, 1984.

The inspectors also interviewed other personnel during the inspection.

2. Action on Previous Inspection Findings

(Closed) Open Item (272/83-15-09 and 311/83-12-09)

Define scope and develop a program to evaluate the shelf life of items already in storage by January 31, 1984. The Engineering Department has initiated a program whereby spare parts are being reviewed and reevaluated to determine shelf life and proper storage level. In addition, the licensee requests shelf life information from the vendor on all new purchase orders. The inspector reviewed a sample production department spare parts data sheet which is used to identify history, location, vendor, storage level, shelf life, etc. for each stored component. The inspector also verified that the licensee is requiring shelf life information from vendors on all purchase orders.

This item is closed.

(Closed) Open Item (272/83-15-08 and 311/83-12-08)

Reorganization of B-Building Storeroom to provide unique bin storage for each different item and tag each safety-related item presently in the

storeroom (except for lots of nuts and bolts) by January 1984. Based on similarities between this item and open items 272/84-16-02, 311/84-16-02, 272/84-16-03 and 311/84-16-03 this item will be closed and combined under a single new unresolved item, 272/84-38-01 and 311/84-37-01. See section 3 for details.

(Closed) Violation (272/84-16-02 and 311/84-16-02)

Failure to maintain materials in storage facilities conforming to assigned storage levels. Based on similarities between this item and open items 272/83-15-08, 311/83-12-08, 272/84-16-03 and 311/84-16-03, this item will be closed and combined under a single new unresolved item, 272/84-38-01 and 311/84-37-01. See section 3 for details.

(Closed) Open Item (272/84-16-03 and 311/84-16-03)

Resolve implementation of effective tagging system for materials in storage. Based on similarities between this item and open items 272/83-15-08, 311/83-12-08, 272/84-16-02 and 311/84-16-02, this item will be closed and combined under a single new unresolved item, 272/84-38-01 and 311/84-37-01. See section 3 for details.

3. Storage Program

Subsequent to an October 1983 NRC inspection (50-272 & 311/83-15), the licensee committed to revamp the storeroom by January 31, 1984 so as to provide separate bins for each unique safety-related item and to properly tag each item. Inspection 50-272 & 311/84-16, conducted in May 1984, found additional examples of safety-related items not being tagged and not being stored in accordance with assigned storage levels.

The inspectors held discussions with the Manager - Nuclear Procurement and Material Control who indicated that it was not the licensee's intent to have revamped the storehouse by January 1984, but to have implemented a corrective action program by then. The last paragraph on page five of the licensee's response to NRC inspection 50-272 & 311/84-16, dated August 9, 1984, from E.A. Liden, Manager - Nuclear Licensing and Regulation to Mr. Thomas T. Martin, Director, Division of Engineering and Technical Programs, committed the licensee to a January 1985 date for reviewing all material currently in storage to ensure proper identification of the required storage level on the appropriate tag.

The licensee representative indicated that this revamping program is ongoing and that by January of 1985 all items will be properly tagged, their storage level correctly identified, and each unique item(s) stored in a separate bin. This is an unresolved item which incorporates NRC findings 272/83-15-08, 311/83-12-08, 272/84-16-02, 311/84-16-02, 272/84-16-03 and 311/84-16-03 into one item (272/84-38-01 and 311/84-37-01).

4. Training

The principle purpose of this inspection was to ascertain whether the training and retraining program for non-licensed employees was in confor-

mance with technical specifications, QA program requirements, and licensee commitments.

4.1 References

- Salem - Units 1 and 2 Technical Specifications, Section 6
- Salem Generating Station, Final Safety Analysis Report, Chapter 13
- NUREG 0737, Clarification of TMI Action Plan Requirements
- ANSI N18.1-1971, The American National Standard for Selection and Training of Nuclear Power Plant Personnel
- Public Service Electric and Gas Company (PSE&G) Training Procedures Manual

4.2 Non-Licensed Operators (NLOs)

Training of NLOs and shift technical advisors (STAs) falls under the responsibility of the operations group. The NLO training division of the operations group has three instructors and two consultants dedicated to the program. The operations group is planning to seek INPO accreditation in December 1984. The training supervisor for NLOs is a senior licensed operator (SLO). The NLO training staff appeared qualified, having a blend of instructors with many years of plant experience and instructors having appropriate technical expertise. Progression of NLOs is from utility operator to apprentice equipment operator to equipment operator. Rate of progression is controlled by union contract. Until about 1982, formal training was not required for job progression. As a consequence many equipment operators were "grandfathered" into the existing program. However, equipment operators now receive two weeks of formal training per year.

The inspectors reviewed the following documents against the referenced requirements of section 4.1:

- Training Procedure (TP)-301, Non-Licensed Operator Training, revision 2
- TP-304, Shift Technical Advisor Training and Certification, revision 1
- TP-306, Plant Design Change Review Program, revision 2
- TP-307, Operational Experience Review Program for Salem Generating Station, revision 3
- TP-901, Technical Supervisory Skills Program-1, revision 1

- TP-902, Technical Supervisory Skills Program-2, revision 1
- TP-903, Technical Supervisory Skills Program-3, Continuing Training Program for Salem Station Supervisors and Senior Supervisors, revision 0
- Final Oral Examinations of three Assistant Equipment Operators
- Training records for three Equipment Operators and two Utility Operators

In addition, the inspectors verified that the licensee had an effective program for assuring that design changes, operational experiences, licensee event reports, etc. are reviewed and incorporated, if applicable, into lesson plans and training procedures.

STAs are all SLOs. The inspectors verified that STAs are receiving training commensurate with regulatory requirements. This training occurs under the licensed operator requalification training group. The requalification training program is designed to provide training on all systems important to safety every two years and on all other systems every five years. NLOs and STAs are currently being trained on using new emergency operating procedures which provide a systematic approach to identifying plant problems.

4.3 Technical Skills

The technical skills group is responsible for providing technical training to all plant personnel other than operators. This includes maintenance, instrumentation and control (I&C), QA/QC, physics and chemistry personnel. They also provide general employee training (GET) to all plant, contractor, and visitor personnel.

The inspectors reviewed the maintenance and I&C training programs for effectiveness. They also attended a regularly scheduled GET session to ascertain its effectiveness. The QA/QC training program has recently been initiated to provide technical training on systems to QA/QC personnel and therefore was not reviewed.

The technical skills group is divided into four departments: I&C, Radiation/Chemistry, QA/QC, and Safety and Skills (Maintenance). It consists of approximately 25 instructors, contractor personnel as needed and 4 department supervisors. The I&C department will be seeking INPO accreditation in December of this year. The three other departments will seek INPO accreditation in June 1985.

4.3.1 Instrumentation and Control (I&C)

The inspectors verified that the I&C training program was documented and in conformance with regulatory requirements.

The following procedures were reviewed:

- TP-601, Apprentice I&C Assistant, revision 2
- TP-602, Salem I&C Technician, revision 7
- TP-604, Technical Worker, revision 1
- TP-605, Reliability Soldering, revision 0

In addition, the inspectors verified proper implementation of the I&C training program by the following:

- Touring the I&C training center labs. These labs contain simulators and equipment which accurately reflect Salem plant systems. Students receive approximately 70% hands-on training and 30% classroom training.
- Reviewing six training folders and qualification cards. These records were compared to the site's qualifications list used by I&C supervision when assigning job orders.
- Discussing effectiveness of the nuclear training center's training program and the on-site training program with the I&C Senior Planning Supervisor.

The on-site I&C apprentice training program appears particularly comprehensive in that work orders, similar to or identical with those found in the plant, are assigned to the apprentice technician (trainee) who is then required to perform the entire job including preparing and filing the appropriate paper work. This is done in a laboratory type atmosphere which includes simulators. Various jobs are assigned to the trainee over a six-week training period to acquaint him with the systems he will encounter. Supervisory review is in evidence throughout the program.

4.3.2 Maintenance

The inspectors verified that the maintenance training program was documented and in conformance with regulatory requirements.

The following procedures were reviewed:

- TP-701, Apprentice Station Mechanic, revision 2
- TP-703, Advanced Maintenance Electrician, revision 2

- TP-705, Utility Mechanic Indoctrination Course, revision 1
- TP-706, Station Mechanic - Continuing Training, revision 2
- TP-709, Electrician/Shift Electrician Continuing Training, revision 2

In addition, the inspectors verified proper implementation of the maintenance training program by the following:

- Attending two training classes. The inspectors examined course content, job applicability, and theory.
- Reviewing examinations, class attendance records, and educational background and verifying they reflected curriculum and program requirements.
- Reviewing student critiques and assessing resultant corrective actions.
- Examining the training qualification card system. The qualification card system is divided into two components. Upon completion of formal training at the nuclear training center the first qualification card is signed. Approximately three months later the student's job supervisor fills out and signs the second qualification card. Criteria are established on what the job supervisor looks for, such as technical knowledge, supervision required, leadership abilities, safety, and utilization of assigned crew.
- Verifying that curriculum requirements meet ANSI 18.1-1971 requirements.
- Reviewing site training records. (See comments in section 4.5.)

4.4 Training Effectiveness

The inspectors reviewed the programs implemented by PSE&G which help assure that the training provided by the Nuclear Training Center (NTC) meets station requirements. Before implementing new or revised training procedures, the NTC management and the Salem Operations Manager must first review them. The inspectors verified this program. Although not required by procedures, station personnel also review lesson plans as they are being developed. The inspectors verified through discussions with both training personnel and operations personnel that an active review process does take place.

At the conclusion of a training session, students provide written critiques of the training received. Three months after the training, the students again provide written critiques on the value of the training received and the students' supervisors also provide written critiques. Administrative controls have been established for control and review of these critiques.

In addition, PSE&G has established a nuclear training oversight committee (NTOC) made up of senior management from both the NTC and Salem operations. This committee periodically meets to review the overall responsiveness of the NTC to operations needs. Reporting to this NTOC are training review groups (TRGs) established to review the training effectiveness for each job classification (e.g. Operations, I&C, Maintenance, etc). The TRGs meet approximately every two to three months. The inspectors reviewed the minutes of five meetings of the operations TRG, 4 meetings of the maintenance TRG, and six meetings of the NTOC.

The nuclear operations QA group annually audits the NTC. The inspector reviewed the 1983 and 1984 audit schedule and verified an audit was carried out in 1983 and one was scheduled for this year. The inspector reviewed Audit #S-84-2, "Training - Nuclear Training Center and Salem Station, Salem Generating Station" March 22, 1984.

Lastly, the inspectors found evidence that the NTC had an active program to hire qualified plant personnel as well as outside personnel as training instructors. This policy provides for more effective and meaningful training as well as better communications between the operating and training organizations.

4.5 Findings

Although the NTC is only about three years old, it is establishing an effective and well managed training program for NLOs, maintenance personnel, and I&C personnel. One area, however, which needs to be addressed by PSE&G management is the records management program. Training records are disbursed between the NTC and the various departments. There is no consistency between departments and the NTC as to the type and method of information stored. In many cases training and qualification information is disbursed between different organizations and different filing systems. Examples were found in maintenance where training records were incomplete, were disbursed among different files, and failed to accurately indicate the training received or reasons for absence of training. Further investigation showed that generic problems exist in the total plant records management program.

On April 6, 1984, the QA department issued corrective action request (CAR) SA-84-C018 to the Manager - Systems and Procedures - Nuclear.

The CAR stated that requirements have not been established for the nuclear department concerning record retention which comply with Regulatory Guide 1.88 and ANSI N45.2.9 requirements. The CAR further stated that an overall program for classification, collection, and long term storage of these records has not been formalized.

Discussions with operations and training management indicated that corrective action has been initiated to correct these problems. These corrective actions include the development of procedures to provide controls of nuclear department records and eventually a computerized centralized records control system. The control and maintenance of training records will be included in this new management information system. This is an unresolved item awaiting implementation of a centralized records management and control system which will provide easy access to uniform qualification/training records that are complete and up-to-date. (272/84-38-02 and 311/84-37-02)

5. Unresolved Items

Unresolved items are matters about which more information is required in order to ascertain whether they are acceptable items, items of non-compliance, or deviations. Two unresolved items which were identified during the inspection are discussed in sections 3 and 4.5.

6. Exit Meeting

The inspectors met with Salem staff on October 19, 1984 to discuss the scope and findings as detailed in this report. The licensee representatives acknowledged the inspectors' findings.

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