U.S. NUCLEAR REGULATORY COMMISSION
REGION I

Report No. 50-272/84-21 and 50-311/84-21

Docket No. 50-272 and 50-311

License No. DPR-70, DPR-75 Priority - Category C

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

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

Inspection At: Hancocks Bridge, New Jersey

Inspection Conducted: May 29 - June 1, 1984

Inspectors: T. Dragoun, Radiation Specialist — 7/3/84 date

Approved by: M. Shanbaky, Chief, Facilities Radiation Protection Section — 7/9/84 date

Inspection Summary:

Inspection on May 29- June 1, 1984 (Combined Report No. 50-272 and 50-311/84-21)

Areas Inspected: Routine, unannounced safety inspection of the radiation protection program, including: ALARA implementation; external exposure control; surveillance and posting; and procedure review and implementation. The inspection involved 36 hours on site by one region-based inspector.

Results: No violations were identified.

DETAILS

1.0 Persons Contacted

During the course of this routine inspection the following personnel were contacted or interviewed:

1.1 Licensee Personnel

*J. M. Zupko, General Manager, Salem Operations
*E. A. Liden, Manager, Nuclear Licensing and Regulation
*J. O'Connor, Radiation Protection Engineer
*W. Britz, Radiation Protection Services Manager
*W. Ferguson, Radiation Protection Supervisor - Operations
*J. Clancy, Radiation Protection Services, Senior Engineer
*J. Gomeringer, Associate Quality Assurance Engineer
T. Jones, ALARA Supervisor

1.2 NRC Personnel

*J. Linville, Senior Resident Inspector

*Attended the Exit Interview on June 1, 1984

2.0 Purpose

The purpose of this routine inspection was to review the licensee's radiation protection program with respect to the following elements:

- ALARA Implementation
- External Exposure Control
- Surveillance and Posting
- Procedure Review and Implementation

3.0 ALARA Implementation

The implementation of the ALARA program was reviewed against criteria contained in:

- 10 CFR 20.1 Purpose
- Regulatory Guide 8.8, "Information Relevant to Ensuring that Occupational Radiation Exposures Will Be As Low As Is Reasonably Achievable"
- Regulatory Guide 1.33, "Quality Assurance Program Requirements (Operation)"
- NRC/PSEG Meeting 84-11, "Radiation Protection Program Improvements" held 2/1/84
- Administrative Procedure No. 7 "ALARA Program"

The licensee performance relative to these criteria was determined by:

- Observing the advance planning meeting that discussed overhaul of several valve operators in the reactor system
- Review of 18 Radiation Exposure Permits that incorporated ALARA controls
- Observation of work in progress
- Discussions with the station and corporate ALARA engineers

Within the scope of this review no violations were identified. However, the following improvement items were noted:

The ALARA functions were performed by groups at the corporate and the station. The inspector discussed with the licensee the lack of a document delineating these ALARA responsibilities. The licensee stated that an ALARA Manual will be issued by Radiation Protection Services (Corporate) by June 15, 1984. This manual will, in part, coordinate the responsibilities for the ALARA program within the licensee's organization. (84-21-01)

All exposure estimates are currently provided by the "REP Desk" technicians. The inspector discussed with the licensee the need for the ALARA engineer involvement in establishing the Man-Rem goals. The final estimate will than become a goal for the job to allow evaluation of performance and determine the need for post-job reviews. The licensee will evaluate incorporation of this concept into procedure AP-7.(84-21-02)

These items will be reviewed during a subsequent inspection.

The inspector observed that temporary computers are used to store and analyze daily personnel exposures and controlled area entries. This technique has allowed early identification and control of high exposure situations by management.

4.0 External Exposure Control

The licensee's control of external exposure was reviewed against criteria contained in:

- 10 CFR 20.101 Radiation dose standards for individuals in restricted areas.
- Procedure RP 1.013 "Radiation Exposure Permit/Extended Radiation Exposure Permit" Rev 9
- Procedure RP 1.018 "Administrative Requirements for the Control of Personnel Exposure" Rev 2
- Procedure RP 1.001 "Access Control Point Management" Rev 5

The licensee's performance relative to these criteria was determined through discussions with selected personnel and a review of selected records. Within the scope of this review, no violations were identified.

5.0 Surveillance and Posting

The licensee's program for surveillance and posting of radiologically controlled areas was reviewed against criteria contained in:

- 10 CFR 20.103, 20.105, 20.201, and 20.203
- Technical Specification 6.12 "High Radiation Area"
- Procedure RP 4.001 "Routine Survey - Schedule" Rev 9
- Procedure RP 4.004 "Radiation Survey - Gamma Dose Rate" Rev 6
- Procedure RP 1.010 "Posting of Radiation Signs and Barriers" Rev 7

The licensee's performance relative to these criteria was determined by:

- Tours of the reactor containment and auxiliary building
- Independent dose rate measurements
- Discussions with selected technicians

Within the scope of this review, no violations were identified.

6.0 Procedure Review and Implementation

The licensee's review and implementation of procedures was reviewed against criteria contained in:

- Technical Specification 6.11 "Radiation Protection Program"
- Regulatory Guide 1.33 "Quality Assurance Program Requirements"
- PSEG Letter R.A. Uderitz to T. T. Martin dated 8/4/83 (Response to Inspection 50-311/83-14)
- Technical Specification 6.8 "Procedures and Programs"

The licensee's performance relative to these criteria was determined by:

- Review of changes to the RP-series of procedures
- Review of licensee response to high airborne particulate and high gaseous radioactivity in the containment on 5/31/84

Within the scope of this review, the following were identified:

Revisions and deletions are in progress affecting a large number of radiation protection procedures. A specific review of these changes is required to ensure that all technical specifications, regulatory

requirements, and commitments to the NRC continue to be met. The licensee has also proposed that RP procedures be exempted from review by the Station Operations Review Committee (SORC). Approval of this change will require that thorough reviews of procedures be conducted within the Radiation Protection organization. The licensee stated that the review of these procedures will include verification of procedural compliance with all regulatory requirements. (84-21-03)

In response to inspection 50-311/83-14 the licensee indicated that hourly air samples would be taken in the reactor containment during outages. However, this has been changed to the use of continuous air monitors. The procedures for the continuous air monitors, RP8.031 and RP8.042, Section E. Emergency Procedure are incomplete in that additional air sampling and analysis are not listed as a required action in the event of a CAM alarm. The licensee stated that additional steps will be incorporated into the procedures to identify the cause of air-borne activity and to specify appropriate corrective actions. (84-21-04)

These items will be reviewed during a subsequent inspection.

7.0 Exit Interview

The inspector met with licensee management denoted in Section 1.1 at the conclusion of the inspection on June 1, 1984. The scope and findings of the inspection were discussed at that time. At no time during this inspection effort was written material provided to the licensee by the NRC Inspector.