U.S. NUCLEAR REGULATORY COMMISSION
OFFICE OF INSPECTION AND ENFORCEMENT

Region I

Report No. 79-16

Docket No. 50-272

License No. DPR-70 Priority -- Category C

Licensee: Public Service Electric and Gas Company

80 Park Place

Newark, New Jersey 07101

Facility Name: Salem Unit 1

Inspection at: Hancock's Bridge, N.J.

Inspection conducted: 4/27 - 5/2 and 5/22 - 5/23

Inspectors: D. L. Caphton for 7/11/79
G. Kalman date signed
Reactor Inspector

date signed

date signed

Approved by: D. L. Caphton 7/11/79
D. L. Caphton date signed
Chief, Nuclear Support Section 1

Inspection Summary:

Inspection on April 27-May 2 and May 22-23, 1979 (Report No. 50-272/79-16)
Areas Inspected: Routine, unannounced inspection of refueling activities, outage maintenance, surveillance activities, snubbers and pipe supports and restraints. The inspection involved 48 inspector-hours onsite by one NRC regional based inspector.
Results: Of the four areas inspected, no items of noncompliance were found in three areas, one apparent item of noncompliance was found in one area (Deficiency-disregard of contamination control procedures, paragraph 3.C).

Region I Form 12
(Rev. April 77)

7910010602

DETAILS

1. Persons Contacted

G. Duncan, ISI Maintenance Engineer
J. Gueller, Senior Performance Supervisor
* W. Hunsinger, QA Engineer
* S. La Bruna, Maintenance Engineer
*+B. Leap, Station QA Supervisor
+M. Metcalf, QA Engineer
*+H. Midura, Station Manager
J. Nichols, Reactor Engineer
*+L. Norrholm, Resident NRC Inspector
* F. Robertson, Senior Maintenance Supervisor
E. Roscioli, Senior Reactor Staff Supervisor
*+J. Stillman, Station QA Engineer
*+J. Zupko, Chief Engineer

In addition to the above listed personnel, other licensee employees and contractor personnel were contacted during the course of the inspection.

* Denotes those present at the May 2, 1979 exit interview.

+ Denotes those present at the May 23, 1979 exit interview.

2. Licensee Action on Previously Identified Findings

(Closed) Unresolved item (79-10-02): Refueling procedure conformance to ANSI 18.7. Additions were made to the refueling procedure which addressed requirements for RHR operation, continuous monitoring of source range neutron instrumentation, and core verification. The inspector reviewed the procedural changes and had no additional questions.

(Closed) Inspector follow item (79-10-03): Evaluation of potential for inadvertantly raising an irradiated fuel assembly with the new fuel elevator. Licensee representatives concluded that it was mechanically possible to raise an irradiated fuel assembly with the new fuel elevator. A precaution prohibiting the placement of irradiated fuel assemblies on the new fuel elevator was added to the procedure. This item is considered closed.

(Closed) Inspector follow item (79-10-04): Verification of refueling prerequisites following interruption in fuel handling. Licensee representatives reviewed refueling procedures and concluded that following an interruption in fuel handling operations, applicable refueling prerequisites are adequately addressed in existing procedures. This item is considered closed.

(Closed) Inspector follow item (79-10-05): Piston position measurement during hydraulic snubber visual inspections. The inspector inspected the hydraulic snubbers on the MSIV's and steam generators. The snubbers were typical of the type reviewed by the NRC and found to require piston position measurement during each visual inspection to assure operability. Snubber piston position measurements are to be compared to precalculated criteria to ensure that normal thermal induced movement will not cause the pistons to lock at the stroke limits.

The above follow up item will be reclassified as an unresolved item pending the revision of the hydraulic snubber visual inspection procedure to include criteria for acceptable snubber piston positions (272/79-16-01).

3. Refueling Activities

a. Scope

The inspector verified that refueling prerequisite plant conditions, tests, and inspections were satisfied during the course of the refueling operations. Refueling activities were witnessed and compliance to Technical Specifications and applicable procedures was ascertained. As part of the above inspection, fuel status boards were checked for accuracy, manning in the control room and on the refueling floor was compared to procedural requirements, and the house keeping and health physics practices on the refueling floor and in the spent fuel building were inspected.

b. Documents Reviewed

-- Form 54990, fuel assembly inspection (Core 1 fuel receipt inspection)

-- Westinghouse nuclear fuel division, quality release documents (Core 1 fuel assemblies)

-- Startup Procedure 6.0, Initial Core Loading Unit No. 1.

-- Westinghouse procedure FP-PSE-FE1, Rev. 0, Fuel Inspection Procedure Salem #1 (PSE), EOC1.

-- Westinghouse memo, precautions for reloading of Salem Unit 1 Core, dated May 22, 1979.

-- Administrative Procedure #24, Rev. 2.

c. Findings

The inspection found that refueling operations were being conducted in accordance with Technical Specifications and governing procedures. Potential problems in housekeeping and health physics practices were discussed with licensee representatives. The inspector observed health physics practices that appeared to be contrary to requirements on three separate occasions at the step-off pad leading to the containment air lock and the spent fuel building entrance. On two of these occasions a vendor representative failed to use the frisker when exiting the contaminated area, and on one occasion a member of the security force walked across the step-off pad from the contaminated side to the clean side and back without changing shoe covers. Failure to observe contamination control practices is contrary to paragraphs 6.93 and 6.94 of Administrative Procedure #24, Rev. 5 and is an item of noncompliance (272/79-16-02). Prior to completion of the inspection, the licensee took corrective action by stationing a health physics technician at the step-off pad area to insure improved conformance with requirements.

d. Fuel Assembly Grid Damage

Licensee personnel detected grid damage on several of the fuel assemblies which were removed from the core during the course of the refueling. This finding led to a total defueling of the reactor and an inspection of all fuel assemblies. The inspection results indicated that 29 fuel assemblies included grids with varying degrees of damage. The damage ranged from scratches on the grid straps to segments of the grids missing. The damage was analyzed by licensee personnel and fuel vendor representatives. They concluded that 9 of the 29 assemblies were damaged sufficiently to prevent reuse in the core. A meeting with the licensee and the fuel vendor was scheduled on May 25, 1979 by the NRR licensing project

manager to review the findings and to discuss the proposed plans for refueling the reactor.

3. Outage Maintenance

a. Scope

The procedures for maintenance activities scheduled during the refueling outage were reviewed on a sampling basis to verify that the procedure format complied with the facility administrative requirements and that safety precautions, quality assurance, and testing requirements were included. Where applicable, the maintenance related safety evaluation was reviewed to determine whether an unresolved safety question was involved. Maintenance activities were observed and contract maintenance workers were interviewed.

b. Documents Reviewed

-- DCR MD-0051, R.V. Head Tray Modification

-- DCR 1EC-0479, Install check valves in the #1 RCP Seal Leak-off Lines.

-- Procedure M6M, #11, 12, 21, & 22 Safety Injection Pump Disassembly, General Repair & Assembly.

c. Findings

No inadequacies were identified.

4. Surveillance Activities

a. Scope

The inspector randomly selected for review one of the surveillance tests required by the Technical Specifications. The test procedure was reviewed for adequacy in meeting the Technical Specification requirement, the contractor personnel assigned to perform the test were interviewed and portions of the test were witnessed.

b. Documents Reviewed

-- Procedure M15E, Containment Isolation Type B and C Tests.

-- STS 4.6.1.2 (d) and 4.6.1.3(b), Rev. 0.

c. Findings

No inadequacies were identified.

5. Unresolved Items

Unresolved items are matters about which more information is required in order to ascertain whether they are acceptable items, items of noncompliance, or deviations. An unresolved item disclosed during the inspection is discussed in paragraph 2.

6. Exit Interview

The inspection met with licensee representatives on May 2, 1979 and at the conclusion of the inspection on May 23, 1979 (see detail 1 for attendees) to summarize the scope and findings of the inspection.