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

Region I

Report No. <u>50-311/79-09</u>	
Docket No50-311	· · ·
License No. <u>CPPR-53</u> Priority	Category <u>Bi</u>
Licensee: Public Service Electric and Gas Company	
80 Park Place	
Newark, New Jersey 07101	
Facility Name: <u>Salem Nuclear Generating Statio</u> n, Unit 2	
Inspection at: Hancocks Bridge, New Jersey	
Inspection conducted: January 23-26, 1979	
Inspectors: <u>T.G.Mchatt</u>	2-6-79
T. G. McNatt, Reactor Inspector H. H. Nicholas, Reactor Inspector H. H. Nicholas, Reactor Inspector P. D. Graham, Reactor Inspector Approved by: D. L. Caphton, Chief, Nuclear Support Section No. 1, RO&NS Branch	date signed $\frac{2/6/79}{date signed}$ $\frac{2/6/79}{date signed}$ $\frac{2/6/79}{date signed}$ date signed

Inspection Summary:

Inspection on January 23-26, 1979 (Report No. 50-311/79-09)

<u>Areas Inspected</u>: Routine, unannounced inspection by regional based inspectors of the overall preoperational test program including: test procedure review and verification; test results evaluation; vibration analysis and assessment; regulatory guide implementation; followup on previous unresolved items; and plant tour of the turbine building, auxiliary building, diesel generator areas, control room, and containment. The inspection involved 96 inspector-hours onsite by three NRC regional based inspectors.

Results: No items of noncompliance or deviations were identified.

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Region I Form 12 (Rev. April 77)

DETAILS

1. Persons Contacted

Public Service Electric and Gas Company

*Mr. S. Chawaga, Principal Staff Engineer - QA Mr. J. Cicconi, Senior Construction Engineer Mr. H. Florey, Startup Test Engineer Mr. R. Griffith, Jr., Senior Staff Engineer - QA
*Mr. C. Johnson, Startup Engineer Mr. H. Lowe, Site QA Engineer
*Mr. A. Meyer, Site QA Engineer
*Mr. E. Meyer, Site QA Head Mr. E. Pearce, Startup Test Engineer

United Engineers and Constructors, Inc.

*Mr. W. Taylor, Construction Superintendent Mr. D. Yielding, Startup Test Engineer

The inspectors also interviewed other licensee personnel, including control room operators, technical and instrumentation staff personnel, during this inspection.

* denotes those present at the exit interview.

2. Licensee Action on Previous Inspection Findings

(Closed) Unresolved item (311/78-01-02): SUP 6B switching sequence of air compressors. This item has been resolved by the addition of startup procedure SUP 6C which addresses the air compressor sequencing. This matter is considered to be resolved.

(Closed) Unresolved item (311/78-12-10): The ability to supply emergency lighting to the control room, shutdown station outside of control room, emergency generator rooms and battery rooms. This item has been addressed in a new procedure SUP 49 and will be incorporated into the test program. This matter is considered to be resolved. (Closed) Unresolved item (311/78-33-01): Use of "non-safety related" devices prior to being calibrated. QA Audit No. 847 Calibration Control, Measuring and Test Equipment showed, in part, that corrective action on items from the previous audit (No. 831 which had previously identified similar findings) was reviewed and found in compliance. Also, test equipment is now being ordered "safety related." A review of the test instrument log showed test instrument UET-1C-076 was not used prior to calibration. There are no further questions on this item.

3. Preoperational Test Program

a. Preliminary Test Procedure Review

The inspector received and reviewed the following draft copies of procedures:

- SUP 6C (Draft Copy). No. 2 Station Air Compressor Automatic Startup.
- -- SUP 7 (Draft Copy). Control Air System.
- -- SUP 9 (Draft Copy). Fire Protection System Detection and Alarm Operational System.
- -- SUP 10.3 (Draft Copy). Boron Recycle Process.
- -- SUP 16.4 (Draft Copy). Resin Removal System.
- -- SUP 16.6 (Draft Copy). Gaseous Waste Processing.
- -- SUP 20.3 (Draft Copy). Safeguards System Operational Test.
- -- SUP 24 (Draft Copy). Nuclear Instrumentation System.
- -- SUP 49 (Draft Copy). Emergency Lighting.
- -- SUP 51 (Draft Copy). Integrated Test of Engineered Safeguards and Emergency Power System.

This was a preliminary review of these procedures. A detailed review will be made of the approved procedures on a subsequent inspection. The inspector had no further questions at this time.

b. Test Procedure Review and Verification

The following procedures were reviewed for technical and administrative adequacy and to verify that adequate testing is planned to satisfy regulatory guidance and licensee commitments:

- -- SUP 18.1 Revision O, approved December 18, 1978. Containment Spray System.
- -- SUP 19.7 Revision O, approved January 10, 1979. Chilled Water System.
- -- SUP 20.2 Revision O, approved January 24, 1979. Reactor Protection System Operational Test.
- -- SUP 20.4 Revision O, approved January 9, 1979. Control System Test for Turbine Runback Operation.
- -- SUP 32 Revision 0, approved January 11, 1979. Service Water System.

The inspector ascertained by review of the above procedures that they are consistent with regulatory requirements, guidance and licensee commitments. No discrepancies were noted in the review of these procedures.

c. Test Results Evaluation

The following procedures were reviewed to ascertain whether uniform criteria are being applied for evaluating completed preoperational tests to assure their technical and administrative adequacy:

- -- SUP 17.2A Revision O, approved December 4, 1978. Indexing of the Westinghouse Spent Fuel Racks.
- -- SUP 19.4 Revision 0, approved January 9, 1979. Reactor Nozzle Support Vent System.
- -- SUP 19.5 Revision O, approved January 9, 1979. Reactor Shield Vent Fan System.
- -- SUP 30 Revision 0, approved January 9, 1979. Energization of #2 Gen Bus and Associated Equipment.

- -- SUP 45 Revision O, approved November 27, 1978. Atmospheric Steam Dump Control.
- -- SUP 46 Revision O, approved December 4, 1978. Condenser Steam Dump System Cold.

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- -- SUP 50.2 Revision O, approved December 4, 1978. Reactor Coolant System Leakage Test Hot.
- -- SUP 50.3 Revision 0, approved December 4, 1978. Pressurizer Power Operated Relief Valve.
- -- SUP 50.6 Revision 0, approved January 16, 1979. Pressurizer Pressure and Level Control.
- -- SUP 50.8 Revision O, approved December 4, 1978. Steam Generator Safety Valve Test.
- -- SUP 50.9A Revision O, approved November 27, 1978. Atmospheric Steam Dump Control - Hot.
- -- SUP 50.16 Revision O, approved December 4, 1978. Safety Injection System Precritical Test.
- -- SUP 50.18 Revision 0, approved December 4, 1978. Reactor Coolant Pump Motor Starting Test.

The inspector reviewed the test results and verification of licensee evaluation of test results by the following methods:

- -- Review of all test changes;
- -- Review of all test deficiencies;
- -- Review of test summary and evaluation;
- -- Review of "As-run" copy of test procedure;
- -- Review of QA inspection records; and,
- -- Verifying that the test results have been approved.

No discrepancies were noted in the review of these procedures and the inspector had no further questions at this time.

d. Vibration Analysis and Assessment

Reference: Regulatory Guide 1.20; Comprehensive Vibration Assessment Program for Reactor Internals During Preoperational and Initial Startup Testing.

The inspector discussed vibration analysis results review with the Startup Engineer and with Westinghouse personnel.

The final inspection of the reactor vessel internals by the licensee and their assessment is yet to be made and determined. The final results will be reviewed at a subsequent inspection.

There are no further questions in this area at this time.

e. Regulatory Guide Implementation

The inspector discussed with the Startup Engineer the status of implementation of the following Regulatory Guides:

- -- RG 1.41 Preoperational Testing of Redundant Onsite Electric Power Systems to Verify Proper Load Group Assignments.
- -- RG 1.68 Initial Test Programs for Water-Cooled Reactor Power Plants.
- -- RG 1.68.2 Initial Startup Test Program to Demonstrate Remote Shutdown Capability for Water-Cooled Nuclear Power Plants.
- -- RG 1.108 Periodic Testing of Diesel Generator Units Used as Onsite Electric Power Systems at Nuclear Power Plants.

The inspector was made aware of the licensee's commitments to the Regulatory Guides and the commitment by the licensee to submit to licensing review, his course of action and detailed procedures for the accomplishment of licensee's commitments.

The inspector will followup on these Regulatory Guides and their implementation as documentation between licensing and the licensee is received.

4. Plant Tour

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The inspectors toured the turbine building, auxiliary building, diesel generator areas, containment, and the control room. An aggressive housekeeping and cleanliness effort was observed to be in progress. The inspectors observed portions of a Phase I hydrostatic test on boron system piping and a power range nuclear instrument channel calibration. The inspectors verified properly issued procedures were in use and test instrumentation was calibrated.

No items of noncompliance were identified.

5. Exit Interview

At the conclusion of the site inspection on January 26, 1979, an exit meeting was conducted with the licensee's senior site representatives (denoted in paragraph 1). The findings were identified and previously unresolved items were discussed.