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

Region I

Report No. 50-322/80-03

Docket No. 50-322

License No. CPPR-95 Priority -- Category B

Licensee: Long Island Lighting Company

175 East Old Country Road

Hicksville, New York 11801

Facility Name: Shoreham Nuclear Power Station, Unit 1

Inspection at: Shoreham, New York

Inspection conducted: Janaury 28 to February 1, 1980

Inspectors: D. L. Caphton for — 2/21/80
H. H. Nicholas, Reactor Inspector — date signed

D. L. Caphton for — 2/21/80
W. M. Troskoski, Reactor Inspector — date signed

D. L. Caphton, Chief, Nuclear Support Section No. 1 — date signed

Approved by: D. L. Caphton — 2/21/80
D. L. Caphton, Chief, Nuclear Support Section No. 1, RO&NS Branch — date signed

Inspection Summary:

Inspection on January 28 to February 1, 1980 (Report No. 50-322/80-03)
Areas Inspected: Routine, unannounced inspection by regional based inspectors of the overall preoperational test program including preoperational test program implementation, test program status, test procedure review and verification; tours of the facility; and, followup on previous inspection items. The inspection involved 41.0 inspector-hours on site by two NRC regional based inspectors, and 13.0 supervisory-hours by one NRC supervisor.
Results: No items of noncompliance were identified.

Region I Form 12
(Rev. April 77)

DETAILS

1. Persons Contacted

Long Island Lighting Company

Mr. L. Calone, Chief Technical Engineer
*Mr. D. Durand, OQA Engineer
Mr. J. Kelly, Field QA Manager
Mr. W. Klein, Lead Startup Engineer
*Mr. L. Levin, Assistant Startup Manager
Mr. A. Muller, QC Engineer
Mr. J. Notarro, Operations Manager
*Mr. J. Rivello, Plant Manager
*Mr. J. Taylor, Startup Manager
Mr. D. Terry, Lead Startup Engineer

Stone and Webster Corporation

Mr. J. Baker, Lead Advisory Engineer
Mr. D. Gibson, QC Engineer
Mr. J. Powers, QC Engineer

General Electric Corporation

Mr. A. Pederson, Operations Manager
Mr. J. Riley, Lead Startup Engineer

The inspectors also interviewed other licensee personnel during the course of the inspection.

*Denotes those present at the exit interview.

2. Status of Previous Inspection Items

(Open) Inspector Followup Item (322/76-10-14): Certification of liquid radioactive waste tank capacities, included in liquid radioactive waste preoperational test.

This item is included in a forthcoming procedure, and will remain open until the approved procedure is received and reviewed.

(Open) Inspector Followup Item (322/76-10-16): Effluent and process radiation monitors tested in liquid or gaseous radioactive waste or process radiation monitoring system preoperational test.

This item is included in a forthcoming procedure, and will remain open until the approved procedure is received and reviewed.

(Open) Inspector Followup Item (322/76-10-19): Personnel radiation monitoring and survey instruments, preoperational and acceptance tests need to be defined.

This item is included in forthcoming procedures, and will remain open until the approved procedures are received and reviewed.

(Open) Inspector Followup Item (322/76-10-20): Radioachemistry laboratory equipment checkout and testing, preoperational and acceptance tests need to be defined.

This item is included in forthcoming procedures, and will remain open until the approved procedures are received and reviewed.

3. Overall Preoperational Test Program

a. Test Program Implementation

Discussion:

The inspector met with the startup manager and opened discussions on the preoperational test program implementation, including the following areas:

-- Test program description and conduct;

-- Test organization;

-- Test program administration;

-- Test document control;

-- Design changes and modifications;

-- Plant maintenance during preoperational testing;

-- Equipment protection and cleanliness;

-- Test and measurement equipment; and,

-- Training.

The interview with the startup manager consisted of detailed discussions concerning the test program description and test organization. Items discussed in these two areas included:

-- Familiarization of the general description of the test program by the startup manager;

-- Awareness of responsibilities in the conduct of the test program by the startup manager;

-- A random selection of five tests by the inspector from the test program index;

-- Verification that the tests have been or are scheduled for completion as part of the test program;

-- Verification by the inspector of specified qualification requirements of at least three key test personnel, through review of personnel records or by direct interview; and,

-- Understanding by the startup manager of the responsibilities of key personnel, method and responsibility of appointing test personnel, lines of authority and responsibility, and, organizational interfaces for organizations involved in the test program.

References:

-- Startup Manual;

-- Final Safety Analysis Report;

-- Station Operations Manual;

-- Quality Assurance Manual;

-- Quality Assurance Procedures;

-- System Description Manual;

-- Preoperational Test Procedures;

-- Acceptance Test Procedures;

-- ANSI N18.1, Selection and Training of Nuclear Power Plant Personnel;

-- ANSI N45.2.6, Qualifications of Inspection, Examination and Testing Personnel for the Construction Phase of Nuclear Power Plants; and,

-- Regulatory Guide 1.68, Initial Test Programs for Water Cooled Nuclear Power Plants.

Findings:

The inspector made a random selection of seven tests from the test program index and verified that the tests are scheduled for completion as part of the test program. The test procedures selected were consistent with Regulatory Guide 1.68 requirements and Final Safety Analysis Report commitments.

The inspector verified qualification requirements of five key test personnel by review of personnel records and direct interview.

As a result of reviews of references, interviews and discussions with the startup manager, no discrepancies were noted in the two areas of test program implementation that were covered during this inspection, and the inspector had no further questions at this time.

The remaining items and areas of test program implementation will be followed up in detail on subsequent inspections.

b. Test Program Status

Discussion:

The inspector met with the startup manager, his staff, and other licensee representatives, and held discussions on the following areas and items:

-- Construction schedule;

-- Delays and turnovers;

-- Construction and testing interface;

-- Testing;

-- Test scheduling;

-- Test sequencing;

-- Integrated flush;

-- RPV intervals vibration;

-- Circulating and service water systems; and,

-- ECCS systems.

References:

-- Construction schedules;

-- Test scheduling and sequencing charts;

-- Integrated flush procedure;

-- RPV intervals vibration procedure;

-- ECCS system description;

-- Circulating water system description;

-- Service water system description; and,

-- Referenced test procedures, drawings, diagrams and vendors manuals.

Findings:

As a result of reviews of references, and discussions with the startup manager, his staff and other selected licensee representatives, no discrepancies were noted, and the inspector had no further questions in these areas at this time.

The above items will be followed up on subsequent inspections.

c. Test Procedure Verification

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

-- AT 101.001, Revision 0, Approved April 10, 1978. Auxiliary Boilers and Associated Support Systems

-- AT 102.001, Revision 0, Approved May 22, 1978. Vacuum Priming Systems

-- AT 103.001, Revision 0, Approved March 3, 1978. Condensate Feedwater System

-- AT 104.001, Revision 0, Approved August 10, 1979. Condensate Filter Demineralizer

-- AT 105.001-1, Revision 1, Approved October 26, 1977. Condensate Storage and Transfer

-- AT 112.001-1, Revision 1, Approved August 15, 1977. Generator Hydrogren Seal Oil

-- AT 113.001, Revision 0, Approved May 9, 1978. Stator Cooling System

-- AT 114.001, Revision 0, Approved June 16, 1978. Generator Isolated Phase Bus Cooling

-- AT 114.002-1, Revision 1, Approved June 22, 1977. Main Generator Hydrogen and Carbon Dioxide Gas System

-- AT 116.001, Revision 0, Approved June 30, 1978. Main and Auxiliary Steam

-- AT 124.001, Revision 0, Approved July 12, 1978. Steam Sealing

-- AT 125.001-1, Revision 1, Approved December 29, 1977. Sealing Water System

-- AT 126.001-1, Revision 1, Approved April 19, 1977. Turbine Building Closed Loop Cooling Water System

-- AT 128.001, Revision 0, Approved June 9, 1977. Turbine Exhaust Hood Sprays

The inspector verified that the licensee had a procedure written, reviewed and approved. Management approval was in accordance with established licensee procedures and test objectives were consistent with test titles.

Findings:

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

d. Test Procedure Review

The following procedures were reviewed for technical and administrative adequacy:

-- AT 101.001, Revision 0, Approved April 10, 1978. Auxiliary Boilers and Associated Support Systems

-- AT 102.001, Revision 0, Approved May 22, 1978. Vacuum Priming System

-- AT 103.001, Revision 0, Approved March 3, 1978. Condensate Feedwater System

-- AT 104.001, Revision 0, Approved August 10, 1979. Condensate Filter Demineralizer

-- AT 105.001-1, Revision 1, Approved October 26, 1977. Condensate Storage and Transfer

-- AT 112.001-1, Revision 1, Approved August 15, 1977. Generator Hydrogen Seal Oil

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-- AT 126.001-1, Revision 1, Approved April 19, 1977. Turbine Building Closed Loop Cooling Water System

-- AT 128.001, Revision 0, Approved June 9, 1977. Turbine Exhaust Hood Sprays

The procedures were reviewed for the following:

-- Management review and approval;

-- Procedure format;

-- Test objectives clearly stated;

-- Prerequisites;

-- Environmental conditions;

-- Acceptance criteria;

-- References;

-- Initial conditions;

-- Test objectives are met;

-- Performance verification;

-- Recording conduct of test;

-- Restoration of systems to normal after test;

-- Identification of personnel conducting and evaluating test data; and,

-- Independent verification of critical steps or parameters.

The inspector ascertained by review of the above procedures that they are consistent with regulatory requirements, guidance and licensee commitments.

Findings:

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

e. The following procedures supporting the preoperational test program were received for review:

-- CF 501.001, Revision 0, Approved January 21, 1980. Fire Protection Carbon Dioxide

-- CF 124.001, Revision 0, Approved January 28, 1980. Boilout of Steam Evaporator and Radwaste Steam Generator

-- CS 607.001, Revision 0, Approved December 21, 1979. Rod Worth Minimizer

-- AT 303.001, Revision 0, Approved January 18, 1980. Main Generator Transformers

-- AT 670.003, Revision 0, Approved January 9, 1980. 120 Volt Uninterruptable Power Supply

-- AT 670.004, Revision 0, Approved December 26, 1979. 125 Volt DC Power to Inverter 1R71-INV-03

-- AT 659.001, Revision 0, Approved January 2, 1980. Meteorological Monitoring System

4. Plant Tours

The inspectors made several tours of the facility during the course of the inspection including the primary containment where the inspectors witnessed the installation of one recirculated pump motor, the internals and externals of the reactor pressure vessel, refueling deck, dome head, reactor pressure vessel head, steam moisture separators and dryers, secondary containment and other sections of reactor building, remote shutdown panel outside of control room, control structure, relay room, control room, turbine building, diesel generator rooms, fire deluge and sprinkling systems, electric and diesel driven fire pumps, pumphouse structure, circulating water pumps, service water pumps, traveling screens and a walk-through of HPCI, RCIC, RHR, and core spray systems, and containment sump pump installations.

In all areas inspected, observations by the inspectors included work in progress, housekeeping, cleanliness controls, storage and protection of equipment, components, piping and systems.

No discrepancies were noted and no items of noncompliance were identified.

5. Exit Interview

At the conclusion of the site inspection on February 1, 1980, an exit meeting was conducted with the licensee's senior site representatives (denoted in Paragraph 1). The findings were identified and previous unresolved and open items were discussed.