

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

Region I

Report No. 50-322/81-03

Docket No. 50-322

License No. CPPR-95 Priority -- Category B

Licensee: Long Island Lighting Company  
17 East Old Country Road  
Hicksville, New York 11801

Facility Name: Shoreham Nuclear Power Station, Unit 1

Inspection at: Shoreham, New York

Inspection conducted: March 2-5, 1981

Inspectors: Wm. Troskoski 4-24-81  
date signed  
W. Troskoski, Inspector, Test Program  
Section date signed

Approved by: D.L. Caphton 4/27/81  
date signed  
D.L. Caphton, Acting Chief, Test  
Program Section

Inspection Summary:

Inspection on March 2-5, 1981 (Inspection Report No. 50-322/81-03)  
Areas Inspected: Routine unannounced inspection by a region-based inspector of the overall preoperational test program including preoperational test program implementation, test procedure review and verification, and test program status. The inspection involved 29.0 hours on-site by a region-based NRC inspector.  
Results: No items of noncompliance were identified.

## DETAILS

### 1. Persons Contacted

- W. Black, Test Engineer
- \* B. Christiansen, Assistant Project Manager
- M. Daus, Test Engineer
- J. Dowd, Test Engineer
- \*D. Durand, OQA Engineer
- \* T. Gerecke, QA Manager
- L. Lewin, Assistant Startup Manager
- W. Matejak, S&W Lead AD Engineer
- K. Nicholas, Test Engineer
- A. Pederson, G.E. Operations Manager
- P. Ray, Test Engineer
- \*J. Rivello, Plant Manager
- \*J. Taylor, Startup Manager

#### NRC Personnel

- \*J. Higgins, Senior Resident Inspector

\*Denotes those present at exit interview.

### 2. Test Program Implementation

The inspector met with the Startup Manager and various Test Engineers to discuss the preoperational test program. Areas covered were:

- Test program administration;
- Document control;
- Design change & modifications; and
- Test & measurement equipment.

The interviews consisted of detailed discussions concerning program implementation, administrative controls, organizational interfacing during the testing, and the test program status with respect to various system turnover and testing schedules. The inspector had no further questions at this time.

### 3. Test Procedure Verification

The following Preoperational (PT) and Acceptance Test (AT) Procedures were reviewed by the inspector to ensure that adequate testing is planned by the licensee to satisfy regulatory guidance and licensee commitments:

- PT 116.001, Revision 0, MSIV Leakage Control, 1-21-81.
- PT 129.001, Revision 0, Turbine High Pressure Control (EHC), 1-21-81
- PT 136.002, Revision 0, Nuclear Boiler Steam Leak Detection System, 3-20-80.
- PT 309.001 ABC, Revision 0, 4160V Power Distribution Preop Test, (R22), 10-22-80.
- PT 314.001, Revision 0, 120v AC Power Distribution (R35), 8-26-80.
- PT 402.001, Revision 0, Primary Containment Atmosphere Control System, 7-25-79.
- PT 411.001, Revision 1, Relay Room, Emergency Switchgear Room, Chiller Equipment Room & Elevation 44 HVAC Equipment Room Heating and Ventillation & AC, 9-21-77.
- PT 412.001, Revision 1, Control Room Air Conditioning/Control Room Leak Test, 5-16-79.
- PT 414.001 ABC, Revision 1, Diesel Generator Room Ventillation System, 4-19-77.
- PT 418.001, Revision 0, Reactor Building Standby/Normal Ventillation System (Reactor Building Leak Rate Test), 6-20-79.
- PT 421.001, Revision 0, RBSUS & CRAC Chilled Water, 8-30-79.
- PT 652.001, Revision 0, Power Range Reactor Recirculation Flow Units, 5-16-78.
- AT 000.005, Revision 0, Cathodic Protection (Y46A), 7-23-80.
- AT 105.001, Revision 2, Condensate Storage and Transfer System.
- AT 116.001, Revision 0, Main and Auxiliary Steam System (Including RFPT), 6-30-78
- AT 124.001, Revision 0, Steam Sealing (Including Steam Packing Exhauster), 7-12-78.
- AT 125.001, Revision 1, Sealing Water System, 12-29-77.
- AT 126.001, Revision 1, Turbine Building Closed Loop CW System, 12-24-80.

- AT 128.001, Revision 0, Turbine Exhaust Hood Sprays System, 6-9-77.
- AT 132.001, Revision 1, Hypochlorination System, 9-15-77.
- AT 192.001, Revision 1, Screen Wash & Traveling Screens, 12-29-77.
- AT 301.001, Revision 0, 138 KV System, 6-17-80.
- AT 302.001, Revision 0, 69 KV System, 3-12-80.
- AT 303.001, Revision 0, Main Generator Transformer, 1-17-80.
- AT 304.001, Revision 1, Normal Station Service Transformer, 11-3-80.
- AT 305.001, Revision 0, Reserve Station Service Transformer, 10-18-79.
- AT 308.001A, Revision 0, 4160V Normal Bus Distribution Bus 1A, 1-12-81.
- AT 308.001 B, Revision 0, 4160V Normal Bus Distribution Bus 1B, 1-21-81.
- AT 310.001, Revision 0, 480V Normal Bus Distribution, 11-14-78.
- AT 313.001 A,B, Revision 0, 120V AC Uninterruptable Power Supply, 5-2-78.

#### Findings

The inspector verified that the licensee had a procedure written, reviewed and approved in accordance with established administrative procedures.

The above tests were incorporated into a management control system that tracked draft completion, initial approval, Joint Test Group approval, and test status for each AT and PT procedure. No items of noncompliance were identified.

#### 4. Test Procedure Review

The following procedures were reviewed for technical content and administrative controls:

- PT 123.001, Standby Liquid Control System, 6-21-77.
- PT 136.003, Automatic Depressurization System, 10-21-80, (JTG approved 11-19-80).
- PT 119.001, Reactor Core Isolation Cooling System, 11-14-78.

The procedures were reviewed for the following:

- Management review and approval;
- Procedure format;
- Test objectives clearly stated;
- Prerequisites;
- Environmental conditions;
- Acceptance criteria;
- References - FSAR, G.E. Design Specifications and Preoperational Test Instructions;
- Initial conditions;
- Test objectives are met;
- Performance verification;
- Recording conduct of test;
- Restoration of systems to normal after test; and,
- Independent verification of hold points or critical parameters.

#### Findings

1. PT 123.001, SBLC System, was written on 6-21-77. The most recent G.E. design specification for the SBLC system is Document No. 22A1482AJ, Revision 3, issued 1-17-80. The inspector noted that the amount of sodium pentaborate called for in the test procedure differed from the amount specified in the G.E. design document. The inspector further expressed his concern that all test procedure's acceptance criteria reflect the current design specifications.

The licensee's representative informed the inspector that a management control system has already been implemented to correct such **problems**. Before a formal preoperational test can be started, the test procedure must be fully **reviewed** and approved by Startup and the Joint Test Group. This is to be accomplished per Startup Manual section 8.4.3, Test Procedure Approval and Release for Performance.

Because the SBLC system is not scheduled to be tested for several months, the final review of PT 123.001 by the Startup and Joint Test Group is yet to be completed. A review of the approved test procedure's acceptance criteria and referenced design documents to verify conformance with current design specifications is Inspector Followup Item 81-03-01.

2. The inspector held discussions with the cognizant test engineer concerning the RCIC system test procedure PT 119.001. Items of specific concern addressed by the inspector were: (1) acceptance criteria in the **procedure** that were marked "(later)", to be provided at a future date, and (2) the method used to calculate the Net Positive Suction Head in section 8.11.11 is not provided in the test. The licensee representative acknowledged the inspectors concern. As this procedure is yet to be reviewed and approved by the Startup and Joint Test Group, a final review of the acceptance criteria and the inclusion of the NPSH calculation into the test procedure is Inspector Followup Item 81-03-02.

The inspector had no further questions at this time. No items of noncompliance were identified.

#### 5. Exit Interview

At the conclusion of the site inspection on March 5, 1981, an exit meeting was conducted with the licensee's senior site representatives (denoted in paragraph 1). The scope and findings of the inspection were presented.