

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

Region I

Report No. 50-322/79-21

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 No. 1

Inspection at: Shoreham, New York

Inspection conducted: November 27-30, 1979

Inspectors: Lewis Narrow
L. Narrow, Reactor Inspector

12/26/79
date signed

R. A. McBrearty
R. A. McBrearty, Reactor Inspector

12/14/79
date signed

Approved by: FOR: AC Gene
R. W. McGaughy, Chief, Projects Section,
RC&ES Branch

date signed

12/26/79
date signed

Inspection Summary:

Inspection on November 27-30, 1979 (Report No. 50-322/79-21)

Areas Inspected: Routine, unannounced inspection by two regional based inspectors of work activities and quality verification records of pipe supports and restraints; and quality records of reactor internals. The inspectors also reviewed licensee action and status of outstanding items. The inspection involved 48 inspector-hours onsite by two NRC regional based inspectors.

Results: No items of noncompliance were identified.

DETAILS

1. Persons Contacted

Long Island Lighting Company

T. W. Catchpole, Section Supervisor, Field QA
T. C. Czajkowski, Chief Welding Supervisor
*T. F. Gerecke, Engineering QA Manager
*J. M. Kelly, Field QA Manager
T. Koch, QA Engineer
*B. R. McCaffery, Project Engineer
E. J. Nicholas, Section Supervisor, Field QA

Stone and Webster Engineering

*T. T. Arrington, Superintendent Field QC
*C. A. Fonseca, Head, Site Engineering Office
*J. Hassett, Senior QC Inspector
*K. A. Howe, General Superintendent Construction
M. Poole, Senior Construction Assistant
J. Schlothauer, QC Inspector
A. Staggs, Junior Construction Assistant
W. Taylor, Senior QC Inspector

Reactor Controls Incorporated

*K. Aspinwall, QC Supervisor
*J. Barlett, Assistant QC Supervisor

General Electric Company

*R. M. Pulsifer, Resident Site Manager

*Denotes persons in attendance at the exit interview.

The inspector also interviewed other licensee and contractor personnel during the inspection.

2. Plant Tour

The inspector observed work activities in progress, completed work and construction status in several areas. Work items were examined for obvious defects and for noncompliance with regulatory requirements and licensee commitments. Specific activities and completed work observed by the inspector included sand blasting of fuel pool liner to provide non-reflective finish, conduit, pipe and tubing supports, welding of supports in suppression pool and rework of core spray nozzles.

No items of noncompliance were identified.

3. Control Rod Drive (CRD) Insert/withdrawal Lines

During the plant tour the inspector observed that certain of the insert/withdrawal lines for the CRD system did not appear to be adequately supported. This item was discussed with representatives of the licensee and the contractor. The inspector was informed that support for these lines was included in a re-analysis of piping supports presently in progress. This item is unresolved pending inspection by an NRC inspector of the installed supports for these lines after completion of the analysis (79-21-01).

4. Inspection of Cable Installation

During review of QC procedures and instructions in connection with close-out of certain outstanding items, the inspector noted that installation of cable was permissible prior to completion of raceway and conduit installations. For this purpose, Procedure QC 12-1 identifies certain aspects of raceway and conduit installation which must be accepted by FQC, as a minimum, in order to proceed with cable pulling. However, QCI FSI-F 12.1-IDF which is the applicable QC instruction for "Inspection of Cable Installation" does not identify all of these minimum requirements as inspection attributes. The inspector was informed that QCI FSI-F 12.1-10 would be revised to identify these attributes. This item is unresolved pending review by an NRC inspector of the revised QCI. (79-21-02)

5. Pipe Supports and Restraints

The inspector observed the as-installed condition of the pipe supports listed below for evidence of damage, deterioration, corrosion, insecure fasteners and foreign material accumulation.

- E-11 PSR-196
- E-11 PSR-270
- E-41 PSR-057
- E-41 PSR-047
- E-21 PSR-038
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No items of noncompliance were identified.

6. Safety-Related Pipe Support and Restraint System - Review of Records

The inspector selected for review records associated with the following pipe support restraints:

- E-11 PSR-199, Residual Heat Removal (RHR) System
- E-11 PSR-196, RHR System
- E-11 PSR-270, RHR System
- E-41 PSR-047, High Pressure Coolant Injection (HPCI) System
- E-41 PSR-057, HPCI System
- E-21 PSR-028, Core Spray System
- E-21 PSR-038, Core Spray System
- E-51 PSR-011, Reactor Core Isolation System (RCIS)
- E-51 PSR-053, (RCIS)
- N-11 PSR-192, Main Steam System

The inspector's review was done in order to ascertain that the records included, but were not limited to, the following parameters:

- Type and classification of pipe support or restraint system comply with appropriate drawings
- Location and spacing meet licensee's specifications and have been verified by QA/QC
- weld identification/location corresponds to respective welding documentation
- Welders were qualified for the welding procedures used

The inspector found that the reviewed records were complete and contained the required information.

No items of noncompliance were identified.

Reactor Vessel Internals - Review of Quality Records

The inspector reviewed in-storage inspection records, material receiving inspection records and vendor supplied material certification certificates associated with the following selected reactor pressure vessel internals components:

- Core Support Plate
- Shroud Head
- Shroud

The inspector's review was done in order to ascertain that the records reflected that the storage and inspection activities were consistent with applicable requirements and included the following:

- General Electric Procedure No. 22 A 2724, Rev. 0, entitled "Equipment Storage Requirements"
- Eastern Stainless Steel Company Certificates of Test for material used in the fabrication of the shroud, shroud head and core support plate
- Material Receipt Inspection Report (MRR) No. 1529 for the above listed components
- Inspection records for the period December, 1972 to November 1979 for the above components

The inspector found that the records indicated that inspections were made at the required frequency and component storage conditions agreed with the requirements delineated in procedure 22 A 2724.

No items of noncompliance were identified.

8. Review of Nonroutine Events Reported by the Licensee

By letter dated August 17, 1979 the licensee reported, as a significant deficiency in accordance with 10 CFR 50.55(e), that unacceptable radiography had been performed on valve castings furnished by a casting sub-vendor to Velan Engineering Company.

The inspector examined Noncomformance and Disposition (N&D) Reports No. 5456 and 1808 which confirmed re-radiography and rework of castings for Valves No. 1 E 11 *ADV-081A and 081B, 1 B 21 *ADV-036A and 036B, and 1 P 41 *VTC-D41. As stated in the licensee's letter, these included all of the valve bodies furnished and inspected by this sub-vendor and therefore no further corrective action was required.

The inspector had no further questions concerning this item.

By letter dated June 22, 1979 the licensee reported, as a significant deficiency in accordance with 10 CFR 50.55(e) that surface preparation of completed welds had been inspected and accepted although they did not meet the requirements of specification SHI-056. This item had previously been identified as a noncompliance during NRC inspection 50-322/78-06.

The inspector examined QC records which showed that reinspection of Welds completed prior to June 1, 1978 showed fourteen welds which failed to meet the minimum wall criteria. These welds had been reworked, reinspected and accepted. Review of QC records showed that all rework had been completed prior to performance of the hydrostatic tests of the systems. Therefore, no retests were required.

The inspector had no further questions concerning this matter.

By letter dated November 18, 1977 the licensee had reported, as a significant deficiency in accordance with 10 CFR 50.55(e), a potential deficiency in design of the Safety Relief Valve (SRV) System which might result in a greater load than previously predicted for the "worst case" SRV blow-down due to a possible second actuation of the relief valves. This phenomenon has been identified as a "Second Pop".

Since identification of this problem and based on the results of tests and analysis of the SRV system "T" quencher discharge devices have been substituted for the ramhead devices previously specified. Use of the "T" quencher device has reduced the load due to second or subsequent pops of the SRV's so as to bring them within the design criteria originally established for the Shoreham design. The supporting analysis is included in a report which has been submitted to the Office of Nuclear Regulation.

The inspector had no further questions concerning this matter.

By letter dated May 2, 1978 the licensee reported, as a significant deficiency in accordance with 10 CFR 50.55(e), a deficiency in their initial report on Pipe Break Outside Containment (PBOC). A re-analysis using a new computer model has now been completed and a report on the Shoreman PBOC has been submitted as Appendix 3 C of the FSAR. This report includes the requirements for environmental qualification of electrical equipment required for safe shutdown of the reactor. The environment qualification of this equipment will be reviewed by the NRC together with the review of the environmental qualification of Class IE equipment and systems exposed to a LOCA environment.

The inspector had no further questions concerning this matter.

9. Licensee Action on Previous Inspection Findings

(Closed) Noncompliance (78-06-01): Grinding of field weld No. I E 11-1C020-FW3 was not in accordance with Specification SHI-056 requirements. Following identification of this nonconforming condition the licensee reinspected this weld and found that grinding of the pipe surface had also reduced the pipe wall thickness below the minimum and therefore reported this nonconformance as a significant deficiency in accordance with 10 CFR 50.55(e).

The inspector examined records (E&DCR F 14070 and Courter NC Report No. 0175) which showed reinspection of welds which had been ground for surface finish and rework of nonconforming welds and pipe below the minimum wall thickness.

The inspector had no further questions concerning this matter.

(Closed) Inspector Follow-up (78-08-03): Precautionary measures to protect cable from sharp edges of cable trays.

The inspector examined:

- EDCR's No. F16796 and F16796A which provided for use of 1/2 - inch and 3/4 - inch slotted tubing tied to cable tray rungs and side-rails at cable crossing locations.
- Inspection report dated March 9, 1978 for inspection of cable trays for rough and sharp edges and unprotected bolts in one area of the reactor buildings. Other cable trays will be similarly inspected.

The inspector also observed that sharp edges of cable trays perviously identified had been protected with slotted tubing and during a random inspection of cable trays in the reactor building identified no instances of cables crossing unprotected sharp or rough edges.

(Closed) Inspector Follow-up (78-08-06): Lack of a procedure for testing of wireway penetration seals.

The inspector examined specification SHI-459 dated July 27, 1979 "Cable and Mechanical Penetration Fire Stops and Seals" which identifies fire stops; fire stops in combination with differential pressure, hydrostatic pressure and radiation stops; and cable seals and which provides for tests of these stops.

10. Unresolved Items

Unresolved items are matters about which more information is required in order to ascertain whether they are acceptable items, or items of noncompliance. Unresolved items identified during the inspection are discussed in Paragraphs 3 and 4.

11. Exit Interview

The inspector met with licensee representatives (denoted in paragraph 1) at the conclusion of the inspection on November 30, 1979. In addition, the NRC Resident Inspector, Mr. J. C. Higgins attended the meeting. The inspector summarized the scope and findings of the inspection.