

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

Region I

Report No. 50-322/81-05
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

Inspection at: Shoreham, New York

Inspection conducted: March 23-26, 1981

Inspectors: Lewis Mallow
L. Narrow, Reactor Inspector

4/22/81
date signed

Approved by: E. C. McCabe, Jr.
E. C. McCabe, Jr., Chief, Reactor Projects
Section 2B

date signed
4/22/81
date signed

Inspection Summary:

Inspection on March 23-26, 1981 (Report No. 50-322/81-05)

Areas Inspected: Routine, unannounced inspection (24 hours onsite) by a regional based inspector of the Field QA audit and surveillance program; for review of the status of outstanding items; and for observation of work in progress and the status of construction.

Results: No items of noncompliance were identified.

Region I Form 12
(Rev. April 77)

8106040528

DETAILS

1. Persons Contacted

Long Island Lighting Company

- R. DiRocher, QA Engineer
- * T. F. Gerecke, Engineering QA Manager
- * J. M. Kelly, Field QA Manager
- J. J. McCarthy, QA Engineer
- * B. R. McCaffrey, Assistant Project Manager
- * M. H. Milligan, Project Engineer
- E. J. Nicholas, Section Supervisor, Field QA
- * J. P. Novarro, Project Manager
- C. Seamans, Assistant Project Engineer

Stone and Webster Engineering (S&W)

- * T. T. Arrington, Superintendent, FQC
- * R. S. Costa, Project QA Manager (Boston)
- R. Perra, Assistant Superintendent, FQC
- * R. A. Howe, General Superintendent

* 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 installation of pipe supports, separation of instrument lines and welding for rework of pipe supports.

No items of noncompliance were identified.

3. Field QA Audit Program

The inspector discussed the Field QA audit program with the licensee's representatives and reviewed the audit schedule, record of audits performed, selected audit reports and followup for corrective action of nonconformances. The following documents were reviewed.

- a. 1980 Field Audit Schedule showing frequency of scheduled audits and identifying audit number, description and date performed.

- b. Reports of recent audits performed, audit checklists were attached, audit findings were identified together with corrective action or, if necessary, a request for response by the audited organization.
- c. Field Audit Transmittal/Response Nos. 1234A and 1247A for violations identified during Audits FA-1234 and 1247. These documents identified the finding, the proposed corrective action, and showed approval and verification of the corrective action.

The inspector also discussed the computer programs for maintenance of audit records with the licensees representative and examined a printout of these records.

No items of noncompliance were identified.

4. Field QA Surveillance Program

The inspector reviewed Engineering Quality Assurance Instruction EQAI-18.2.2, "Surveillance of Field Mechanical and Electrical Activities," and discussed this program with the licensee. This program provided surveillance of work activities in progress in a planned and systematic manner. It includes surveillance of welding performance and material control, ASME pressure testing, storage of mechanical and electrical equipment, and electrical cable installation.

The inspector examined the summary of surveillance reports, selected surveillance reports in each of the work areas and Corrective Action Requests (CARs) for nonconforming conditions.

No items of noncompliance were identified.

5. Radwaste Building Shear Wall Design

S&W review of seismic calculations of the Millstone 3 auxiliary building had identified a problem in the analyses for transfer of horizontal loads to the base mat. Problem Report PR-S-20 had been issued and identified this problem as applicable to the Shoreham project. Further review by S&W determined that only the Radwaste Building might be affected and that the horizontal load carrying capability of this building should be re-analyzed.

The inspector discussed this problem with the licensee and examined IOM dated March 25, 1981 from S&W to LILCO which states that the reanalyses had been completed and establishes the structural adequacy for horizontal loads

The inspector had no further questions concerning this item.

6. Review of Nonroutine Events Reported by the Licensee

a. Unistrut and Power Strut Hangers and Supports (78-00-10)

By letters, SNRC-336 and 363 dated November 17, 1978 and March 7, 1979 respectively, the licensee reported, as a significant deficiency in accordance with 10 CFR 50.55(e), use of improperly sized channels and nuts for installation of supports for piping, ductwork, conduit and cable trays. This item was reviewed during inspection 322/80-19 but remained unresolved pending a spot check of additional inspection reports.

The inspector examined additional inspection reports of installation of conduit, pipe and instruments. These reports showed inspection of anchor bolts in accordance with the revised QC Instructions FS1-F10.4-01, F12.2-04 and F12.1-08 for anchor bolts, raceway and instrument supports.

The inspector had no further questions concerning this item.

b. Tube Turn Fittings (79-88-01)

On April 4, 1979, Tube Turns Division of Chemetron Corporation had reported in accordance with 10 CFR 21 that certain 4-inch fittings had been manufactured of material having a carbon content higher than the allowable range. This item was reviewed during inspection 322/80-19 but remained unresolved since there was no evidence available to confirm the disposal of three of the elbows. This information was also furnished to licensees in IE Circular 79-10.

The inspector discussed efforts to trace the three elbows with licensee representatives and reviewed the documentation shown below. Since the three elbows could not be located, Courter examined piping isometrics and change notices to identify and list all ASME 4-inch 45° and 90° elbows. FQC verified the Traceability Control Nos. (TCNs) of the installed elbows and determined that TCN-B093 were not installed onsite. TCN-B093 had been assigned to Lot 6709 elbows. The inspector confirmed this information by review of the following.

- . Courter memo QC-81/08 dated March 20, 1981
- . Courter NR No. 687
- . Memo FQC to licensee dated March 24, 1981

The inspector had no further questions concerning this item.

c. ITT North Power Supplies for Bailey Controls (80-00-02)

By letter dated July 24, 1980, the licensee reported, as a significant deficiency in accordance with 10 CFR 50.55(e), potential failure of power supplies used in Bailey Controls for HVAC equipment. The power supplies had been furnished by ITT North Electric and failure resulted from contamination of the AC stability capacitor which caused swelling and leakage or rupturing of the case.

The capacitors were replaced and tested under the direction of a Bailey representative. The inspector discussed the tests and qualification of the power supplies with the licensee and reviewed the records shown below.

- . E&DCR P-3180A which requires tests of the power supplies in accordance with a customer Bulletin issued by Bailey Controls with repair or replacement of any which do not meet the test and certification by Bailey of suitability for use of any repaired or replaced units.
- . N&D No. 3274 showing replacement of all capacitors after failure of three under test. Tests of the replaced capacitors were acceptable.
- . Certification of compliance dated November 21, 1980 from Bailey Controls Company.

The inspector had no further questions concerning this item.

d. Square D Motor Control Center Starters (80-00-03)

By letter dated November 20, 1980, the licensee reported, as a significant deficiency in accordance with 10 CFR 50.55(e), a defect in the Nema Size 3 contactors of Square D 480V Motor Control Centers (MCCs). The defect was caused by application of a lubricant to rubber bumpers which are attached to the movable starter armature and which caused the bumpers to stick to the starter case. In some cases the contactors would not close when required. This item was also reported by S&W in accordance with 10 CFR 21 (81-88-01).

The inspector reviewed documentation onsite which identified 9 starters onsite containing a total of 15 contactors which had been manufactured within the time frame identified by Square D and showing that corrective action had been completed.

The inspector had no further questions concerning this item.

e. Weld Defects in Square Tubing (81-00-02)

The licensee reported on February 27, 1981, in accordance with 10 CFR 50.55(e) a potential deficiency in welding of square tubing. On March 9, 1981, the licensee reported that further investigation of a sample of tubing had identified no additional unsatisfactory welds and therefore the problem was not a reportable deficiency in accordance with 10 CFR 50.55(e).

The inspector reviewed the following records:

- . N&D No. 3880 dated February 27, 1981 which showed that lack of fusion had been identified in seam welds of 3" x 3" and 4" x 4" steel tubing. A total of 45,000 lineal feet of tubing had been purchased. A sample (MIL-STD-105D) of 500 lineal feet was examined and showed no additional weld defects. The N&D was closed based on results of sample inspection.
- . 10C to FQC instructed FQC to inspect 500 feet of 3-inch and 4-inch tube steel; 200 feet in reactor building; 150 feet in Minifab Shop and 150 feet in storage areas.
- . FQC Inspection Report dated March 2, 1981 showed 549 feet of 3-inch and 4-inch pipe inspected and found to be satisfactory.

The inspector had no further questions concerning this item.

f. Bergen-Paterson Snubber Deficiencies (80-88-02)

By letter dated June 20, 1980, Bergen-Paterson Corporation (B-P) reported, in accordance with 10 CFR 21, certain deficiencies in a limited number of strut assemblies with mechanical shock arrestors (snubbers) furnished by Pacific Scientific Company (80-88-02). These potential problems were also identified in IE Circular 79-25. An additional problem concerning the load capacity of assemblies using Part 2540-120 was later identified by B-P and was identified to licensees in IE Circular 79-25, Supplement A.

This item was reviewed during NRC Inspection 80-05 and 80-19 but remained unresolved. The inspector again reviewed the status of inspection and rework of the hangers identified by Bergen-Paterson as potentially deficient. The records show 13 units not received onsite; 7 units received but not inspected; 4 units rejected and returned for corrections; and 5 units to be provided with new brackets to upgrade their capacity.

This item remains unresolved pending completion of corrective action.

7. Licensee Action on Previous Inspection Findings

(Closed) Noncompliance (80-10-02): Failure to meet separation requirements of specifications for conduit installation.

N&D No. 3398 was written to document this nonconformance and to require documentation prior to sign-off by construction. The disposition requires that such exceptions be documented on an E&DCR and identifies E&DCR F29154 as documenting nonconforming conditions in question. The inspector confirmed this action by examinations of E&DCR F29154 and QC Instruction QC1-FS1-F12.1-08G, "Inspection of Raceway/Conduit Installations." Paragraph 5.3.6 of this QC1 establishes the same requirements.

(Closed) Unresolved Item (80-10-0): Clarification of painting inspection reports.

The inspector examined the following documents:

- . N&D Report No. 2882 which had been dispositioned, reworked and closed on January 5, 1981. The disposition required inspection and test of the entire surface and rework of the defective areas. FQC inspection report dated January 2, 1981 confirmed that the rework was in accordance with the disposition and was acceptable.
- . E&DCR F29203 and F29203A concerning surface preparation and coating of areas behind clip attachments.
- . KTA-Tator Associates Daily Painting Inspection Reports No. 732, 735, 736, 737, 738 and 739 of surface preparation and coating of down comers and areas behind clip attachments.

The inspector had no further questions concerning this item.

(Open) Unresolved Item (80-19-01): Review for reportability in accordance with 10 CFR 50.55(e) of deficiency in Velan Swing check valves.

The inspector was informed that this problem had been reviewed by S&W and was not considered reportable. However, there was no documentation onsite to substantiate this review. The inspector requested that such documentation be provided and also that the licensee independently review this problem for reportability. In addition, the inspector requested that the licensee examine their procedures to determine whether items which are not identified on N&D reports might escape review for reportability.

8. Exit Interview

The inspector met with licensee representatives (denoted in Paragraph 1) at the conclusion of the inspection on March 26, 1981. In addition, the NRC Senior Resident Inspector, Mr. J. C. Higgins attended the meeting. The inspector summarized the scope and findings of the inspection.