



## LONG ISLAND LIGHTING COMPANY

SHOREHAM NUCLEAR POWER STATION

P.O. BOX 618, NORTH COUNTRY ROAD • WADING RIVER, N.Y. 11792

JOHN D. LEONARD, JR.  
VICE PRESIDENT - NUCLEAR OPERATIONS

**OCT 25 1985**

SNRC-1210

Dr. Thomas E. Murley  
Regional Administrator  
Office of Inspection & Enforcement  
Region I  
U.S. Nuclear Regulatory Commission  
631 Park Avenue  
King of Prussia, PA 19406

Startup Testing Program Activities  
Inspection 85-31  
Shoreham Nuclear Power Station  
Docket No. 50-322

Reference: Letter from NRC (Stewart D. Ebnetter) to LILCO  
(J. D. Leonard) dated September 26, 1985,  
Including Notice of Violation and NRC Inspection  
Report 50-322/85-31

Dear Dr. Murley:

The attached information (Attachment I) is being forwarded in response to the reference letter. This attachment addresses the subject notice of violation in accordance with NRC instructions.

Should you have any questions, please contact this office.

Very truly yours,

J. D. Leonard, Jr.  
Vice President - Nuclear Operations

PGP:ck

Attachment

cc: J. A. Berry

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RESPONSE TO NOTICE OF NRC VIOLATION

VIOLATION

10CFR50 Appendix B Criterion V requires in part that "activities affecting quality shall be prescribed by documented procedures and shall be accomplished in accordance with these procedures." Technical Specification 6.8.1 contains similar requirements.

Contrary to the above, during the startup testing program three examples were identified wherein test personnel did not implement their governing procedures for activities affecting quality. First, on August 8, 1985, while performing a control rod drive friction test on selected control rods, test personnel did not connect the pressure differential test box with the control rod fully inserted and conduct the settling friction test on rod 18-27 with the cooling water valve closed as required in procedure STP-5.8.2. Second, during inspector review of test results on August 9, 1985, it was noted that test personnel did not prepare a test exception for those level indicators (1B21-LT-154/155 and 1C61-LI-004) that did not meet the test acceptance criteria of STP-9.8.1 as required by the administrative procedure SP-12-075.01. Third, during inspector review of test results on August 11, 1985, it was noted that test personnel did not evaluate the settling friction test of control rod 18-27 in the manner prescribed in procedure STP-5.8.2 in that the rod had been identified as having passed the test acceptance criteria, whereas the analysis performed as prescribed in the procedure showed that the rod (18-27) did not satisfy the acceptance criteria.

The consequences of each of the above procedure non-compliances on plant operations, testing and safety are minimal and each item was corrected by the licensee when identified. When considered together, these examples constitute a violation. This is a Severity Level V violation (Supplement I).

As noted above and in Section 3.3 of the subject inspection report, the NRC inspector identified three examples of non-compliance with startup test program procedures during inspection 50-322/85-31 conducted during the period July 29, 1985 to August 12, 1985. The examples cited were:

- Failure to connect control rod drive differential pressure test equipment with the control rod drive fully inserted and failure to perform a notch-settle test with the cooling water valve fully closed.
- Failure to prepare a test exception report for reactor water level indicating meters that did not meet acceptance criteria.

- Failure to properly analyze the notch-settle differential pressure data for control rod 18-27.

#### LILCO's Response

##### 1. Corrective Steps Which Have Been Taken and the Results Achieved

With respect to STP-5, Control Rod Drive, the following corrective actions have been taken:

Procedure changes were promptly initiated and ROC approved (TPC 85-585 and TPC 85-586) to specify in the body of the procedure that control rods be fully inserted whenever connecting, venting or disconnecting the differential pressure test equipment. Further, Test Directors have been instructed to provide copies of applicable sections of startup test procedures along with copies of referenced vendor instructions, diagrams, etc. to test personnel to use and refer to in the field whenever testing activities are performed in the field. Test Directors were also counseled on the importance of performing a detailed review of operating instructions referenced in the test procedures.

Friction testing was repeated on rod 18-27 with its cooling water valve fully closed. Based on the General Electric Company's System Operation and Maintenance Manual (GEK-71240) instructions and on an evaluation of friction test data which showed the cooling-water valve open data to be conservative, friction tests were not repeated for control rods 22-23 and 22-39.

After repeating the continuous insert friction test and the notch settle test of control rod 18-27, test personnel evaluated the data in a manner that was judged not to be the method prescribed by the procedure. Subsequent discussions with the personnel involved established that their judgement was based on a precedent set at a similar BWR during startup testing where the criterion language was identical. Test group staff issued a Test Exception Report to track the NRC concern and then sought guidance from General Electric (San Jose) on the correct methodology for analysis of notch-settle differential pressure data. The correct methodology was specified and given to test personnel. Based on the specified analysis, rod 18-27 met the acceptance criterion for friction testing. Further testing was not required.

With respect to STP-9, a test exception report was prepared to identify the failure of Level 2 acceptance criteria of certain reactor vessel level indicators.

Discussions with the test personnel who had noted the discrepancy in level indicating switches revealed that the root cause for failure to prepare a test exception was a misunderstanding of the requirement to evaluate only meter indications and not analog trip system level indicating switch voltage readings against the acceptance criteria, so written clarification on this matter was given to test personnel. Meter checks and loop calibrations were performed during a plant outage, and STP-9 section 8.1 was repeated. There were additional Level 2 acceptance criteria failures, identified in a later test exception report, and disposition of these will be sought from General Electric (San Jose).

The LILCO corrective actions described above have achieved full compliance with the requirements of 10CFR50 Appendix B Criterion V regarding startup testing.

2. Corrective Steps Which Will Be Taken to Avoid Further Violations

Several corrective actions will be taken to avoid further procedural noncompliances of startup test procedures or administrative procedures. The first will be to conduct a review of all STP's scheduled to be performed during test conditions 1 through 6. The purpose of this review will be to identify all sections or procedure steps which rely on vendor instructions or other station procedures, to include significant instructions, notes or precautions from these instructions or procedures in the body of the startup test procedure; and to the extent possible, to identify ambiguities in the acceptance criteria and analysis sections of the startup test procedures, and to incorporate necessary corrections, clarifications or amplifications. This review of all STP's is scheduled to be completed by December 31, 1985.

A second will be to emphasize the "lessons learned" from the experiences of heatup testing, including this violation, during training to be held for all test personnel prior to resumption of power ascension testing in Test Conditions 1 and above. The lessons learned include the paramount importance of paying attention to detail in the performance of tests and the analysis of test results; the need for seeking immediate clarification from supervisors and managers where there is any question of procedure intent, method or interpretation; and the importance of documenting by procedure change or test exception report any deviation from the startup test procedures, as required by administrative procedures.

Additionally, the Quality Control organization has increased the frequency of administrative and test prerequisite

surveillance inspections. (This preventive action was discussed with the NRC Inspector as noted in Section 5.0 of his report.) The Quality Control Surveillance Inspection Checklist now lists satisfactory completion of prerequisites (such as review of vendor instructions or other station procedures) as an inspection attribute for all test surveillances.

3. Date When Full Compliance Will Be Achieved

As previously noted, Shoreham is now in full compliance.