

September 7, 1982

Lawrence Brenner, Esq.
Administrative Judge
Atomic Safety and Licensing Board
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Dr. James L. Carpenter
Administrative Judge
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Dr. Peter A. Morris
Administrative Judge
Atomic Safety and Licensing Board
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

In the Matter of
Long Island Lighting Company
(Shoreham Nuclear Power Station, Unit 1)
Docket No. 50-322 (OL)

Dear Administrative Judges:

In the report filed on August 23, 1982, the NRC Staff identified the pages of the Shoreham SER that are relevant to the testimony on QA/QC (SC 12-15). Enclosed, for the convenience of the Board and parties, are copies of those pages.

Sincerely,

David A. Repka
Counsel for NRC Staff

Enclosure: As stated

cc: See Page 2

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cc w/encl:

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17 QUALITY ASSURANCE

17.1 General

The description of the quality assurance program for the operations phase of the Shoreham Nuclear Power Station is contained in Section 17.2 of the Final Safety Analysis Report. Our evaluation of this quality assurance program is based on review of this information and discussions with representatives of the Long Island Lighting Company. We assessed Long Island Lighting Company's quality assurance program for the operations phase to determine whether it complies with the requirements of Appendix B to 10 CFR Part 50, "Quality Assurance Criteria for Nuclear Power Plants and Fuel Reprocessing Plants"; the applicable quality-assurance-related Regulatory Guides and ANSI Standards listed in Table 17-1; and the Standard Review Plan, Section 17.2, Rev. 0, dated November 24, 1975, "Quality Assurance During the Operations Phase."

17.2 Organization for the Quality Assurance Program

The structure of the organization responsible for the operation of Shoreham and for the establishment and execution of the operations phase quality assurance program is shown in Figure 17-1. The Vice President of Operations has been delegated overall responsibility for the safe and reliable operation of all Long Island Lighting Company generating plants. He is responsible for the establishment, implementation, and effectiveness of the operational quality assurance program, policies, goals, and objectives. These responsibilities are carried out through: the Quality Assurance Manager, Manager - Electric Production-Nuclear, the Plant Manager, and the Director of Production.

The quality assurance department is supervised by the Quality Assurance Manager. He reports functionally and administratively to the Senior Vice President, Engineering and Project Management during modification activities and functionally to the Vice President of Operations for direction during operating phase activities. The Quality Assurance Manager is responsible for establishing and implementing the Long Island Lighting Company quality assurance program at Shoreham as described in the Long Island Lighting Company Quality Assurance Manual. He is assisted in carrying out his responsibilities by onsite and offsite quality assurance personnel.

The quality assurance organization has the authority to: (1) identify quality problems, (2) initiate, recommend, or provide solutions, (3) verify implementation of solutions, and (4) stop unsatisfactory work or further processing of unsatisfactory material. The quality assurance organization is responsible for: (1) reviewing and approving quality related documents (e.g., instructions, procedures, and specifications), (2) performing vendor quality assurance prequalifications, (3) assuring that procurement documents contain quality requirements which can be inspected and controlled, (4) surveillance and auditing of vendors, (5) documenting and reporting to management nonconformances discovered during surveillance or audit, (6) assuring corrective actions are effective and accomplished in a timely manner, and (7) auditing of maintenance and operation activities.

Table 17-1

Regulatory Guidance Applicable to
Quality Assurance Program

1. Regulatory Guide 1.28 (Revision 0 - June 1972), "Quality Assurance Program Requirements (Design and Construction)."
2. Regulatory Guide 1.50 (Revision 0 - August 1972), "Quality Assurance Requirements for Installation, Inspection, and Testing of Instrumentation and Electric Equipment."
3. Regulatory Guide 1.33 (Revision 0 - November 1972), "Quality Assurance Program Requirements (Operation)."
4. Regulatory Guide 1.37 (Revision 0 - March 1973), "Quality Assurance Requirements for Cleaning of Fluid Systems and Associated Components of Water-Cooled Nuclear Power Plants."
5. Regulatory Guide 1.38 (Revision 0 - March 1973), "Quality Assurance Requirements for Packaging, Shipping, Receiving, Storage, and Handling of Items for Water-Cooled Nuclear Power Plants."
6. Regulatory Guide 1.39 (Revision 0 - March 1973), "Housekeeping Requirements for Water-Cooled Nuclear Power Plants."
7. Regulatory Guide 1.58 (Revision 0 - August 1973), "Quality Assurance Requirements for the Design of Nuclear Power Plants."
8. Regulatory Guide 1.64 (Revision 1 - February 1975), "Quality Assurance Requirements for the Design of Nuclear Power Plants."
9. Regulatory Guide 1.74 (Revision 0 - February 1974), "Quality Assurance Terms and Definitions."
10. Regulatory Guide 1.88 (Revision 0 - August 1974), "Collection, Storage, and Maintenance of Nuclear Power Plant Quality Assurance Records."
11. Regulatory Guide 1.94 (Revision 0 - April 1975), "Quality Assurance Requirements for Installation, Inspection, and Testing of Structural Concrete and Structural Steel During the Construction Phase of Nuclear Power Plants."
12. Regulatory Guide 1.144 (Revision 0 - January 1979), "Auditing of Quality Assurance Programs for Nuclear Power Plants."
13. ANSI N45.2.8 - 1975, "Supplementary Quality Assurance Requirements for Installation, Inspection, and Testing of Mechanical Equipment and Systems for the Construction Phase of Nuclear Power Plants."
14. ANSI N45.2.13 - 1976, "Quality Assurance Requirements for Control of Procurement of Items and Services for Nuclear Power Plants."

The Plant Manager reports to the Manager - Electric Production-Nuclear. He is directly responsible for the safe and reliable operation of Shoreham and for assuring the implementation of the quality assurance program on site.

The Operating Quality Assurance Engineer reports directly to the Plant Manager and maintains a working interface and a direct line of communication with the Quality Assurance Manager. The Operating Quality Assurance Engineer has direct responsibility for assuring implementation of the Long Island Lighting Company quality assurance program and additions and changes thereto onsite. He is responsible for establishing, reviewing, and implementing all site quality assurance/quality control procedures and instructions and for the performance of site audits. He independently evaluates and reports the status and adequacy of the quality assurance program at the station to the Plant Manager and the Quality Assurance Manager. Differences of opinion between the Operating Quality Assurance Engineer and Plant Manager involving quality matters will be referred to the Quality Assurance Manager, and if necessary, to the highest level of management for ultimate resolution.

17.3 Quality Assurance Program

The quality assurance program description for the operation of Shoreham is described in the Long Island Lighting Company Quality Assurance Manual and is supplemented by quality assurance procedures and instructions which provide the detailed instructions and checklists necessary to implement or verify implementation of the quality assurance program requirements.

The quality assurance program for Long Island Lighting Company is structured to be in accordance with Appendix B to 10 CFR Part 50 and with the provisions of the NRC regulatory guidance shown in Table 17-1. These documents, coupled with the quality assurance program description in the Final Safety Analysis Report, form the foundation from which the overall quality assurance program is formulated and describe how the requirements of Appendix B to 10 CFR 50 are satisfied. The program is implemented via the Long Island Lighting Company Quality Assurance Manual and implementing procedures. The Manual is approved by the Senior Vice President - T & D and Operations and the Senior Vice President - Engineering and Project Management and is supplemented by quality assurance procedures and instructions. These documents control quality-related activities involving safety-related items to satisfy the requirements of Appendix B to 10 CFR 50.

The offsite operational quality assurance procedures and instructions are approved by the Quality Assurance Manager. The station quality assurance/quality control procedures and instructions are reviewed by the Operating Quality Assurance Engineer and the Quality Assurance Engineer, approved by the Plant Manager and issued by the Operating Quality Assurance Engineer. The quality assurance program requires that quality assurance documents encompass detailed controls for: (1) translating codes, standards, and regulatory requirements into specifications, procedures and instructions, (2) developing, reviewing, and approving procurement documents, including changes, (3) prescribing all quality-affecting activities by documented instructions, procedures, or drawings, (4) issuing and distributing approved documents, (5) purchasing items and services, (6) identifying materials, parts, and components, (7) performing special processes, (8) inspecting and/or testing material, equipment, processes

or services, (9) calibrating and maintaining measuring and test equipment, (10) handling, storing, and shipping of items, (11) identifying the inspection, test, and operating status of safety-related items, (12) identifying and dispositioning nonconforming items, (13) correcting conditions adverse to quality, (14) preparing and maintaining quality assurance records, and (15) auditing of activities which affect quality.

The Quality Assurance Manager is responsible for the establishment and continuous implementation of the quality assurance indoctrination and training program to assure that persons involved in safety-related activities are knowledgeable in quality assurance instructions and implementing procedures and demonstrate a high level of competence and skill in the performance of their quality-related activities.

Quality is verified through surveillance, inspection, testing, checking, and audit of work activities. The quality assurance program requires that quality verification and inspections be performed by individuals from the plant staff who are not directly responsible for performing the actual work activity. Inspections are performed with procedures, instructions, and/or checklists by inspectors who have been qualified and certified in accordance with codes, standards, or Long Island Lighting Company training programs. A technical quality assurance review is performed on spare and replacement parts to ensure that controls for inspection and testing safety-related items are equal to or better than the original equipment.

The Long Island Lighting Company quality assurance organization is responsible for quality assurance audits, which include planning, preparation, scheduling, performance, reporting, and verifying implementation of corrective and preventive action measures. These audits are performed with written procedures or checklists by qualified personnel not having direct responsibility in the areas being audited. The quality assurance program establishes a comprehensive audit system to ensure that the quality assurance program requirements and related supporting procedures are effective and properly implemented during operational phase. Audits will include an evaluation of quality assurance practices, procedures, and instructions; work areas, activities, processes, and items; the effectiveness of implementation of the quality assurance program; and conformance with policy directives.

The quality assurance program requires documentation of audit results and written review by management having responsibility in the area audited to determine and take corrective action as required. Reaudits are performed to determine that nonconformances are effectively corrected and that the corrective action precludes repetitive occurrences. Audit findings, which indicate quality trends and the effectiveness of the quality assurance program, are reviewed by the Quality Assurance Manager and the Plant Manager and reported to appropriate management levels on a periodic basis.

17.4 Conclusion

Our review of the Long Island Lighting Company's quality assurance program description for the operations phase has verified that the criteria of Appendix B to 10 CFR Part 50 have been addressed in the Shoreham quality assurance program.

Based on our review and evaluation of the quality assurance program description contained in Section 17.2 of the FSAR for Shoreham, we conclude that:

- (1) The quality assurance organization of Long Island Lighting Company provides: independence from cost and schedule (when opposed to safety considerations), authority to effectively carry out the operations quality assurance program, and access to management at a level necessary to perform their quality assurance functions.
- (2) The quality assurance program, with the exception of the outstanding issue described in 17.5 of this SER, describes requirements, procedures, and controls that, when properly implemented, comply with the requirements of Appendix B to 10 CFR Part 50 and with the acceptance criteria contained in Standard Review Plan Section 17.2.

Accordingly, the staff concludes that the applicant's description of the quality assurance program, with the exception of the outstanding issues noted below, is in compliance with applicable NRC regulations.

17.5 Outstanding Quality Assurance Issues

We have not completed our review of those systems, structures, and components which should be under the control of the quality assurance program. We will discuss our resolution of the Q-list for Shoreham in a supplement to this report.

As stated in Section 13.1, the applicant is changing the management organization. If these changes affect the quality assurance program, they will be discussed in a supplement to this report.

17 QUALITY ASSURANCE

17.5 Outstanding Quality Assurance Issues

Our review of the quality assurance program description, for the operations phase, has verified that the criteria of Appendix B to 10 CFR 50 have been adequately addressed in Chapter 17 of the Final Safety Analysis Report. This determination of acceptability included a review of the list of items to which the quality assurance program applies.

The list of items was reviewed by the technical review branches to assure that safety-related items within their scope of review fall under the quality assurance program controls. Differences between the staff and the applicant regarding the list have been resolved to the staff's satisfaction. The list has been expanded to include safety-related items reflected in NUREG-0737, "Clarification of TMI Action Plan Requirements," November 1980. Therefore, the staff has no open items concerning the quality assurance program for operations or to what the program applies.