

U.S. NUCLEAR REGULATORY COMMISSION
REGION I

Report No. 50-552/85-32

Docket No. 50-352

License No. NPF-27

Licensee: Philadelphia Electric Company
2301 Market Street
Philadelphia, Pennsylvania 19101

Facility Name: Limerick Generating Station, Unit 1

Inspection At: Limerick, Pennsylvania

Inspection Conducted: August 5 - 9, 1985

Inspectors:

M. Dev, Reactor Engineer

8.29.85

date

Approved by:

P. K. Eapen
Dr. P. K. Eapen, Chief,
Quality Assurance Section

8/30/85
date

Inspection Summary: Routine, unannounced inspection conducted on August 5-9, 1985 (Inspection Report No. 50-352/85-32)

Areas Inspected: Licensee's action on previous NRC concerns and the quality assurance program for power ascension. The inspection involved 40 inspection hours by one region-based inspector.

Results: No violations were identified.

DETAILS

1.0 Persons Contacted

S. DiMauro, Lead Auditor - PECO
C. Endris, Regulatory Engineer - PECO
*K. Folta, QA Engineer - PECO GILBERT
*C. Harmon, QC Supervisor - PECO
M. Held, QC Engineer - PECO
*G. Lauderback, QA Engineer - PECO
*G. Leitch, Plant Manager - PECO
C. Mengers, Gen Supervisor, QA Audit - PECO
C. O'Donnel, Lead Auditor - PECO
*J. Rubert, Supervisor, QA Audit - PECO
G. Rainey, Instrument & Control Engineer - PECO
D. Rossman, QA Engineer - PECO
R. Smith, QA Engineer - PECO
*R. Smith, Lead Auditor - PECO
*V. Warren, Test Engineer - PECO

*Denotes those present at exit meeting held on August 9, 1985.

The inspector also contacted other licensee and contractor technical and administrative personnel during this inspection.

2.0 Licensee's Action on Previous NRC Concerns

(Closed) Inspector Follow Item (50-352/84-21-03): The licensee's trend analysis method did not address all corrective action systems. There was no procedure for evaluation and analysis of corrective action quality trend.

In response to the above the licensee has established a Procedure, QADP-32, Revision 0, Quality Assurance Tracking and Trending System Trending Quality Deficiencies. This procedure describes method to be used for the Electric Production QA Trend Analysis and evaluation of quality problems identified as a result of QA Audits, QC Inspections, QC Monitoring, QA Surveillances, LERs, INPO Evaluations, JUMA Audits, ANI Inspections, NRC Inspections, QC Initiated Non-compliance Reports, and other Noncomformance Reports. In addition, Engineering and Research QA findings are trended in accordance with the Procedure QAI-29. The inspector reviewed the licensee's Procedure QADP-33, Revision 0, for the Entry of Data into the Quality Assurance Tracking and Trending System Data Base, and Instruction for Data Input to Quality Assurance Tracking and Trending System. The new trending system incorporated attributes such as, personnel error; design, manufacturing and construction deficiency; external causes; procedural deficiency; management or QA program deficiency; records; and commitments. These attributes were trended against findings relative to organization, criteria, severity, activities, causes and the time-span.

Based on the above this item is closed.

(Open) Inspector Follow Item (50-352/84-31-08): Appendix I of the Administrative Procedure A-46 addressed station QA records, individual responsibility, and records maintenance and transmission to NRMS. The initial review indicated that the intent of the Appendix I was not uniformly implemented. The current inspection verified that the licensee updated all but 15 of the 68 station procedures. This item remains open pending completion of the remaining 15 procedures.

(Open) Unresolved Item (50-352/84-67-04): Two fuel bundles (LY 8076 and LY 8310) were stuck in the spent fuel pool rack during fuel loading. An investigation was conducted to evaluate and analyze the severity of the problem. The licensee has not completed the required test because the dummy fuel bundles have been loaned to the Hope Creek Generating Station. This item remains open, pending completion of the required test by the licensee.

3.0 Quality Assurance Program for Power Ascension

3.1 Reference/Requirements

- 10 CFR Appendix B, Quality Assurance Criteria for Nuclear Power Plants ..., Criteria X and XVI
- Limerick Generating Station (LGS) FSAR, Section 17.2, Operational Quality Assurance Program
- LGS Technical Specification, Section 6, Administrative Controls
- ANSI N45.2.12 - 1977, Requirements for Auditing Quality Assurance Program
- ANSI N18.7 - 1976, Administrative Controls and Quality Assurance for the Operational Phase of Nuclear Power Plants
- LGS Quality Assurance Plan, Volume III, Operation Phase
- Philadelphia Electric Company (PECo) Nuclear Review Board Procedure, NRB-3, Audits

3.2 Program Review

The inspector reviewed LGS QA Operational Program as applicable to startup and power ascension test to verify that the licensee has established procedures to provide QA/QC coverage for the following activities:

- conduct of testing
- Tracking of test deficiencies
- Test documentation
- Control of measuring and test equipment
- QA and management audit of test program and audit review

- Responsibility of QA personnel as related to startup test program

The inspector reviewed the following LGS administrative and QA procedures and instructions:

- A-13, Procedure for Reporting Defects and Noncompliance, Rev. 2
- A-14, Procedure for Control of Plant Modification, Rev. 2
- A-25.1, Preventive Maintenance Program, Rev. 1
- A-26, Procedure for Corrective Maintenance, Rev. 1
- A-27.1, Administrative Procedure for Procurement of Q-Listed Items, Rev. 1
- A-43, Surveillance Testing Program, Rev. 7
- A-47, Procedures for Preparation and Control of Surveillance Test Procedure, Rev. 4
- A-200, Startup Test Procedure Format and Content, Rev. 1
- A-201, Startup Test Procedure Control, Rev. 1
- A-202, Startup Test Implementation, Rev. 1
- A-203, Startup Test Program Personnel Training and Qualification, Rev. 0
- A-204, Hot Functional Test Procedure Preparation, Control and Conduct, Rev. 0
- QADP-6, Quality Assurance Division Audit Program - Preoperational and Operational Phase, Rev. 10
- QADP-8, Procedure for Preoperation and Use of Audit Checklist, Rev. 6
- QADP-9, Procedure for Control of Apparent Deficiencies and Auditor Follow-up Required Items, Rev. 10
- QADP-9.1, QC Procedure for Control of Nonconformances, Rev. 1
- QADP-12, Procedure for Performance of QA Division Surveillance, Rev. 10
- QADP-26, Quality Control Inspection of LGS Startup Preoperational Testing Activities, Rev. 2
- QADP-27, Procedure for Issuance and Control of Limerick Startup Quality Control Corrective Action Request, Rev. 3
- QADP-27.1, Procedure for Performance of Startup Nonconformance Report Trend Analysis, Rev. 3
- QADP-28, Procedure for Quality Assurance Monitoring of Completed LGS Startup Preoperational Test Packages, Rev. 1
- QADP-30, Procedure for LGS Startup QC Surveillances, Rev. 1
- QADP-100, Training, Qualification and Certification of Quality Control Personnel, Rev. 2
- QADP-101, Quality Control Inspection Program, Rev. 1
- QADP-101.1, Conduct of QC Inspection Activities, Rev. 2
- QADP-101.2, QC Review of Inspection Points in Work/Test Procedures, Rev. 1
- QADP-104, QC Monitoring Program, Rev. 1
- QADP-104.1, Scheduling, Performing, Documenting and Status Tracking Quality Control Monitoring Activities, Rev. 2
- QADP-104.2, Preparation of Detailed Monitoring Checklist, Rev. 1

- QADP-105, Calibration and Control of QC Measuring and Test Equipment, Rev. 0
- LGS-QCI-003, Instruction for Review of Startup Test Procedures (STP) and Hot Functional (HF) Procedures, Rev. 3
- LGS-QCI-005, Instruction for Surveillance of Startup and Hot Functional Testing Programs, Rev. 1
- LGS-QCI-007, Instruction for Review of Startup and Hot Functional Testing Programs, Rev. 1

3.3 Program Implementation

The inspector discussed with the Electric Production and Engineering and Research QA/QC Supervisory personnel, LGS Instrument and Control engineer, and their staff regarding scope, responsibility and implementation of LGS startup and power ascension test program. The inspector verified that LGS has established procedures and instructions, referenced in paragraph 3.2, to provide QA/QC coverage for power ascension test activities including conduct of testing, tracking of test deficiencies, test documentation, and control of measuring and test equipment, by QA/QC personnel, on a regular basis. These procedures and instructions were adequate and the individuals performing QA/QC overview of the startup test activities were experienced, qualified, properly indoctrinated and certified to meet the licensee and regulatory requirements.

The inspector reviewed the following management and quality assurance audits of the test program on a sampling basis and verified that they were performed in accordance with the program requirements.

AL-84-41 MI, Measuring and Instrumentation
 AL-84-18 PR, Control of Heavy Load
 AL-84-28 PR, Preoperational Testing
 AL-84-58 PR, Corrective Action
 AL-84-86 PR, Initial Fuel Load and Zero Power Testing
 AL-84-19 MEM, Corrective Maintenance Program
 AL-84-69 MEM, Corrective Maintenance Program
 AL-84-40 SU, Hot Functional Startup Testing
 AL-85-07 MOD, Minor Plant Modification
 AL-85-30 PR, Corrective Action Program for QA/NRC Identified Noncompliances

The inspector noted that these audits properly identified unresolved items and nonconformances and recommended corrective actions, as applicable. It was also noted that LGS open items tracking mechanism updated "Activities Report" biweekly and "Open Item List" monthly. This provided updated status of all outstanding audit finding and nonconformances to the LGS QA/QC and the management. The audits were reviewed by responsible management personnel and items requiring resolution were properly dispositioned and documented in accordance with program requirements.

The inspector witnessed the following Electric Production QA audit in progress:

AL-85-64 SO, LCO Surveillance Test Procedure Review
AL-85-64 PR, TMI Lesson Learned Routine Test Procedure Review

The inspector also reviewed Current QA Audit Schedule and found it adequate.

3.4 Findings

No violations were identified in the areas inspected.

4.0 Management Meetings

Licensee management was informed of the scope and purposes of the inspection at an entrance meeting conducted on August 5, 1985. The findings of the inspection were discussed with licensee representatives during the course of the inspection. An exit meeting was conducted on August 9, 1985 at the conclusion of the inspection (See Paragraph 1.0 for attendees) to provide the findings of this inspection to licensee management.

At no time during the inspection was written material provided to the licensee.