

U.S. NUCLEAR REGULATORY COMMISSION
REGION I

Report No. 50-352/84-37

Docket No. 50-352

License No. CPPR-106 Priority -- Category B

Licensee: Philadelphia Electric Company

2301 Market Street

Philadelphia, Pennsylvania 19101

Facility Name: Limerick Generating Station, Unit 1

Inspection At: Limerick, Pennsylvania

Inspection Conducted: July 5-13, 1984

Inspectors: L. E. Briggs
L. Briggs, Lead Reactor Engineer

8/3/84
date

Approved by: H. H. Nicholas for
L. H. Bettenhausen, Chief, Test
Programs Section, Engineering
Programs Branch

8/3/84
date

Inspection Summary: Inspection on July 5-13, 1984 (Report No. 50-352/84-37)

Areas Inspected: Routine, onsite, unannounced inspection by one region-based inspector (13 hours) of follow-up of previously identified items, preoperational test witnessing, preoperational test procedure review, test procedure results evaluation, QC/QA interface with startup and plant tours.

Results: No violations identified.

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DETAILS1. Persons Contacted

- A. Aversano, Startup Quality Control Engineer
- F. Coyle, Quality Assurance Engineer
- *C. Endriss, Regulatory Engineer
- *E. Gibson, Quality Assurance Engineer
- D. Kelsey, Startup Engineer
- *G. Leitch, Superintendent, Limerick Generating Station
- *A. MacAinsh, Quality Assurance Site Supervisor
- *W. Mc Cullough, Project Startup Engineer
- *K. Meck, Quality Assurance Engineer
- *J. Phillabaum, Licensing Engineer
- *J. Rubert, Lead Quality Control Engineer
- P. Shott, Startup Engineer
- A. Spector, Field Engineer/Startup Engineer

Other NRC Personnel

- *J. Wiggins, Senior Resident Inspector, Limerick
- *W. Borchardt, Reactor Engineer

The inspector also contacted other members of the licensee's technical and QA/QC staff during the inspection.

2. Followup of Previous Inspection Findings

(Closed) Unresolved Item (84-04-01), Licensee to revise AD7.0-2 and review previously tested pumps to ensure appropriate vendor pump curve verification had been conducted. Revision of AD7.0-2 was found acceptable during inspection 50-352/84-25. The inspector reviewed Startup Quality Control (QC) Surveillance Report No. 364 conducted on June 1, 1984, to determine the status (completeness) of pump curve verification data. Several minor discrepancies were identified during the surveillance.

A follow-up surveillance was conducted on July 12, 1984 which identified one system package not yet complete (condensate pumps). This data package is in the process of being assembled by the system startup engineer. The surveillance report was closed on July 12, 1984 following the reaudit. A sampling review by the inspector verified that packages were complete. The QC engineer also submitted for approval a Startup Training Bulletin (No. 84-XXXVIII) discussing TT1.1-1, Technical Test for Driven Mechanical Equipment requirements to ensure future packages are complete.

(Closed) Unresolved Item (84-04-03), Licensee to revise FSAR to incorporate a low reactor water level recirculation pump motor generator set run-back to agree with as-built plant conditions. The inspector reviewed the Licensing Document Change Notice (LDCN) No. FS-565 approved for submittal on May 31, 1984. The LDCN incorporated the required FSAR change.

No unacceptable conditions were identified.

3. Test Witnessing

3.1 Scope

Test witnessing by the inspector included the observations and overall crew performance identified in Paragraph 3.2 of NRC:RI Inspection Report 50-352/84-04.

3.2 Preoperational Testing Witnessed

The inspector observed portions of the following tests:

- IP-59.1, Containment Isolation and Nuclear Steam Supply Shutoff System (NSSSS), Revision 1; and,
- IP-78.1, Startup Range Neutron Monitoring, Revision 0.

In both cases the inspector verified that the criteria referenced in Paragraph 3.1 above were being met.

No problems were noted during the various times that test witnessing was conducted during the inspection.

The inspector did note that startup engineer control, at least during the conduct of the above tests, was better than that observed during previous tests witnessed. In addition, the number of Test Change Notices (TCN) in both cases was substantially reduced from previous observations.

3.3 Preoperational Test Program Changes

The licensee (PECO) has recently made several changes to increase preoperational test control and PECO involvement during preoperational test performance and to reduce the number of procedural TCN's. A brief summary of program changes include:

- A PECO Engineer - Supervisory has been assigned to help coordinate and organize the program and report status to the Station Superintendent or his assistant.
- A PECO engineer has been assigned to each preoperational test that is not yet complete who will participate in the actual performance of the test. The PECO engineer will oversee and coordinate the conduct of the preoperational test.

To reduce the number TCN's and the complexity of review the licensee has revised (June 25, 1984) AD-8.3P, Preoperational Test Implementation to allow test changes to be written in the body of the procedure, vice writing on a separate form, if test intent is not altered and the changes are minor in nature.

The inspector had no further questions at this time. However, the new method of incorporating test changes will be observed during future routine inspections.

4. Preoperational Test Procedure Review

The following procedure was reviewed in preparation for test witnessing, technical and administrative adequacy and for verification that testing is planned to adequately satisfy regulatory guidance and licensee commitments. The procedure was reviewed to verify licensee review and approval, proper format, technical adequacy, test objectives, prerequisites, initial conditions, test data recording requirements and system return to normal.

-- IP-34.1, Reactor Enclosure HVAC, Revision 0, Approved July 2, 1984.

The above procedure was approved for logic testing only. Filter efficiency, flow distribution and flow resistance testing will be incorporated at a later date. These items will be reviewed after the filter testing portion of IP-34.1 is approved and issued by the licensee.

The inspector had no further questions at this time.

5. Test Procedure Review for Test Results Evaluation

5.1 Scope

The 4 completed test procedures listed below were reviewed to verify that adequate testing had been conducted to satisfy regulatory guidance, licensee commitments and FSAR requirements and to verify that uniform criteria are being applied for evaluation of completed test results in order to assure technical and administrative adequacy.

-- IP-23.1 Diesel Generator Fuel Oil System, Revision 0;

-- IP-18.1 Instrument Air System, Revision 0;

-- IP-37.1, Condensate and Refueling Water Transfer, Revision 0; and,

-- Code Hydro, QC Record No. MI-IM-RPV-1-3-1, pages 1 through 778.

The inspector reviewed the test results and verified the licensee's evaluation of test results by review of test changes, test exceptions, test deficiencies, "As-Run" copy of test procedure, acceptance

criteria, performance verification, recording conduct of test, QC inspection records, restoration of system to normal after test, independent verification of critical steps or parameters, identification of personnel conducting and evaluating test data, and verification that the test results have been approved.

5.2 Findings

No discrepancies were noted in the above review. The following open test exceptions were noted.

<u>Procedure Number</u>	<u>Test Exception Number</u>
IP-18.1	001 and 007
IP-37.1	005, 010 and 011

These procedures will be examined during subsequent inspections for acceptable resolution of the listed exceptions and licensee review and approval. (352/84-37-01)

6. Quality Control/Quality Assurance Interface with Startup

The inspector reviewed 4 Startup QC Surveillance Reports (SQCSR) and 2 QA audits of different preoperational tests conducted by the licensee's startup organization. The results and findings were discussed with the responsible QA/QC engineer. The following were reviewed:

-- SQCSR No. 417, Surveillance of the performance of IP-59.1, Containment Isolation and Nuclear Steam Supply Shutoff System, completed on July 10, 1984. No discrepancies were identified.

-- SQCSR No. 163, Surveillance of the performance of IP-44.1, Condensate System, completed on March 17, 1984, identified one discrepancy, valve packing leakage on valve HV-103C. Leakage was corrected and the surveillance deficiency was cleared.

-- SQCSR No. 162, Surveillance of the performance of IP-55.1, Control Rod Drive Hydraulic System (RDHS) (NSSS). Initial surveillance on March 16, 1984 identified several administrative problems concerning signatures and dates. A final surveillance on March 28, 1984 verified all items corrected and the surveillance deficiencies were cleared.

-- SQCSR No. 094, Surveillance of 'A' Emergency Diesel Generator Initial Operations (vendor testing), conducted on February 22, 1984. One discrepancy resulted when an operator almost operated a switch which was red tagged. This discrepancy resulted in issuance of Training Bulletin 84-XII on February 23, 1984. The discrepancy and the surveillance was closed on March 5, 1984.

-- Quality Assurance Audit Report (QAAR) No. S-059, started on June 3, 1984 (still in progress) observed initial performance of IP-100.3, Mechanical Snubber Testing. This audit to date has resulted in 3 discrepancies (Finding Report Nos. S-089, S-087 and S-088), 1 of which resulted in a Stop Work Order when 2 TCN's to IP-100.3 were prepared and implemented without proper review and approval. The TCN's (005 and 006) deleted a test prerequisite that required QC Instruction 8031/P-2.00, "Pipe Hanger Support, Restraint and Shock Arrestor Installation - Final Review" be complete prior to test (IP-100.3) performance. The other audit findings were administrative procedural violations. At termination of this inspection (July 13, 1984) the Stop Work was still in effect with on-going licensee action to resolve the identified discrepancies.

-- QAAR No. S-046, Audit of IP-52.1, High Pressure Coolant Injection, conducted April 17 through June 6, 1984, did not identify any discrepancies.

The inspector did not have any further questions at this time.

7. Plant Tours

The inspector made several tours of various areas of the facility to observe work in progress, housekeeping, cleanliness controls and status of construction and preoperational test activities.

No violations were identified.

8. Exit Interview

A management meeting was held on July 13, 1984, to discuss the inspection scope and findings as detailed in this report (see Paragraph 1 for attendees). No written information was provided to the licensee at any time during the inspection.