

U.S. NUCLEAR REGULATORY COMMISSION  
REGION I

Report No. 84-39  
Docket No. 50-352  
License No. CPPR-106 Priority - Category B  
licensee: Philadelphia Electric Co.  
2301 Market Street  
Philadelphia, Pennsylvania 19101

Facility Name: Limerick Generating Station, Unit 1  
Inspection At: Limerick and Philadelphia, PA  
Inspection Conducted: July 23-27, 1984

Inspector: James Prell 9/20/84  
J. Prell, Reactor Engineer date

Approved by: S. D. Ebner for 9/20/84  
S. D. Ebner, Chief, date  
Engineering Programs Branch

Inspection Summary: Inspection conducted on July 23-27, 1984  
(Report No. 50-352/84-39)

Areas Inspected: Unannounced inspection by one region-based inspector (30 hours) to determine readiness prior to fuel load of licensee's training program for non-licensed personnel. Areas inspected were maintenance, instrumentation and control, non-licensed operators, health physics and chemistry. The inspector also reviewed the status of previous inspection findings.

Results: Three open items were closed and one unresolved item was identified.

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1. Persons ContactedPhiladelphia Electric Company (PECO)

J. Cornell, Lead Staff Engineer, Instrumentation & Control (I&C)  
 \*R. Costagliola, Supervisory Engineer, Maintenance Division  
 J. Cotton, Maintenance Engineer, Electric Production Department (EPD)  
 R. Dubiel, Senior Health Physicist, EPD  
 \*P. Duca, Jr., Technical Engineer, EPD  
 \*C. Endriss, Regulatory Engineer, EPD  
 \*E. Firth, Training Coordinator, EPD  
 \*C. Harmon, Quality Assurance Engineer (QAE), Engineering and Research Division (E&RD)  
 \*A. Kilburn, Quality Control  
 \*G. Lauderback, QAE, E&RD  
 G. Leitch, LGS Superintendent  
 \*A. MacAinsh, LGS QA Supervisor  
 \*K. Mandl, Senior Auditor, QA, EPD  
 J. Olson, Senior Instructor, Training and Testing, Maintenance Division  
 E. Roth, Foreman, Training and Testing, Maintenance Division  
 R. Wiegler, I&C  
 J. Wiley, Senior Chemist, EPD

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\*S. Chaudhary, Senior Resident Inspector  
 J. Wiggins, Senior Resident Inspector

\*Denotes those present at the exit meeting on July 27, 1984.

The inspector also interviewed other personnel during the inspection.

2. Action on Previous Inspection Findings

(Closed) Open Item (352/83-17-01) Review for adequacy operational staffing and training commitments, administrative and operational procedural development, and licensee identification of organizational and staffing levels for Unit 1 operation. The inspector reviewed PECO memorandum dated 12/13/1983, subject "Staffing Level Status," from P. J. Duca to G. M. Leitch. This memorandum identified Unit 1 organizational and staffing levels. The inspector also verified that the staffing levels of the Health Physics, Chemistry, Maintenance, and Operations Departments met or exceeded minimum levels and that these departments have met their training commitments. The status of administrative and operational procedure development was reviewed and found adequate for the Maintenance and Operations Departments. Health Physics and Chemistry procedure development will be reviewed for adequacy during future Health Physics inspections. This item is closed.

(Closed) Open Item (352/83-17-02) The NRC is awaiting further information from the licensee on qualifications of certain QA personnel. The

inspector reviewed the resumes of four individuals in the QA Department, Electric Production, against their job descriptions, ANSI/ASME N 45.2.23-1978 and ANSI/ANS-3.1-1978. All individuals exceeded the ANSI requirements. This item is closed.

(Closed) IE Circular (352/81-CI-02) The licensee should review and revise, as necessary, their administrative controls regarding licensed operator performance to ensure the guidance of IE Circular No. 81-02 is incorporated. The inspector verified that administrative procedure A-7, "Shift Operation," Revision 0, incorporated the guidance found in IE Circular No. 81-02. This item is closed.

### 3. Operating Staff Training

The purpose of this inspection was to confirm that the licensee has trained the operating staff to FSAR commitments prior to initial fuel loading. The inspector reviewed the training status of maintenance personnel, non-licensed operators, instrumentation and control (I&C) personnel, health physics and chemistry technicians, and key members of site management.

#### 3.1 References

- Limerick Generating Station (LGS) Final Safety Analysis Report (FSAR)
- ANSI/ANS 3.1-1978, "American National Standard for Selection and Training of Nuclear Power Plant Personnel"

#### 3.2 Scope of Inspection

In order to determine if the plant operating staff was trained and qualified to operate/maintain LGS Unit 1 after fuel load, the inspector performed the following:

- Verified that a documented training program consistent with FSAR commitments for the principal plant staff had been established. This included review of training schedules, lesson plans, and administrative and implementing procedures. It also included discussions with supervision, training coordinators, instructors and students.
- Verified that the licensee had established a documented program for general employee training (GET) which allows personnel site access and provides them with a general knowledge of plant operations and safety. This included reviewing GET lesson plans, procedures and records of attendance. The inspector also discussed the administration and effectiveness of the GET program with appropriate management personnel and former students.

- Verified that responsibility for evaluating the training programs had been assigned.
- Reviewed numerous training records of individuals in each of the disciplines identified above to verify their qualifications and the effective implementation of the training programs.
- Verified that a program had been developed for training/qualifying replacement personnel.

### 3.3 Documents Reviewed

The inspector reviewed the following documents:

- MA-4, Welder Qualification and Welding Procedure Qualification, Revision 5
- MA-9, Training of Maintenance Division Personnel, Revision 3
- Maintenance Division LGS Personnel Training Matrix, no date
- Outline for Indoctrination of LGS Maintenance Personnel, July 12, 1984
- Lesson Plan (LP), Welder Qualification and Welding Procedure Qualification, July 19, 1984
- LP, Procedure for Generation, Control and Revision of Maintenance Division Administrative Procedures, July 19, 1984
- LP, Procedure for Preparation of Maintenance Shop Procedures, July 19, 1984
- LP, Generation, Control and Revision of Maintenance Division Standard Work Instruction Procedures, July 19, 1984
- LP, Procedure for Proper Nuclear Plant Housekeeping and Control of Combustibles, July 19, 1984
- Maintenance Division Training Outline (MDTO), Administrative Controls - Nuclear Power Plants (Engineering Staff/NDE/QC Personnel), no date
- MDTO, Maintenance Supervisors, no date
- MDTO, Upgrade 1st Class to Foremen, no date
- Personnel records of nine maintenance personnel

- GP-PR-111031, Proposal to Provide a Non-Licensed Operator Training Program For The Limerick Generating Station, June 25, 1984
- LP-GET-0021, General Employee Training (Abbreviated), Draft
- Health Physics and Technician Training Outline
- Personnel training/qualification records of eight instructors
- Personnel training/qualification records of two Health Physics and Chemistry technicians
- A-50, Procedure For Conduct of Station Training
- NTS Training Manual, Revision 0
- LP, Process Instrumentation and Control Course
- LP, Nuclear Instrumentation Course
- Job Analysis for: Special Tester "A", Special Tester "B", Tester and Technical Assistant
- Personnel training/qualification records of three I&C technicians
- Machinist Trainee Evaluation Report
- Machinist 2nd Test

### 3.4 Findings

The on-site Nuclear Training Section (NTS) is responsible for providing training to non-licensed operators, as well as licensed operators, GET, health physics and chemistry personnel and shift technical advisors. Maintenance personnel are trained/qualified by the Maintenance Division and I&C personnel are trained/qualified by the Research and Test Division.

The training program for maintenance and I&C personnel is well documented and recorded. The training/qualification program for both disciplines appears thorough and well-planned. Only 1st class maintenance personnel are to be permanently staffed at LGS. Staffing is almost complete. Site specific training on LGS maintenance procedures and instructions has not yet begun. This training is scheduled to be given just prior to fuel load. This is part of an unresolved item 50-352/84-39-01 identified below.

The LGS GET program has been instituted since May 1984. At the time of this inspection approximately 50% of the PECO/BECHTEL personnel

had received this training. LGS is planning on implementing site access control requirements on August 15, 1984. After that date all personnel requiring unescorted site access must have received their GET.

Although the NTS has drafted administrative procedures, these procedures have not yet been PORC approved. The NTS is, however, administering their program against these draft procedures which appear adequate.

Assistant Plant Operators (APOs), Plant Operators (POs) and Auxiliary Operators (AOs) are committed in the LGS FSAR to a three-phase training and qualifying program prior to fuel load. At the time of this inspection, these individuals still had not completed Phases II and III. In order to complete Phase II, each individual requires three more weeks of training. The NTS has scheduled this training to occur in six separate sequential sessions, each three weeks long, lasting for a total of 18 weeks. As presently scheduled, this means that only half of the personnel would complete their required training prior to the September 15, 1984 fuel load. Phase III consists of a six-week on-the-job training program during which the individual is required to demonstrate various skills to management. His management is then required to sign off on the individual's "qualification card." At the time of this inspection, the NTS had not received any signed-off qualification cards for AOs, APOs, and POs.

Prior to fuel load, site specific training on maintenance procedures and instruction should be provided to LGS maintenance personnel, and Phases II and III training should be completed for AOs, APOs, and POs. This is an unresolved item pending completion of licensee action in these areas and subsequent NRC review (50-352/84-39-01).

The NTS has established a program for evaluating training effectiveness. It is a two-part program. Part I consists of a short-term lesson evaluation by the student when the training is just completed. The Part II evaluation occurs four to six months later when evaluation forms are filled out by the student and his supervisor. The NTS is also a member of the Operators Experience and Assessment Committee which meets monthly to identify plant problems. The NTS is included to help identify training needs.

#### 4. Unresolved Items

Unresolved items are matters about which more information is required in order to ascertain whether they are acceptable items, items of non-compliance, or deviations. An unresolved item identified during the inspection is discussed in paragraph 3.4.

5. Exit Meeting

The inspector met with LGS staff on July 27, 1984 to discuss the scope and findings as detailed in this report. The licensee representatives acknowledged the inspector's findings.

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