# U.S. NUCLEAR REGULATORY COMMISSION REGION I

Report No. 50-352/84-44 Docket No. 50-352 License Nc. CPPR-106 Priority --Category B Licensee: Philadelphia Electric Company 2301 Market Street Philadelphia, PA 19101 Facility Name: Limerick Generating Station, Unit 1 Inspection At: Limerick, Pennsylvania Inspection Conducted: August 14-20, 1984 J. S. Hodson Reactor Engineer Approved by: C. J. Anderson, Chief, Plant System Section, Engineering Protection Branch, DETP

Inspection Summary: Inspection on August 14-20, 1984 (Inspection Report No.
50-352/84-44)

Areas Inspected: A routine unannounced inspection of activities related to the preoperational testing of safety-related heating ventilation and air conditioning (HVAC) systems. The inspection involved 23 inspection hours on site by one region-based inspector.

Results: No violations were identified.

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#### DETAILS

#### 1.0 Persons Contacted

## 1.1 Philadelphia Electric Company (PECO)

D. Condliff, Start-up Group Supervisor

\*J. M. Corcoran, Field QA Branch Head

\*L. C. Dyer, Quality Assurance Engineer

J. Krais, Start-up Engineer

\*W. L. McCullough, Project Start-up Engineer

E. L. Neasham, Start-up Group Supervisor

M. Perry, System Start-up Engineer

J. W. Spencer, Start-up Director

J. Yacyshyn, Field Engineer

## 1.2 U. S. Nuclear Regulatory Commission (USNRC)

\*R. Borchardt, Reactor Inspector

J. Wiggins, Senior Resident Inspector (Operations)

S. Chaudhary, Senior Resident Inspector (Construction)

\*Denotes personnel present at exit meeting.

## 2.0 Facility Tour

The inspector observed work activities in progress and completed work in several areas of the plant during a general inspection of Unit 1. The inspector examined work items for obvious defects and noncompliance with NRC requirements or licensee commitments. Particular note was taken of indications of quality control activities through visual evidence such as inspection records and non-conformance and acceptance tags. Specific work activities and completed work observed by the inspector included HVAC installation and HVAC preoperational testing.

No violations were identified.

# 3.0 Heating, Ventilation, and Air Conditioning (HVAC) Preoperational Testing

## 3.1 Test Witnessing and Procedure Review

The inspector reviewed the test procedure and witnessed the performance of IP-73.1, Rev. 0, dated 7/29/84, "Preoperational Test Procedure Standby Gas Treatment, Start-up Subsystem 34B, 34J, and 70A". The overall objective of this test is to demonstrate the capability of secondary containment to isolate and of the air recirculation and standby gas treatment systems to function properly. Since the testing had started prior to the inspector's visit, the entire test was not witnessed. Those parts witnessed by the inspection were the

reactor enclosure isolation logic testing and the refueling floor isolation logic testing. Parts to be completed after the inspector's visit include the system air balance, filter efficiency testing, and the reactor enclosure drawdown.

During the witnessing of the testing and the procedure review, the inspector conducted interviews with the test engineer and other selected personnel. These individuals were questioned for their knowledge of administrative procedures related to testing, general test experience, and their knowledge of the specific test being performed. The test procedure was reviewed for compliance with NRC commitments. The actual testing was evaluated for adherence to administrative procedures, adherence to the specific test procedure, and technical justification for deviation from the specific test procedure.

No violations were identified.

#### 3.2 Test Results Evaluation

The inspector reviewed the test results for the following pre-operational tests. The test results were reviewed for compliance with NRC commitments and for consistency with the scope and acceptance criteria of the procedure.

- IP-34.2, Rev. O, "Refueling Floor HVAC", results dated 7/29/84.
- IP 28.1, Rev. C, "D/G Enclosure HVAC" results dated 7/26/84

The test results for each of these tests included a test summary report.

The overall objective of IP-34.2 is to demonstrate the proper operation of the refueling floor HVAC system. The test results were approved by the licensee with one test exception. This exception involved a low flow switch (FSL-76-113) which was not operational. The part of the test requiring this low flow switch was bypassed and will be performed prior to fuel loading.

The overall objective of IP-28.1 is to demonstrate the proper operation of the diesel generator enclosure HVAC system. Auto and manual start and tripping of the fans and associated interlocks were demonstrated. Automatic blade pitch control of the exhaust fans was tested. The test results were approved by the licensee with no test exceptions.

No violations were identified.

### 4.0 Exit Meeting

The inspector met with the licensee and contractor representatives (denoted in Paragraph 1.0) at the conclusion of the inspection on August 20, 1984. The inspector summarized the scope and the inspection findings. At no time during this inspection was written material provided to the licensee.