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REGION I

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Licensee:	PECO Energy Correspondence Control Desk P.O. Box 195 Wayne, Pa 19087-0195
Facility Name:	Limerick Generating Station, Units 1 and 2
Inspection Period:	December 14, 1993 through January 18, 1994
Inspectors:	N. S. Perry, Senior Resident Inspector T. A. Easlick, Resident Inspector S. L. Hansell, Operations Engineer

Approved by: _____ 1/31/94
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EXECUTIVE SUMMARY
Limerick Generating Station
Report No. 93-33 & 93-33

Plant Operations

Unit 1 experienced a main generator stator water cooling runback that resulted in the 1A and 1B reactor recirculation pumps tripping as designed. The reactor operator immediately placed the reactor mode switch to "shutdown" initiating a full reactor scram, in accordance with plant procedures. The operators conducted a controlled orderly shutdown, placing the unit in a hot shutdown condition. The inspectors determined that PECO Energy's initial response and corrective actions were appropriate (Section 1.4).

Maintenance

Observed maintenance activities on the D12 emergency diesel generator were found to be properly conducted and controlled. However, a minor weakness in the overall maintenance planning process was identified as the post-maintenance test was inadequate (Section 2.1). Tours of the Unit 1 plant areas for installation of scaffolding in preparations for the refueling outage indicated that no situations were identified where scaffolding could potentially interfere with the operation of plant equipment (Section 2.3). Main control room panel modifications associated with the removal of the residual heat removal system steam condensing mode were carefully coordinated with the control room staff (Section 2.4).

Surveillance

Surveillance activities observed were: B RHR Pump Valve and Flow Test; Standby Gas Treatment Flow Tests; and D24 Diesel Generator Slow Start Operability Test Run. These tests were properly conducted by knowledgeable plant personnel (Section 3.1). A non-cited violation was identified concerning the failure to meet technical specification surveillance sampling requirements for emergency diesel generator fuel oil (Section 3.2).

Engineering

The inspectors attended three engineering meetings regarding the replacement of jet pump hold down beams scheduled for the upcoming Unit 1 outage. The meetings were found to be a positive initiative in light of the short duration of the upcoming outage and the complexity of the replacement activities (Section 4.1).

Plant Sup ort

A non-cited violation was identified concerning adherence to contaminated areas posting requirements. The inspectors concluded that the individuals involved needed only minor clarification concerning health physics issues (Section 5.1.2). Two notifications were made in the emergency preparedness area during this inspection period. The first concerned having more than 10% of the offsite sirens unavailable for more than 1 hour due to local weather-related power outages. The second concerned the unavailability of the ENS network in the main control room. (Section 5.3)

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DETAILS

1.0 PLANT OPERATIONS (71707)[1]

The inspectors observed that plant equipment was operated and maintained safely and in conformance with license and regulatory requirements. Control room staffing met all requirements. Operators were found alert, attentive and responded properly to annunciators and plant conditions. Operators adhered to approved procedures and understood the reasons for lighted annunciators. The inspectors reviewed control room log books for trends and activities, observed control room instrumentation for abnormalities, and verified compliance with technical specifications. Accessible areas of the plant were toured; plant conditions, activities in progress, and housekeeping conditions were observed. Additionally, selected valves and breakers were verified to be aligned correctly. Deep backshift inspection was conducted on December 19 and 23, 1993, and January 15, 1994.

1.1 Operational Overview

At the beginning of the inspection period Unit 1 was in its end-of-cycle coastdown at 87% of rated power. The unit coastdown continued, until January 14, 1994, when the unit was manually scrammed from 75% of rated power due to a trip of both reactor recirculation pumps resulting from a loss of main generator stator water cooling (Section 1.4). The unit was returned to 75% power on January 17, 1994, and continued coasting down for the remainder of the inspection period.

Unit 2 operated at full power throughout the inspection period, except for minor power reductions for surveillance testing and control rod functional tests.

1.2 Event Reports

On January 14 and 16, 1994, PECO Energy made two four-hour reports to the NRC pursuant to 10 CFR 50.72. The first report concerned a spurious reactor enclosure HVAC isolation signal that isolated the Unit 1 secondary containment, and started the standby gas treatment system (SGTS) and the reactor enclosure recirculation system (RERS) as designed. An immediate investigation was begun into the cause of the isolation. The initial troubleshooting eliminated several possible causes and the isolation was reset during these activities. Approximately 50 minutes after the isolation was reset, a second spurious isolation was received. Continued troubleshooting identified a failed relay associated with the 50 minute time delay for a reactor enclosure isolation on low differential pressure. The relay was replaced and the systems were restored to normal operating status.

The second report concerned a manual start of the SGTS and the RERS on January 16, 1994. These systems were started to maintain reactor enclosure differential pressure, after experiencing problems with the auxiliary boiler's ability to supply adequate steam flow to the

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[1]The NRC Inspection Procedures used as guidance are listed parenthetically throughout this report.

Unit 1 reactor enclosure HVAC steam heating coils. This problem combined with excessively low outside air temperatures resulted in the Unit 1 reactor enclosure having low negative delta-pressure. The ESF would have automatically initiated after 50 minutes with the low differential pressure condition. Later that same day, the plant operators were able to restore auxiliary heating steam to the reactor enclosure heating coils, and the ventilation systems were restored to normal.

The inspectors had no further questions concerning these events. The inspectors will review the Licensee Event Reports associated with these events as part of the routine inspection program.

1.3 Cold Weather Preparations

During this inspection period, the inspectors verified that plant personnel performed appropriate actions in preparation for cold weather. In particular, the inspectors toured various areas in and around the plant, and reviewed the completed procedure, GP-7, Cold Weather Preparation and Operation, Revision 11. A procedure note states that this procedure should be completed by November 15 of every year. The inspectors noted that the majority of the procedure was completed in October 1993. The inspectors concluded that actions were appropriately taken to ensure proper operation of the plant systems during cold weather.

1.4 Unit 1 Runback/Scram

On January 14, 1994, with the unit operating at 75% of rated power, a generator stator water cooling runback signal was initiated when the 1 B stator cooling pump was inadvertently tripped. (The 1A stator cooling pump was removed from service for maintenance at the time.) Since feedwater flow was above 47% when the runback was initiated, the 1A and 1B reactor recirculation pumps were automatically tripped 10 seconds apart. The reactor operator immediately placed the reactor mode switch in the "shutdown" position initiating a full reactor scram, in accordance with the Operational Transient procedure (OT)-112, Recirculation Pump Trip. The unit was placed in a hot shutdown condition and all systems functioned as expected. The Unit 1 operators implemented Emergency Operating Procedures, T-101, RPV control and T-99, Post Scram Restoration, and conducted a controlled orderly shutdown.

PECO Energy's review of the event determined that the cause of the runback was attributed to the tripping of the 1B stator water cooling pump. The 1B pump tripped during the installation of the "on" (red) indicating bulb, when the bulb broke causing a short in the pump trip logic, which energized the pump's trip coil. In the trip logic, the "on" (red) light is wired through the trip coil to monitor the coil integrity. The logic is designed this way to indicate a faulty trip coil. Under normal conditions, the bulb does not allow enough current to pass through the coil to trip it. However, when a short in the bulb or socket exists, the

coil will pass enough current to energize the coil and trip the pump. Apparently, many of Limerick's "on" indicating lights are designed this way for large motors, and 4KV and 13.2 KV breakers.

As part of the immediate corrective actions for this event, operations management issued a Shift Training Bulletin to the operations staff. The bulletin discussed the event and emphasized the need to use caution when replacing indicating bulbs on plant equipment. PECO Energy will conduct a review/walkdown to specifically identify all components that use this indication in their trip logic.

The NRC received a report of the above event via the Emergency Notification System (ENS). The inspectors determined that PECO Energy's initial response and corrective actions were appropriate. The root cause analysis and the need for additional/long-term corrective action will be reviewed upon issuance of the Licensee Events Report as part of the routine inspection program.

2.0 MAINTENANCE (62703)

2.1 Maintenance Observations

The inspectors reviewed the following safety-related maintenance activities to verify that repairs were made in accordance with approved procedures and in compliance with NRC regulations and recognized codes and standards. The inspectors also verified that the replacement parts and quality control used on the repairs were in compliance with PECO Energy's Quality Assurance (QA) program.

The following maintenance activities were reviewed:

On December 22, 1993, the inspectors observed portions of the maintenance activities on the D12 emergency diesel generator. The lower air start distribution system manual air start valve was being replaced, along with the air tubing to the number 4 cylinder. Observed maintenance activities were found to be properly conducted and controlled. However, while reviewing the associated post-maintenance tests, the inspectors determined that the test for the tubing replacement appeared to be inadequate. The test specified that a leak check be performed after tubing replacement. This tubing is normally not pressurized, except during a diesel engine start, or an air barring of the engine. An engine start or air barring were not specified on the test. Therefore, the post-maintenance test would not identify any leaks in this instance, unless it was performed with the tubing pressurized. The inspectors brought this condition to the attention of operations personnel, who questioned the appropriate maintenance planning personnel. Plant personnel agreed that the test was inadequate, and the test was improved to require engine air barring during the leak check.

The inspectors noted that although the post-maintenance test was determined to be inadequate in this instance, the test was not yet performed. Additionally, operations personnel had not yet reviewed the test, so that an opportunity existed to identify the inadequate test prior to performance. The inspectors concluded that the inadequate post-maintenance test exhibited a minor weakness in the overall maintenance planning process.

The inspectors observed the performance of the A Average Power Range Monitor (APRM) Calibration/Functional Test, ST-2-074-412-1, on January 15, 1994. The test was performed as part of the Unit 1 startup preparation, following the unit shutdown on January 14, 1994. The inspectors observed portions of the activities from both the main control room and the auxiliary relay room, and concluded that the test was adequately preplanned and well coordinated with operations personnel. The I&C technicians were very knowledgeable of the system's operations and read each step of the procedure aloud as they performed it. No discrepancies were identified.

2.2 Shoreham Fuel Shipments

During this inspection period, all shipments were completed that will occur prior to the upcoming Unit 1 refueling outage, scheduled to begin on January 29, 1994. As of the end of the inspection period, 19 shipments were successfully completed, and the 2 shipping casks were being shipped offsite for recertification. The remaining 14 shipments are scheduled to be made after the Unit 1 refueling outage. The inspectors observed portions of the activities at Limerick regarding the shipment of Shoreham fuel, and concluded that the activities continue to receive proper management attention and are being properly controlled.

2.3 Unit 1 Refueling Outage Preparations

Throughout the inspection period, the inspectors toured the Unit 1 plant areas and observed activities being performed in preparation for the refueling outage. In particular, the inspectors observed the installation of scaffolding. A relatively large number of scaffolding erection projects were underway or were completed. The inspectors verified that the scaffolding was being erected as required by appropriate plant procedures and that the scaffolding did not interfere with the operation of various plant equipment. All scaffolding observed by the inspectors was properly constructed and had the proper documentation attached to the scaffolding. No situations were identified where the scaffolding could potentially interfere with the operation of plant equipment. The inspectors concluded that the installation of scaffolding is being properly controlled.

2.4 Control Board Modification

On January 12, 1994, the inspectors observed work associated with Work Order (WO) #C0147179, Elimination of Residual Heat Removal (RHR) Steam Condensing Mode, Panel 10C601. This WO involved the removal of various controls and indications from the main control room vertical panel 10C601. Valve controls and indicating recorders were removed

and plain metal covers were put in their place. The inspectors observed that the workers carefully coordinated all work activities with the control room staff, and had little or no impact with the control operations. This work is part of a plant modification (#6240) that will completely remove the steam condensing mode of RHR. The major part of the modification will be completed during the Unit 1 upcoming outage and will be reviewed by the inspectors at that time.

3.0 SURVEILLANCE (61726)

3.1 Surveillance Observations

During this inspection period, the inspectors reviewed in-progress surveillance testing and completed surveillance packages. The inspectors verified that the surveillances were completed according to PECO Energy approved procedures and plant technical specification requirements. The inspectors also verified that the instruments used were within calibration tolerance and that qualified technicians performed the surveillances.

The following surveillances were reviewed:

ST-6-051-232-1	B RHR Pump Valve and Flow Test
ST-1-076-315-1	SGTS Reactor Enclosure Secondary Containment Integrity Test Revised Boundary
ST-6-076-250-1	SGTS and RERS Flow Test
ST-6-092-312-1	D12 Diesel Generator Slow Start Operability Test Run

The surveillance tests observed were properly conducted by knowledgeable plant personnel, and were properly supervised by management.

3.2 Late Emergency Diesel Generator Oil Test

Two emergency diesel generators (D11 and D14) were declared inoperable on December 29, 1993, after it was discovered that a technical specification surveillance requirement 31 day time limit had been exceeded. Technical specification 4.8.1.1.2c.2 requires sampling new fuel oil and verifying within 31 days of obtaining the sample that properties specified in Table 1 of ASTM D975-81 are met. For Limerick, this testing is performed at the Valley Forge Laboratories. For D11, the fuel was delivered and sample taken on October 28, 1993, and for D14, on November 3, 1993. The samples were immediately analyzed and satisfactory results were received before the end of the day on December 29, 1993; both diesels were then declared operable.

Investigation by plant personnel determined that the method of tracking the completion of the surveillance requirement was less than adequate, in that no technical specification due date exists in the system. Additionally, all personnel involved in the shipping process for the fuel samples were apparently not aware of the importance of expediting the process, and Valley Forge Laboratories does not notify the Limerick Chemistry Department of receipt, or confirm a due date, for any given sample. Corrective actions included, as an interim action, manually tracking all diesel fuel sample surveillance tests to an administrative 20 day receipt of results. Planned actions include revising the tracking system to specify an appropriate time limit for receipt of test results, and establishing a receipt acknowledgement from the lab to the station.

The inspectors concluded that corrective actions taken and planned were adequate. The safety significance of this instance was minimal since the results of the analyses were satisfactory. This violation of a technical specification surveillance requirement meets the criteria for enforcement discretion of Section VII of the NRC's Enforcement Policy and will not be cited.

4.0 ENGINEERING

4.1 Jet Pump Beam Replacement

During the inspection period the inspectors attended three meetings regarding jet pump hold down beam replacement. PECO Energy is scheduled to replace all twenty hold down beams during the upcoming Unit 1 outage. Some General Electric (GE) representatives were present, and other representatives were tied into the meeting via speaker phone. The meetings were well attended with productive discussions between GE and PECO Energy regarding NDE examinations and delivery dates. The inspectors found these meetings to be a positive initiative in light of the short duration of the upcoming outage and the complexity of the planned outage activities.

5.0 PLANT SUPPORT (71707)

5.1 Radiological Protection

During the inspection period, the inspectors examined work in progress in both units including health physics (HP) procedures and controls, ALARA implementation, dosimetry and badging, protective clothing use, adherence to radiation work permit (RWP) requirements, radiation surveys, radiation protection instrument use, and handling of potentially contaminated equipment and materials.

The inspectors observed individuals generally frisking in accordance with HP procedures. A sampling of high radiation area doors was verified to be locked as required. Compliance with RWP requirements was reviewed during plant tours. RWP line entries were reviewed to verify that personnel provided the required information and people working in RWP areas were observed as meeting the applicable requirements.

5.1.1 Control Room Access Change

During this inspection period, the access control point to the main control room was reconfigured to be more user friendly and convenient. In the past there were two access control points, one for each door, with one inside the control room door. Presently, one control point, outside of the control room, serves both doors. The inspectors observed use of the new control point, the labelling, and the associated RCA barriers, and concluded that the area is being properly and effectively used.

5.1.2 Contaminated Area Control

On January 12, 1994, during a routine tour through the plant, the inspectors observed activities in and around a posted contaminated area at the base of the B Unit 1 residual heat removal heat exchanger. One individual was inside of the posted contaminated area, with another co-worker outside of the posted area. They were in the process of marking the floor for installation of a pipe support. The worker outside of the posted area handed the end of a chalk line to the worker inside the posted area. They stretched the line and snapped it to mark the floor. The worker outside the posted area then rewound the chalk line into the container. When the inspectors questioned the workers concerning the removal of the potentially contaminated chalk line from the posted area without first verifying that it was not contaminated, they indicated they thought it was acceptable since the line was contained when it was wound in. However, they indicated that they did not first check with health physics personnel. When contacted, health physics personnel indicated to the inspectors that the observed practice was not acceptable. An HP technician was immediately sent to talk with the workers. Additionally, the technician verified that the chalk line and the floor where it was used were not contaminated.

Plant management indicated that the observed practice was unacceptable. Corrective actions were taken to ensure that the workers understood their health physics responsibilities when working in and around contaminated areas in the plant. Additionally, personnel were reminded that if a question exists, that health physics personnel need to become involved to resolve the issue.

The inspectors concluded that for this incident safety significance was low. However, the inspectors were concerned that personnel may not, in all instances, understand their health physics responsibilities and that they may be reluctant to involve health physics personnel when necessary. After discussing the issues with plant management, the inspectors concluded that reasonable efforts have been and are being taken to educate plant personnel

concerning potential health physics situations. For the above example, the inspectors concluded that the individuals involved needed only minor clarification concerning health physics issues, and that previous corrective actions taken concerning health physics issues could not reasonably have been expected to have prevented this incident. This violation of plant administrative procedures, concerning adherence to posting requirements for contamination control, meets the criteria for enforcement discretion of Section VII of the NRC's Enforcement Policy and will not be cited.

5.2 Security

Selected aspects of plant physical security were reviewed during regular and backshift hours, to verify that controls were in accordance with the security plan and approved procedures. This review included the following security measures: guard staffing, vital and protected area barrier integrity, and implementation of access controls including authorization, badging, escorting, and searches.

5.2.1 Surveillance Testing

During this inspection period, the inspectors reviewed a sampling of completed Security Surveillance Test Accountability Packet/Tracking Log, SOP -017-04, and the associated Surveillance Testing Pass-Ons/Work Schedule, SOP-017-05. Information is initially recorded on SOP-017-05, and is transferred to SOP-017-04 before being discarded at the end of the month. The logs are used to help track the status of surveillance testing, and SOP-017-05 is only used as an enhancement to the overall process. SOP-017-04, from July 25 through August 15, 1993, was reviewed. The inspectors noted appropriate use of N/A for not applicable. In one instance the inspectors identified what appeared to be an incomplete log in that one block was not filled in. Through discussions with security management and review of procedures, the inspectors concluded that only forms contained in the surveillances themselves are considered official documentation of results. Therefore, failure to completely fill out SOP-017-04 was a weakness that needed management attention.

In response, security management performed a self-assessment of security documentation to determine if a generic problem existed. The inspectors reviewed the findings of the self-assessment and discussed the report with security management. The self-assessment identified several minor discrepancies which indicated that management attention appeared necessary to remind personnel to ensure that forms are properly completed. Corrective actions included issuing a memo to all security force members and generating a special cover sheet emphasizing the importance of attention to detail during completion of documentation. The inspectors concluded that the self-assessment was a good initiative and that the corrective actions taken were appropriate to address the apparent weakness.

5.3 Emergency Preparedness

During this inspection period, two notifications were made to the NRC in the emergency preparedness area. The first was a one-hour notification made on January 10, 1994, after it was determined that more than 10% of the offsite sirens had been unavailable for more than 1 hour over the prior weekend, due to local weather-related power outages. At the time of the notification, four sirens were still inoperable and were being investigated.

The second was a one hour notification made on January 15, 1994, when it was determined that the ENS network was not available in the main control room. The line was returned to service later that day. The inspectors were appropriately informed of both notifications.

6.0 SAFETY ASSESSMENT/QUALITY VERIFICATION (40500)

6.1 Nuclear Review Board Meeting

On January 6, 1994, the Nuclear Review Board (NRB) met at Limerick Generating Station, and the inspectors attended portions of the meeting. The inspectors found the meeting to be well-attended, with detailed presentations and active participation from the board members. The chairman conducted an exercise in which the attendees broke into small groups to discuss the NRB's performance. The inspectors found this self-assessment to be a positive initiative. The inspectors concluded that the NRB successfully fulfilled its technical specification function of providing an independent review and audit of designated activities.

7.0 REVIEW OF LICENSEE EVENT AND ROUTINE REPORTS (90712, 90713)

7.1 Licensee Event Reports (LERs)

The inspectors routinely reviewed LERs and performed followup inspections to PECO Energy's actions regarding the disposition of corrective initiatives. The inspectors reviewed the following LERs and found that the events were described accurately, PECO Energy had identified the root causes, implemented appropriate corrective actions and made the required notifications.

LER 1-93-010, Actuation of the PCRVICS, an ESF, after a Reactor Enclosure exhaust plenum radiation monitor spuriously tripped, Revision 01, Event Date: August 20, 1993, Report Date: December 23, 1993.

LER 1-93-016, Primary Containment and Reactor Vessel Isolation Control System Actuation Causing Isolation of the Reactor Water Cleanup System due to a leaking pressure relief valve, Event Date: November 15, 1993, Report Date: December 15, 1993.

LER 1-93-017, Condition prohibited by Technical Specifications (TS) in that a Special Report for an inoperable Seismic Monitoring System was not submitted within the TS time period, Event Date: July 5, 1993, Report Date: January 12, 1994.

The inspectors found that the LERs listed above met the requirements of 10 CFR 50.73 and had no further questions regarding these events.

7.2 Routine Reports

Routine reports submitted by PECO Energy were reviewed to verify the reported information. The following report was reviewed and satisfied the requirements for which it was reported.

> Station Monthly Operating Reports for November, dated December 13, 1993, and December, dated January 13, 1994.

8.0 FOLLOWUP OF PREVIOUS INSPECTION FINDINGS (92702)

(Closed) Unresolved Item (50-353/93-03-02). On December 14, 1992, during performance of a special procedure to purge contamination from a faulty moisture element on the Unit 2 offgas system, a nitrogen purge valve was left closed preventing the pressurization of the moisture element as described in the procedure. The reason for the shut nitrogen valve was investigated by PECO Energy. They determined that the original checkoff list (COL), which required the valve to be closed, had been revised in October of 1992 to require the valve to be open, in accordance with the system piping and instrumentation diagrams (P&IDs). Plant management concluded that the valve was not repositioned per the revised COL. No guidance existed for changing actual valve position when the check-off list position was changed. At that time, PECO Energy considered the closed valve an isolated event in that no similar events had been identified. This item remained unresolved until PECO Energy completed the investigation.

In response to this event, the Director, Site Engineering, issued a memorandum to site engineering personnel regarding COL revisions. The memorandum stated that when a COL that effects the normal plant lineup is revised, it is the responsibility of the person revising the COL to notify operations to perform the steps that have been changed. This should be documented in the Immediate User Notification block of the Station Qualified Reviewer (SQR) form and the Shift Manager should be listed as the Responsible Individual. The inspectors had no further questions regarding this event and consider the unresolved item closed.

(Closed) Deviation (50-352/353/92-21-02). Commitment to NRC Bulletin No. 88-07, Supplement 1, Core Thermal Hydraulic Instabilities.

The deviation was issued due to the removal of the original manual scram criteria from the Limerick operating procedures for thermal hydraulic instabilities. It did not appear that the Limerick procedure information met the criteria stated in NRC Bulletin No. 88-07 Supplement 1, Power Oscillations In Boiling Water Reactors (BWRs), a licensee commitment.

Limerick removed the APRM 10% peak to peak oscillation and periodic local power range monitor (LPRM) upscale or downscale alarms as procedure criteria for the recognition of thermal hydraulic instabilities, requiring a manual reactor scram.

Limerick's response dated October 16, 1992, to the NRC Inspection report No. 50-352/353/92-21, stated that there was no deviation from commitments made in response to NRC Bulletin No. 88-07, Supplement 1. The response stated that Limerick adopted the recommendation contained in BWROG letter No. 92030, "Implementation Guidance for Stability Interim Corrective Actions."

The NRC staff contended that the BWROG letter did not require or suggest that facilities remove the existing APRM and LPRM criteria. Other BWR plants in Region I, responding to the same information, added the new guidance contained in BWROG-92030 to the existing APRM/LPRM criteria committed to in NRC Bulletin 88-07, Supplement 1. NRC's view was that the Limerick action was not conservative because they removed criteria that were readily available to the operators and replaced it with information that was subjective and not clearly defined. The Limerick procedure changes to operational transient procedure (OT)-104, Unexpected/Unexplained Reactivity Insertion, and OT-112, Recirculation Pump Trip, were modified and approved on June 12, 1992. The following criteria replaced the original procedure guidance:

1. Any LPRM OR
   APRM noise signal grows by two OR
   more times its initial noise level.

2. The characteristics of the LPRM AND
   APRM signals change from random to a regular periodic variation (with approximately 1 to 2 second oscillation period).

3. Period meters display strong positive to negative swings (with approximately 1 to 2 second oscillation period).

On October 14, 1993, a meeting was held between the NRC staff and the Limerick Generating Station staff at the NRC Regional Office in King of Prussia, Pennsylvania. The purpose of the meeting was to provide Limerick the opportunity to discuss their disagreement with the deviation. The Limerick staff provided their written response to the NRC concerns on November 1, 1993, as agreed upon by both parties.

As noted in the NRC Examination Report No. 50-352/353/93-18 Limerick's response provided detailed actions that satisfied our concerns in the area of procedures and training related to the power instability issue.

On January 14, 1994, the inspector conducted an independent review of the OT procedure changes, associated licensed operator training and the procedure change safety evaluation. The review was performed to verify and assess Limerick's actions and commitments contained in the November 1, 1993 letter.

The inspector discussed the revised procedures with the control room operators to determine their familiarity and understanding of the OTs. The operators were knowledgeable of the revised procedures and demonstrated the ability to use control room indications to implement the written procedure guidance. The operators also provided positive and consistent comments about the training regarding the procedure changes.

The inspector reviewed procedures OT-104, Unexpected/Unexplained Reactivity Insertion, Rev. 14, and OT-112, Recirculation Pump Trip, Rev. 14. The procedures were changed and approved on December 6, 1993. The revised procedures reinstated the 10% APRM peak to peak oscillation criteria for the recognition of thermal hydraulic instabilities, requiring a manual reactor scram. The procedure changes were made in accordance with regulatory requirements and plant administrative procedures.

The inspector reviewed the licensed operator requalification (LOR) training provided for the OT-104 and OT-112 procedure changes. The lesson plan contained the most current information about the core thermal hydraulic instabilities and Limerick's recent procedure revisions. The LOR training stressed the importance of determining the frequency of the reactor power and/or period meter oscillation. This was a prior operator weakness noted by Limerick and NRC personnel. The training also emphasized the need to perform an immediate manual reactor scram if a power oscillation is detected.

The inspector reviewed Limerick's revised safety evaluation, associated with OT-104 and OT-112, that was performed in December 1992. The evaluation was performed in accordance with the Limerick administrative procedures and satisfactorily documented the reason for the OT procedure revisions.

In summary, even though Limerick initially disagreed with the NRC deviation for the OT-104 and OT-112 procedure revisions, they subsequently took appropriate action to address the NRC staff's concerns. Based on the above information this item is closed.

9.0 MANAGEMENT MEETINGS

9.1 Exit Interviews

The inspectors discussed the issues in this report with PECO Energy representatives throughout the inspection period, and summarized the findings at an exit meeting with the Plant Manager, Mr. R. Boyce, on January 18, 1994. PECO Energy personnel did not express any disagreement with the inspection findings. No written inspection material was provided to licensee representatives during the inspection period.

9.2 Additional NRC Inspections this Period

Two Region-based inspections were conducted during this inspection period. Inspection results were discussed with senior plant management at the conclusion of the inspections.

Date	Subject	Inspection No.	Lead Inspector
01/03/94	Vessel Level Modification	50-352/94-01 50-353/94-01	Scholl
01/12/94	Diesel Generator	50-352/93-30 50-353/93-30	Lazarowitz