

PHILADELPHIA ELECTRIC COMPANY

LIMERICK GENERATING STATION

P. O. BOX A

SANATOGA, PENNSYLVANIA 19464

(215) 327-1200 EXT. 2000

August 29, 1989

M. J. MCCORMICK, JR., P.E.
PLANT MANAGER
LIMERICK GENERATING STATION

Docket No. 50-352
License No. NPF-39

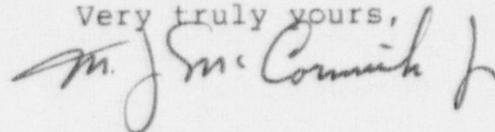
U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, DC 20555

SUBJECT: Limerick Generating Station, Unit 1
Reply to Notice of Violation
NRC Inspection Report No. 50-352/89-12
and 50-353/89-19

NRC letter dated July 28, 1989, forwarded Inspection Report No. 50-352/89-12 and 50-353/89-19 for Limerick Generating Station Units 1 and 2. This Inspection Report contained a Notice of Violation applicable to Unit 1 for a failure to declare control rod drive accumulators inoperable, lack of procedural compliance in radiation protection activities, and inadequate calibration of Primary Containment Post-LOCA radiation monitors. Our responses to these Violations are provided in the attachment to this letter. This response is being submitted one day late due to delays in final preparation. This delay was discussed with Mr. Paul Kaufman of the NRC Region I on August 29, 1989.

If you have any questions or require additional information, please contact us.

Very truly yours,



JKP/VAW/DCS:aj

Attachment

cc: W. T. Russell, Administrator, Region I, USNRC
T. J. Kenny, USNRC Senior Resident Inspector, LGS

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VIOLATION A

- A. Plant Technical Specification 3.1.3.5 requires that all control rod scram accumulators shall be operable in operational conditions 1, 2 and 5. If one or more control rod scram accumulators are determined to be inoperable the appropriate Action specified in Technical Specifications 3.1.3.5 shall be taken. Additionally Technical Specifications (TS) 4.1.3.5.b.2 requires each control rod scram accumulator shall be determined operable at least once per 18 months by:

Measuring and recording the time for up to 10 minutes that each individual accumulator check valve maintains the associated accumulator pressure above the alarm set point with no control rod drive pump operating.

Contrary to the above on six documented occasions between September 11, 1984 and May 9, 1989 accumulators failed to maintain pressure during the testing required by TS 4.1.3.5.b.2 and were not declared inoperable nor were TS 3.1.3.5 actions taken.

This is a Severity Level IV violation (Supplement I).

RESPONSE

Admission of Alleged Violation

Philadelphia Electric Company (PECo) acknowledges the violation.

Reason for the Violation

The cause of the event is the misinterpretation of the intent of Technical Specifications (TS) Surveillance Requirement (SR) 4.1.3.5.b.2 by station personnel. The data acquired from performing the associated surveillance test (ST) was not used to make any operability determinations for the Hydraulic Control Unit (HCU) accumulators. The 17 accumulators that failed the ST were not declared inoperable since our interpretation of the basis of this TS SR was that the test results were to be used for trending purposes and not to establish operability. This interpretation was not in agreement with that of the NRC.

Corrective Action and Results Achieved

A temporary waiver of compliance to permit continued operation of Unit 1 at a reactor vessel pressure above 600 psig was requested and granted on June 9, 1989. Additionally, PECO submitted an emergency TS change request on June 10, 1989 to revise the requirements for accumulator operability to be applicable for reactor pressure below 600 psig only. The approved TS amendment was issued by the NRC on July 24, 1989.

Corrective Actions Taken to Avoid Future Non-Compliance

The surveillance test, ST-3-047-790, which satisfies TS SR 4.1.3.5.b.2 has been revised to include an evaluation of the test results by the Reactor Engineer. Accumulators with check valves which have not met the required pressure retention criterion will be declared inoperable when reactor pressure is below 600 psig. The revision to the procedure includes the initiation of Maintenance Request Forms on the HCU's which alarm on low pressure during the performance of the ST. The revision also provides for the performance of the ST at the beginning of a refueling outage and the scheduling of maintenance during that current outage for those accumulators which alarm on low pressure during the ST. Also, we will be submitting a TS change request to the accumulator check valve surveillance requirement in TS section 4.1.3.5.b.2., as appropriate, to more accurately reflect the relationship of this surveillance requirement to control rod scram accumulator operability.

Date When Full Compliance was Achieved

Full compliance was achieved upon approval of TS amendment #31 by the NRC on July 24, 1989.

VIOLATION B

B. Technical Specification 6.11, "Radiation Protection Program", requires in part, that procedures shall be approved, maintained and adhered to for all operations involving personnel radiation exposure.

Item B.1

Procedure RW-630, "Control of HEPA Ventilation Units," Rev. 1, requires, in part, in Section 6.14, that during use, each operating HEPA Ventilation Unit will be checked at the indicated frequency by Health Physics Technicians providing job coverage to ensure the differential pressure across each filter is still within the acceptable range. The readings will be recorded on the Portable Ventilation Unit Inspection Form (PVUIF).

Contrary to the above, on May 26, May 30, May 31, and June 2, 1989, Health Physics Technicians providing job coverage under Radiation Work Permits (RWPs) 89-5589 and 89-5619, failed to ensure that the differential pressure across each filter was within the acceptable range for HEPA Ventilation Unit LGS 1003-4 during each use as required by the PVUIF.

Item B.2

Procedure HP-310, "Radiation Work Permits," Rev. 16, requires, in part, in Section 6.1.1, that an RWP is required for all entries into areas which are posted "RWP Required for Entry."

Contrary to the above, on June 13, 1989, a Health Physics Technician entered Hot Machine Shop Tent #2, posted "RWP Required for Entry", without signing in on an RWP as required.

The above two examples of failure to follow procedures constitute a violation and are categorized as a Severity Level IV violation (Supplement I).

RESPONSE

Admission of Alleged Violation

Philadelphia Electric Company acknowledges the violation.

Reason for the Violation

Item B.1

The cause of this occurrence is personnel error resulting from a lack of sufficient understanding of additional job responsibilities. The Health Physics (HP) technicians' responsibilities for surveilling the HEPA ventilation units are contained in the Radwaste (RW) department's program which controls all aspects of the use of the HEPA ventilation units. These responsibilities were not included in the specific job assignment of the HP technicians who were assigned to provide direct support of the work controlled by the RWP's. As a result, the HP technicians did not perform the required inspections.

Item B.2

The cause of this occurrence is cognitive personnel error. The HP technician knew the requirements of the RWP. However, the technician knowingly entered the RWP area without reading, signing, and complying with the RWP to retrieve an air sample following completion of work activities in the area.

Corrective Actions Taken and Results Achieved

Item B.1

The HEPA Ventilation Unit (LGS 1003-4) was checked on June 3, 1989 and the differential pressure across the filter was found acceptable. All HEPA ventilation units were reviewed to verify proper inspection frequencies and all HP technicians were instructed on the need to properly document the functional checks.

Item B.2

The technician was given a Whole Body Count on June 13, 1989, the results of which showed no uptake of radioactive material. The technician received no unexpected whole body exposure as detected by the technician's dosimetry.

Corrective Actions Taken to Avoid Future Non-Compliance

Item B.1

Control over the HEPA Ventilation Units was transferred to the Health Physics department by the approval of Health Physics Procedure HP-815, "Control of HEPA Ventilation Units," on June 20, 1989. The pressure checks of the HEPA filters were incorporated into the Health Physics Routine surveillance program beginning on July 5, 1989, removing the responsibility for performing these checks from the Health Physics technician providing direct support of work controlled by an RWP. These responsibilities have been communicated to all HP Technicians through an HP department information notice and is being discussed in HP Technician continuing training. This training is scheduled to be completed by September 22, 1989.

Item B.2:

Because the Health Physics technician involved was experienced and is held accountable for his actions, he was appropriately disciplined. Procedural compliance was re-emphasized in the discussion of this event at a Health Physics group meeting on June 22, 1989.

Summary

These and other recent procedural non-compliances were noted with concern by plant management along with an increase in the number of personnel errors. Through management meetings procedural compliance has been emphasized to plant supervisory personnel, along with management's concern about this adverse trend. By direction of plant management, discussions have been held within each plant group concerning the need for compliance with procedures and possible consequences of non-compliance both to plant operations and personnel safety. Procedure compliance is emphasized in both initial and requalification General Employee Training classes. A letter was issued on August 8, 1989 by the Plant Manager to all station personnel emphasizing that forethought and planning of work must be included in performance of normal work activities. To reaffirm our commitment to safe plant operation, we have adopted a revised schedule plan which specifically regulates the operation activities on a plant-wide basis to be consistent with the staffing available. This plan has relieved the scheduling pressure experienced during the completion of the recent Unit 1 refueling outage and the Unit 2 startup program. Implementation of the foregoing step has resulted in a reduction in the occurrence of personnel errors including those associated with procedural non-compliance. Plant management will continue to monitor this type of occurrence and initiate appropriate corrective actions.

Date When Full Compliance Will Be Achieved

Full compliance was achieved on June 22, 1989, upon completion of the immediate corrective actions described above.

VIOLATION C

- C. Technical Specification 3.3.7.5. "Accident Monitoring Instrumentation," requires a channel calibration of the Primary Containment Post-LOCA High Range Monitors. Further, Table 4.3.7.5-1, "Accident Monitoring Instrumentation Surveillance Requirements," states that the Primary Containment Post-LOCA Radiation Monitor channel calibrations shall consist of an electronic calibration of the channel, not including the detector, for range decades above 10R/hr with an installed or portable gamma source.

Contrary to the above, calibrations performed March 4-6, 1989, did not include an electronic calibration of the channel, not including the detector, for range decades above 10 R/hr.

This is a Severity Level V violation (Supplement I).

RESPONSE

Admission of Alleged Violation

Philadelphia Electric Company acknowledges the violation.

Reason for the Violation

The primary cause of this event was procedural deficiency. The Surveillance Tests, intended to satisfy the Technical Specifications calibration requirements, did not address the analog portion of the channel electronics; only the digital portion was properly calibrated.

A causal factor resulting in the procedural deficiency was a misinterpretation of information provided by the vendor/supplier of the Post-LOCA Radiation Monitors (PLRM). Upon investigation by the station Instrument and Controls (I&C) group, it was determined that, during the pre-operational phase of Limerick Generating Station (LGS) Unit 1, the ST for checking the calibration of the PLRMs was developed by a contractor employee working for PECO. Calibration of the analog portion of the PLRMs had been completed by the vendor/supplier shortly before the development of the ST. The writer of the ST was verbally informed by a vendor/supplier that the analog portion of the calibration check would not be required during initial performance of the ST. This information was misinterpreted by

the writer to mean that calibration of the analog portion would not be required during any performance of the ST and was therefore omitted from the ST altogether. This error was also missed by the PECO reviewers of the procedure when it was reviewed by the Plant Operation Review Committee (PORC).

Corrective Actions Taken and Results Achieved

Upon discovery of the condition, at 1930 hours on June 13, 1989, all four PLRMs were declared inoperable. Plant I&C group implemented a Temporary Procedure Change (TPC) to the affected STs incorporating the appropriate section of Testing and Laboratories Division Procedure TL-11-00384, "Calibration of General Atomic Digital High Range Radiation Monitor (DHRRM)," which properly calibrated the analog portion of the PLRMs' circuitry. The STs with the TPCs were performed on June 14, 1989, and the TS required minimum number of channels of the PLRMs were declared operable on June 14, 1989, at 1700 hours; 21.5 hours after being declared inoperable. Licensee Event Report 1-89-041 was submitted on June 27, 1989, regarding this condition.

Corrective Actions Taken to Avoid Future Non-Compliance

The established 18-month STs, ST-2-026-407-1, (408-1, 409-1, and 410-1), "Accident Monitoring - Primary Containment Post-LOCA Radiation; Division III (II, III, and II) Calibration," have been revised to ensure a proper calibration check of the analog section of the PLRM channel electronics. These four (4) initial STs are the only ones affected by the specific misinterpretation of the verbal information and this incident is considered an isolated case. In support of this conclusion is a recent I&C review of similar STs involving General Atomics instrumentation as well as STs written by the same ST writer, in which no similar problems were found.

Date When Full Compliance Will Be Achieved

Full compliance was achieved on June 14, 1989, upon completion of the appropriate calibration surveillance requirements for the PLRMs and their subsequent restoration to operable status.