



PECO ENERGY

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10CFR2.201

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Docket Nos. 50-352
50-353

License Nos. NPF-39
NPF-85

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

Subject: Limerick Generating Station, Units 1 and 2
Reply to a Notice of Violation
NRC Combined Inspection Report Nos. 50-352/93-32
and 50-353/93-32

Attached is PECO Energy Company's reply to a Notice of Violation for Limerick Generating Station (LGS), Units 1 and 2, which was contained in your letter dated January , 1994. The cited violations involve the failure to adhere to radiation protection procedures in accordance with the requirements of Technical Specifications Section 6.11. The attachment to this letter provides a restatement of the violations followed by our reply.

If you have any questions or require additional information, please do not hesitate to contact us.

Very truly yours,

GHS

Attachment

cc: T. T. Martin, Administrator, Region I, USNRC
N. S. Perry, USNRC Senior Resident Inspector, LGS

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Reply to a Notice of Violation

Restatement of the Violations

During an NRC inspection conducted on November 29 - December 3, 1993, violations of NRC requirements were identified. In accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," 10CFR Part 2, Appendix C, the violations are listed below:

Technical Specifications 6.11 requires adherence to radiation protection procedures.

1. Radiation Protection Procedure A-C-107, Revision 1, Radiation Work Permit Program and Radiological Controlled Area Access, states, in part, in Section 5.0 that all workers are responsible for complying with established postings in the radiological controlled area (RCA). Further, Section 7.6 of the same procedure states that personnel requiring access on a radiation work permit (RWP) shall proceed to the Access Control Building/Health Physics Field Office and inform Health Physics of the activity to be performed in the RCA.

Contrary to the above, on November 19, 1993, the doors (No. 199 and 190) to Room 309 in the Unit 1 reactor building were posted at 11:00 a.m. to read "High Radiation Area-RWP Required," and three firewatches made separate unauthorized entries into the room at 11:35 a.m., 12:35 p.m., and 1:35 p.m., respectively, that day and did not comply with the posting. Specifically, the individuals did not obtain the required RWP. Further, the individuals did not inform Health Physics of the activity to be performed.

This is a Severity Level IV Violation (Supplement IV).

2. Procedure A-C-107, Revision 0, states, in part, in Section 7.7.4 that the RWP compliance sheet be signed by the worker to indicate that they have read, understood, and will comply with the RWP requirements.

Contrary to the above, on November 29, 1993, at 3:30 p.m. a radiological controls technician, suited in protective clothing and performing on-going surveys for fuel inspection activities, was not properly signed in on the applicable radiation work permit (No. 93-0035,

Revision 3, Perform Fuel Inspection Activities and Unpacking in the Spent Fuel Pool) for the activity. Specifically, the technician had not signed the "compliance sheet" for the permit.

This is a Severity Level V Violation (Supplement IV).

Response

Violation 1.

Admission of the Violation

PECO Energy Company acknowledges the violation.

Reason for the Violation

The primary cause of the violation was that the firewatch personnel (i.e., security guard force members) failed to recognize the change in the radiological posting of both doors leading to Room 309 due to a failure to self check. The doors were reposted from RADIATION area to HIGH RADIATION area at 1100 hours on November 19, 1993 in anticipation of changes to radiological conditions in the room due to testing. The doors were reposted using the standard plant posting methods.

For seven (7) days prior to this occurrence, hourly firewatch visitations due to fire barrier breaches were required. For the preceding 150 entries, the room was posted as a radiation area, requiring no specific action. Thus, the mental conditioning resulting from the repetitive nature of the task resulted in the failure to recognize the posting change.

A contributing factor to this violation is the weak human factors associated with the changed posting. The standard method for postings is to place small inserts under the radiation symbol of the posting denoting the type of posting, the magnitude of radiological conditions, and any additional instructions. All of the radiological posting inserts are the same size and coloring. Therefore, a change in the inserts may not be readily recognizable to workers who perform routine and repetitive tasks in areas where posting requirements are changed infrequently.

Corrective Actions and Results Achieved

One of the firewatch personnel was encountered by an HP technician upon entry to Room 309. This individual was immediately instructed to exit the RWP area, and was briefed on the expectation to read and comply with the requirements of radiological postings by the HP technician. Subsequently, he attempted to enter from another door also without regard to the posting. This individual's employment was terminated.

The two other security force members who were discovered to have previously entered the area without complying with the posting were counselled prior to resumption of their job responsibilities. This counselling included remedial training on radiation practices and reiteration of management expectations.

On November 19, 1993, a guardmount announcement was disseminated to the entire guard force. This announcement specifically addressed the event and actions the firewatch patrol should have taken when faced with this type of circumstance.

The standard operating procedure for firewatch patrol was revised to include enhancements that require management/supervision to evaluate all new fire barrier deficiencies for radiological concerns.

A "lessons learned" bulletin was written and posted in all security assembly areas. This bulletin pointed out the personnel error and the correct steps to prevent recurrence.

On November 22, 1993, the Manager, Radiation Protection met with Security supervision during a routine safety meeting to review the incident and reinforce management's expectations for posting compliance. Also, a "Radiological Standown" was conducted for all security force members. Management emphasized the importance of radiological controls and apprised the security force that compliance with the controls is mandatory, and failure to comply with established controls will not be tolerated.

A conservative personnel exposure assessment was performed and it was concluded that no significant dose rates or airborne activity was encountered.

A detailed six month review of door access print-outs during previous HPCI/RCIC system testing for both Units 1 and 2 was performed to ensure personnel complied with access control requirements. No discrepancies were identified.

Corrective Actions Taken to Avoid Future Non-compliance

In order to improve the human factors of temporary posting changes, a rope and placard or other suitable barrier will be placed across the entrance to the area to more clearly denote that there has been a change in radiological conditions.

A supervisory briefing sheet was developed to discuss how mental conditioning resulting from repetitive tasks may adversely impact attention to detail for postings in areas where radiological conditions infrequently change. This briefing sheet discussed the placement of physical barriers at the entrance to the affected rooms during temporary change in radiological conditions. Management expectations regarding adherence to radiological postings was reinforced. These briefings were conducted by all major station organizations.

Also, on December 3, 1993, a site-wide bulletin was issued describing management's expectations regarding adherence to radiological postings.

Human factors reviews of the radiological protection program are continuing. Improvements incorporated to date include: the use of colored inserts to denote high radiation and locked high radiation areas; the removal of superfluous postings; the reduction in the number of protected area and Radiologically Controlled Area (RCA) entrances and exits; modifications to the control room access area, major plant RCA exits, and the refuel floor radiological layout. All aspects of radiation area controls will be reviewed for additional human factors improvements by June 1994.

The Health Physics organization continues to proactively work with station work groups to improve communications and coordination through interface meetings and ongoing training, and the development of specific job performance standards.

Date When Full Compliance was Achieved

Full compliance was achieved on November 19, 1993, when the firewatch person exited the RWP area, and the appropriate disciplinary actions were administered to all three security force members involved in this incident.

Violation 2.

Admission of the Violation

PECO Energy Company acknowledges the violation.

Reason for the Violation

The live-time computerized RWP process requires that an HP technician review the radiological conditions of a work area covered by an RWP with the worker before the worker signs the RWP compliance sheet. Once the worker signs the compliance sheet, the HP technician assigns the worker to the RWP in the computer. Finally, the worker logs onto the RWP in the computer. If the HP technician has not reviewed the radiological conditions with the worker, the worker will not be assigned to the RWP in the computer, and therefore, will not be able to log onto the computerized RWP. This process provides a barrier to the worker signing in on the computerized RWP without having reviewed the radiological conditions of the work area. The RWP compliance sheet provides evidence that the radiological briefing has taken place.

This incident is unique in comparison with the other incidents referenced in the Inspection Report because it involves an HP technician. In this case, the technician was already familiar with the radiological conditions but failed to sign the compliance sheet. Because he had HP technician access to the computer file, he was able to assign himself to the RWP in the computer and log onto the computerized RWP without signing the RWP compliance sheet.

The cause of this incident was less than adequate self check on the part of the HP technician in that he was aware of the requirement to sign the RWP compliance sheet having signed multiple RWPs over the course of time, but had failed to sign this particular RWP compliance sheet. The technician was in compliance with all requirements of the RWP.

Corrective Actions and Results Achieved

Once notified of the situation, the HP technician exited the area and signed the RWP compliance sheet. The technician was counselled on attention to detail and the principles of Self Check concerning RWP compliance signatures. The technician was also directed to sign each RWP and enter the appropriate computer field, one at a time.

Corrective Actions Taken to Avoid Future Non-compliance

A briefing was conducted for Health Physics technicians regarding the details of this event.

A review of RWP compliance sheets for all refuel floor RWPs used in October and November 1993 was performed to identify any additional examples of the failure to sign RWP compliance sheets. No other instances were identified.

The Health Physics organization maintains strong supervisory oversight of RWP paperwork discrepancies. These discrepancies are tracked as a performance indicator which has been effective in keeping the number of discrepancies low.

In addition, the number of RWPs at the control points has been greatly reduced. This helps to minimize the potential for errors in this area.

Date When Full Compliance was Achieved

Full compliance was achieved on November 29, 1993, when the HP technician exited the RWP area and signed the RWP compliance sheet.