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VICE PRESIDENT
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February 10, 1982

Docket Nos. 50-277
50-278

Report No. 50-277/81-24
50-278/81-26

Mr. R. R. Keimig, Chief
Reactor Projects Branch 2
Division of Resident and Project Inspection
Region I
U.S. Nuclear Regulatory Commission
631 Park Avenue
King of Prussia, PA 19406

Dear Mr. Keimig:

Your letter of January 5, 1982, forwarded combined inspection reports 50-277/81-24 and 50-278/81-26. Appendix A to your letter addresses several activities which do not appear to be in full compliance with Nuclear Regulatory Commission requirements. In addition, your letter included a request that we address your general concern regarding valve positioning difficulties. These items are restated below along with our responses.

- A.1 Technical Specification 3.2.D requires that both off-gas system radiation monitors be operable during reactor power operation, or that temporary monitors be used, or that an orderly shutdown be initiated and the main steam isolation valves (MSIV's) closed within eight hours.

Contrary to the above, during reactor power operation from about 11:00 AM, October 4, 1981 to about 11:00 PM, October 5, 1981, and from about 11:00 PM, October 22, 1981 to about 4:30 PM, October 23, 1981, both off-gas system radiation monitors were inoperable, temporary monitors were not used, and the MSIV's remained open.

This is a Severity Level III Violation (Supplement I) applicable to DPR-56.

RESPONSE:

As reported in LER 3-81-15/1P and 1T the inoperability of the off-gas system radiation monitors was caused by a closed root valve for the sampling system. Upon the plant chemist's discovery that the sampling system was not receiving sufficient flow, an immediate investigation determined that the root valve was closed. The sample line root valve was opened, thus restoring proper flow to the off-gas radiation monitors. The sample line root valve located in the off-gas tunnel was added to the system procedure check-off list. In order to verify operability of this sample system in the future, in addition to the valve check-off list which is performed prior to Reactor Startup, a sample flow verification will be performed at about 600 psig Reactor pressure during startups when greater than 23" condenser vacuum is available. An appropriate revision to the Reactor Startup Check-Off List will be made by February 15, 1982 to accomplish this earlier operational verification. Additionally, a review of other Technical Specification radiation monitoring sample systems will be performed to verify that the present procedures reflect the actual installed sampling systems, including their point of origin with the process systems. If applicable, appropriate procedure and drawing changes will be made no later than May 1, 1982.

- A.2 10 CFR 50.72, and Procedure A-31, Revision 6, April 15, 1981, require licensee notification of the NRC Operations Center within one hour of an unplanned radioactive release.

Contrary to the above, the licensee did not notify the NRC Operations Center within one hour of an unplanned release occurring from about 7:50 PM to 10:30 PM, November 4, 1981: the first notification of the NRC about the release was about 10:30 AM, November 5, 1981.

This is a Severity Level V Violation (Supplement I) applicable to DPR-44 and DPR-56.

RESPONSE:

This failure to notify the NRC Operations Center within one hour was due to personnel oversight at the time of, and for a period of time after the unplanned release. Notification was made approximately 12 hours after the termination of the release, which peaked at about .27 times (0.27x) allowable Technical Specification instantaneous release rate limit. The individual involved in this oversight was counseled on November 6, 1981, concerning the importance and requirement to properly determine

and make notifications of events specified in Administrative Procedure A-31.

A.3 Technical Specification 6.11, requires adherence to radiation protection procedures. Health Physics (HP) Procedure HPC/CO-4, Revision 16, February 4, 1981, Radiation Work Permits, requires those who enter a radiation work permit (RWP) area to read and sign the RWP, to adhere to protective clothing requirements, and to provide the following data: date of entry, social security number, authorized exposure, entry time, and pocket dosimeter reading upon entry. On November 10, 1981, RWP 2-94-0416 for entry into the Unit 2 HPCI room required notification of HP prior to entry, permitted entry wearing shoe covers and gloves if prior HP approval was obtained, and required coveralls, glove liners, and two pairs of shoe covers for other entries.

Contrary to the above, about 3:35 PM, November 10, 1981, a member of the operating shift entered the Unit 2 HPCI room without signing RWP 2-94-0416, without notifying HP, without obtaining permission to reduce protective clothing, without providing any required data, and without wearing coveralls, glove liners, and 2 pairs of shoe covers.

This is a Severity Level V Violation (Supplement IV) applicable to DPR-44.

RESPONSE:

This violation is the result of personnel error, due to a poor practice mistakenly adopted by our senior floor operators. The HPCI room is normally accessible without the need for significant radiation protection measures. This lack of a required protective measure is widely known by our operators. The entrance to the room, however, does have a radiation sign indicating that a radiation work permit and hence a survey is required for entry. The operator violated the radiation protection procedure when he entered the room without having had a radiation survey conducted. The individual who was observed entering the Unit 2 HPCI room without fulfilling the RWP requirements has since transferred to a fossil fired generating station. However, based on our observations as well as the research by the inspector as stated in the inspection report, the other floor operators are being counseled concerning the need to properly obey RWP requirements.

With respect to the conditions in the Unit 2 HPCI room, a resurvey of the area was performed shortly after this event occurred. It was determined that the anti-contamination clothing (shoe covers and gloves) worn by the operator when venting the drain pot was appropriate to the level of work being performed.

Based on the data obtained during the course of this resurvey a new radiation work permit was drafted which included drain pot activities specifically, in addition to inspection, survey and blocking. Provisions for anti-contamination clothing requirements were reviewed to assure that unnecessarily restrictive items were not specified.

In order to provide immediate availability of the RWP for operator entries, the RWP was relocated and maintained adjacent to an access point for the HPCI room. Improved accessibility of the RWP and tailoring of the RWP to the operators' needs should prevent recurrence.

Additionally, the possibility of misleading postings, overly restrictive entry requirements, and poor placement of RWPs has been discussed in recent meetings with Health Physics supervision. Better performance in this area should aid in operator compliance with RWP requirements.

A.4 Technical Specification 6.8.1 requires that written procedures be implemented. Administrative Procedure A-8, Revision 4, January 22, 1980, requires that an entry be made in the locked valve log when a normally-locked valve is restored to its normal position and locked.

Contrary to the above, as of October 20, 1981, locked valve log entries had not been made for eight normally-locked valves that had been returned to their normal positions and locked. At least four of the valves involved appear to have been locked in their normal position prior to October 2, 1981.

This is a Severity Level VI Violation (Supplement I) applicable to DPR-44 and DPR-56.

RESPONSE:

This violation is the result of personnel error. As stated in the inspection report, certain log entries for locked valves were not made in accordance with our administrative procedure A-8, which requires the documentation of restoration of locked valves to their proper positions. The valves corresponding to the missing entries were verified to be in the proper position, indicating that the activities which positioned these valves were performed correctly. Adequate control of review of the locked valve log entries prior to reactor startup is provided in our Reactor Startup Check-Off List.

As stated in the inspection report, check-off lists for Unit 3 startups on October 2 and 5, 1981, incorrectly indicated satisfactory review of the locked valve log. The performance of these two reviews was determined to have been done by a single

individual. This individual is presently absent on extended sick leave, but will be properly counseled upon his return. The subject of proper log entries is included as part of meetings held with the operating staff.

RESPONSE TO GENERIC VALVE POSITIONING CONCERN

Your letter included a request that Philadelphia Electric Company address the recent difficulties with improper system valve lineups. Specifically, a request was made to address the manner in which Philadelphia Electric Company intends to assure the maintenance of proper valve lineups such that Technical Specifications are not exceeded due to mispositioning of valves.

In responding to this request, a meeting was held with the Resident NRC Inspectors and several PECO staff members at Peach Bottom. This group identified and reviewed the difficulties with improper valve lineups which have occurred at Peach Bottom since November of 1980. The identified problems were then reviewed by members of the Peach Bottom staff to determine causes of the difficulty and the corrective actions taken as a result of the identified difficulty. The result of this review indicates that mispositioning of valves was caused by a variety of factors including, design problems, personnel error, procedural deficiencies, or a combination of these problems.

During the past 14 months, design problems resulted in internal flooding of the off-gas radiation monitors during plant operation. A design change has been made and modifications completed to prevent accumulation of water in the off-gas monitor from the process piping in the off-gas system. In response to the unplanned release of the small quantity of contaminated water, several modifications to drain system piping have been completed. In addition, a study has been completed which identifies other potential release paths and identifies modifications which can be implemented to prevent such releases. Specific design for these barriers is in progress.

In those instances where mispositioned valves were caused by personnel error, the individuals responsible were identified and appropriate disciplinary action taken. In each case, re-instruction of individuals primarily responsible and other individuals in that group was provided. In addition, meetings between the operations engineer and operating group supervision and personnel are being held to review these problems. These meetings stress the need to ensure that valving is performed in a responsible, systematic, and conscientious manner. The Station Superintendent has attended the majority of these meetings with operations personnel.

In response to those valving difficulties which were caused by procedural deficiencies, a significant number of new procedures and check-off lists have been developed. These include:

- 1) A check-off list which lists all root valves to safety related instruments. This check-off list is used once per refueling cycle near the end of a major refueling outage.
- 2) New procedures which specifically address bleed and feed operations on potentially contaminated systems.
- 3) New procedures which provide valve lineups and operating instructions for radiation process monitors.
- 4) Detailed instrument valve check-off lists for each instrument rack.
- 5) Minor procedural revisions to correct specific deficiencies identified by the particular event have been processed, approved, and distributed.
- 6) A double verification procedure for valving which is changed as a result of equipment blocking and surveillance testing as well as local leak rate testing has been implemented. Procedure revisions in this area are in progress.
- 7) Surveillance tests for instruments have, for a long period of time, contained double verification of valving associated with those instruments. This procedural mechanism has been strengthened by the use of lead seals in areas where valve mispositioning is not readily identifiable by instrument response or annunciators.

The plant staff review of the valving difficulties also disclosed two areas where additional work is desirable.

- 1) A recent diesel failure was caused by a skid mounted valve on the diesel generators not being placed in the proper position. This valve was not identified on normal plant drawings and was not included in the check-off lists. Specific corrective action regarding these valves has been implemented and a drawing of the skid mounted equipment has been requested. It appears, however, that a review and cross check of the present checkoff lists against skid mounted equipment associated with the HPCI, RCIC, reactor feedwater pump turbines, diesel driven fire pump, cardox systems protecting safety related areas, and safety related sampling systems would be desirable. These reviews are expected to be completed by September 1, 1982.

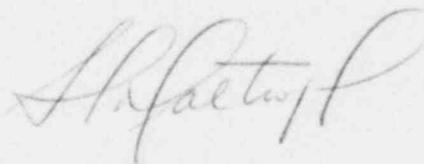
- 2) A second area identified as a result of this review is associated with root valves to safety related sampling systems. A physical check of the installed valves against the present check-off lists and procedures should be performed. This task is expected to be completed by May 1, 1982.

In addition, Philadelphia Electric Company has started to implement a computer system for maintaining records of safety related process valve positions. The critical equipment monitoring system is planned to be installed for trial use by July 1, 1982. This system has incorporated in it new valve tags with a light bar code which identifies the valve to the computer by way of a remote terminal. Use of this system will maintain an up-to-date list of valve position and ensure that an operator dispatched to a valve has actually operated the proper valve. It is expected that over the next two year period, all safety related systems at Peach Bottom will be placed on this critical equipment monitoring computer.

Based on the above review, the corrective actions already taken and the commitment to review those areas identified as needing improvement and the long term program of implementing a critical equipment monitoring program, problems associated with mispositioning of valves should be minimized or be eliminated in the future.

If there are any questions or additional information is required, please do not hesitate to contact us.

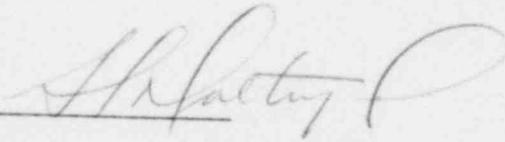
Very truly yours,



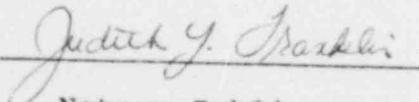
COMMONWEALTH OF PENNSYLVANIA :
SS. :
COUNTY OF PHILADELPHIA :

S. L. Daltroff, being first duly sworn, deposes and says:

That he is Vice President of Philadelphia Electric Company, the Applicant herein; that he has read the foregoing response to Inspection Report Nos. 50-277/81-24 and 50-278/81-26 and knows the contents thereof; and that the statements and matters set forth therein are true and correct to the best of his knowledge, information and belief.



Subscribed and sworn to
before me this 10TH day
of FEBRUARY, 1982



Notary Public

Notary Public, Philadelphia, Philadelphia Co.
My Commission Expires July 28, 1983.