CCN 92-14018

PHILADELPHIA ELECTRIC COMPANY
PEACH BOTTOM ATOMIC POWER STATION
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PEACH BOTTOM—THE POWER OF EXCELLENCE

D. B. Miller, Jr.
Vice President

Docket Nos. 50-277

January 24, 1992

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

SUBJECT: Peach Bottom Atomic Power Station - Units 2 & 3
Response to Notice of Violation 91-30-01 (Unit 2)
(Combined Inspection Report Nos. 50-277/91-30; 50-278/91-30)

Dear Sir:

In response to your letter dated November 27, 1991, which transmitted the Notice of Violation in the referenced inspection report, we submit the attached response. The subject inspection report concerns a routine residents' safety inspection of site activities. This inspection was conducted September 27 through November 4, 1991. An extension of the response time was requested by Regulatory Engineer Albert Fulvio with Senior Resident Inspector Jeff Lyash on January 7, 1992 to include information requested by the NRC at Inspection Exit 91-31/31. This request was granted, extending the response time to January 24, 1992.

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

Sincerely,

Attachment

cc: R. A. Burricelli, Public Service Electric & Gas
T. M. Gerusky, Commonwealth of Pennsylvania
J. J. Lyash, USNRC Senior Resident Inspector
T. T. Martin, Administrator, Region I, USNRC
H. C. Schwemm, Atlantic Electric
R. I. McLean, State of Maryland
C. A. Schaefer, Delmarva Power

IE01

bcc: J. W. Austin A4-4N, Peach Bottom
J. A. Basilio 52A-5, Chesterbrook
G. J. Beck 52A-5, Chesterbrook
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R. J. Lees, NRB 53A-1, Chesterbrook
C. J. McDermott S13-1, Main Office
D. B. Miller, Jr. SMO-1, Peach Bottom
PB Nuclear Records A4-2S, Peach Bottom
K. P. Powers A4-1S, Peach Bottom
J. M. Pratt B-2-S, Peach Bottom
J. T. Robb 51A-13, Chesterbrook
D. M. Smith 52C-7, Chesterbrook

ATTACHMENT

Response to Notice of Violation 91-30-01

Restatement of Violation

Technical Specification 6.8.1 requires that written procedures and administrative policies shall be established, implemented and maintained that meet the requirements of Sections 5.1 and 5.3 of ANSI N18.7-1972. ANSI 18.7-1972, Section 5.1 states, in part, that procedures shall be provided for control of safety-related equipment, and that the procedures shall require independent verification to ensure that necessary measures have been implemented correctly.

Administrative Procedure A-42.1, Revision 3, "Temporary Circuit Modifications During Troubleshooting of Plant Equipment or Verification of Operability," defines the licensee's program for use of troubleshooting control forms (TCF). Procedure A-42.1, Step 7.7.7, states that if the component affected by implementation of the TCF is safety-related, independent/double verification is required.

Contrary to the above, on September 26, 1991, during implementation of TCF 91-1099, adequate initial and independent verifications were not performed. Emergency core cooling system room cooler inlet valve HV-2-33-21084F was not returned to the locked open position as required. As a result, ECCS compartment cooler 2FE057 and the 2B core spray pump were made inoperable for a period of about seven days.

Reason for the Violation

On October 3, 1991, during performance of a routine locked valve survey, operations personnel discovered that Emergency Service Water (ESW) cooling water inlet valve HV-2-33-21084F was unlocked and closed which resulted in the 2B Core Spray (CS) pump and Emergency Core Cooling System (ECCS) compartment cooler 2FE057 being inoperable. The redundant room cooler had previously been isolated to allow more flow through the adjacent room cooler. Prior to this discovery the most recent documented repositioning of the valve occurred on September 26, 1991, during ESW System Flow Trending and Mapping. The flow trending on this specific cooler had been in progress over a three day period due to problems encountered with installation of ultrasonic flow metering equipment. After the testing activities were completed on each day, components were restored and the controlling document, Administrative Procedure A-42.1, Rev. 3, "Temporary Circuit Modifications During Troubleshooting of Plant Equipment or Verification of Operability" was closed out and a new TCF was initiated the next day. The installation and check out of the ultrasonic flow meter requires a "no flow" condition through the pipe, which is obtained by closing the inlet block valve for the cooler. The cooler inlet block valve had to be closed numerous times due to installation and zeroing difficulties associated with the ultrasonic flow device. The A-42.1 TCF used to control the testing activities required the valve to be locked

full open during restoration. As a result of the numerous valve manipulations, the cooler inlet block valve was evidently left in a closed position, but was inappropriately signed off as being in a locked open postion.

Independent verification (IV) that the valve was in the proper position was also required. Although the TCF did not clarify which steps should be independently or double verified (DV), guidance was provided that states "In general, IV should be used during restoration and DV during installation." Personnel involved with the testing were working together, and did not clearly understand the differences between independent and double verification. One of the individuals had very little plant experience, and both individuals had never received training regarding proper verification techniques. As a result the valve was not independently verified. Additionally, the verification that the ESW cooling water inlet valve had been returned to a locked open position was inaccurately signed off on the TCF as having been completed. An independent verification would have identified the valve mispositioning and would have prevented this event.

Additional Information Requested in NRC Exit Meeting 91-31/31

During Inspection Exit 91-31/31, the NRC requested that we investigate and respond to a separate event in this violation response. Specifically, the NRC requested we identify if similarities existed between the two events. This event involved a normally closed ESW air-operated inlet valve found open due to its associated air supply valve being closed. The air valve was found closed by an NRC inspector on 12/23/91. Earlier that day the downstream air line was observed to be leaking by system engineers. A review of the security access history was performed to determine the individuals in the room that could have closed the air valve. Interviews with these individuals have thus far failed to identify how the air supply valve became closed. The engineers that performed the flow testing on 12/20/91 were also interviewed. They indicated that the valve was appropriately restored after testing activities were completed. Investigation of this incident is continuing in accordance with our in-house events investigation program.

Corrective Actions Taken and Results Achieved

The ESW cooling water inlet valve HV-2-33-21084F was properly restored to the locked open position on October 3, 1991. This restored the operability of the 2B Core Spray Pump. Other similar valves manipulated during the ESW testing evolution were inspected and verified to be in their proper position.

The event was discussed with the individuals involved and the individuals were coached on the importance of procedural compliance.

As a result of previous events concerning less than adequate independent or double verification, a new common Nuclear procedure (A-C-33) was

developed in 1991. This procedure was issued November 20, 1991, and clearly delineates the responsibilities of Nuclear Group personnel as well as establishing a uniform approach for the determination of verification activities and processes.

I&C personnel received IV and DV training during August, 1991. The lesson plan utilized information from the verification process common procedure defining IV and DV, a discussion of the process itself and then applied the criteria for proper instrument valving verification. This lesson plan is presented to new I&C employees during their initial training and then every two years as continuing training for the I&C staff. Additional IV and DV training was presented to Maintenance, Maintenance Planners and QC during December 1991 and January 1992 utilizing the verification process common procedure. A discussion of verification and the definitions of how the different processes apply is part of a five week segment of Technical Staff and Management Training.

The practice of performing flow mapping using TCFs has been discontinued and a new procedure (RT-B-033-610-2,3) to control the flow mapping evolution was approved October 25, 1991. This procedure provides better control for ESW system flow mapping and trending.

Corrective Actions to Avoid Future Violations

The Technical Superintendent will ensure that individuals selected for performing plant activities will be trained and experienced for assigned tasks. Each Technical Section Branch Head will review and discuss A-C-33, "Verification Process" with their appropriate personnel by January 31, 1992. Additionally, each Technical Section Branch Head will conduct training concerning the importance of self-checking in the performance of work activities and the verification process.

Appropriate plant personnel will be informed of this event and the proper processes for verification through Technical Staff and Management Continuing Training. The new common Nuclear Procedure Verification Process, A-C-33 will also be presented during this training. The training module is scheduled to be completed by April 1992.

Additionally, independent and double verification training for operations personnel is scheduled for April 13 through May 22, 1992.

An evaluation of previous events concerning valve mispositionings will be performed. The results of this evaluation will be documented and given to the responsible groups for appropriate corrective action.

Administrative Procedure A-42.1, "Temporary Circuit Modifications During Troubleshooting of Plant Equipment or Verification of Operability", will be revised to clarify the requirements for the use of independent and double verification during troubleshooting activities. This revision will also include changes to the troubleshooting control form that will more clearly identify the appropriate verification process to be used.

Date of Full Compliance

Full compliance was achieved on October 3, 1991, when the ESW cooling water inlet valve HV-2-33-21084F was locked open which returned operability to the 2B core spray pump.