

PHILADELPHIA ELECTRIC COMPANY

NUCLEAR GROUP HEADQUARTERS

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August 31, 1992

Docket Nos. 50-277
50-278

License Nos. DPR-44
DPR-56

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

SUBJECT: Peach Bottom Atomic Power Station, Units 2 & 3
Request for Temporary Waiver of Compliance from the
Technical Specifications Section 3.14.D.2, "Fire
Barriers"

Dear Sir:

As discussed with the NRC on August 28 and August 31, 1992, this letter is being submitted to document two requests: 1) that the NRC issue a Temporary Waiver of Compliance (TWOC) to temporarily suspend the requirement to have a continuous fire watch for a safe shut down area with inoperable fire barriers and 2) that the NRC approve the interpretation that Closed Circuit Television (CCTV) is an acceptable means of satisfying the Technical Specification (TS) fire watch requirements. The TWOC was requested to apply until August 29, 1992; at which time a continuous fire watch by use of CCTV was installed in the Unit 3 Pipe Tunnel, Room 19.

A similar request was made and approved on July 17, 1992. This new request was made because of a new understanding of the deficiencies of the Thermo-lag 330 fire barrier system. The NRC issued a supplement to NRC Bulletin (NRCB) No. 92-01, Supplement 1, "Failure of Thermo-Lag 330 Fire Barrier System to Perform Its Specified Fire Endurance Function," on August 28, 1992, which questioned the capability of Thermo-lag in any configuration. In response to the supplement, Philadelphia Electric Company (PECO) identified two additional areas in which Thermo-lag was used as a fire barrier: the Unit 3 Pipe Tunnel, Room 19 and the High Pressure Service Water (HPSW) Pump Structure. The TWOC requested relief for Room 19; identified as an area of concern. An hourly fire watch was immediately established for the HPSW Pump Structure which along with the operable smoke detectors in that area satisfied our TS requirements. However, because of radiation dose rates in the

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Pipe Tunnel and ALARA concerns a CCTV was installed rather than a manned fire watch. The request was made to waive the requirement for a continuous fire watch until the installation of the CCTV could be completed.

In accordance with the guidance contained in the February 22, 1990 memo from T. E. Murley (Director, Office of Nuclear Reactor Regulation), Philadelphia Electric Company (PECO) requested a Temporary Waiver of Compliance from the requirements of Peach Bottom Atomic Power Station, Units 2 & 3 Technical Specifications (TS) Section 3.14.D.2, "Fire Barriers".

Technical Specification 3.14.D.1 details the plant areas and the operability requirements for fire barriers. Technical Specification 3.14.D.2 states: "If the requirements of 3.14.D.1 cannot be met, within one hour establish a continuous fire watch on at least one side of the affected fire barrier, or verify the operability of fire detectors on at least one side of the inoperable fire barrier and establish an hourly fire watch patrol. Reactor startup and continued reactor operation is permissible.". PECO requested a Temporary Waiver of Compliance from this Technical Specification requirement until a CCTV could be installed in the Unit 3 Pipe Tunnel.

The February 22, 1990 memo requests Licensees to provide the following:

- 1) A discussion of the requirements for which a waiver is requested

Technical Specification 3.14.D.1 details the plant areas and the operability requirements for fire barriers. Technical Specification 3.14.D.2 states: "If the requirements of 3.14.D.1 cannot be met, within one hour establish a continuous fire watch on at least one side of the affected fire barrier, or verify the operability of fire detectors on at least one side of the inoperable fire barrier and establish an hourly fire watch patrol. Reactor startup and continued reactor operation is permissible.". PECO requested a Temporary Waiver of Compliance from this Technical Specification requirement until a CCTV could be installed in the Unit 3 Pipe Tunnel.

- 2) A discussion of the circumstances surrounding the situation including the need for prompt action, and a description of why the situation could not have been avoided.

The NRC issued Bulletin 92-01, Supplement 1 on August 28, 1992. PECO immediately identified two areas which were a concern: the Unit 3 Pipe Tunnel (Room 19) and the KPSW Pump Structure. A hourly fire watch was established in the HPSW Pump Structure which also has operable smoke detectors. Room 19 does not have smoke detectors and because of ALARA

concerns a continuous fire watch was considered impractical. After discussions with the NRC, Station Operations and PECO Engineering, it was decided that a CCTV installed in the Pipe Tunnel would be a practical solution. The CCTV was installed by midnight August 28, 1992 and the CCTV system has been continuously monitored since that time.

3) A discussion of compensatory actions

There are no transient combustible materials located in this fire area. Administrative controls implemented by Administrative (A) procedures, e.g., A-12.2, "Control of Combustible Materials, Flammable and Non-flammable Compressed Gases," and A-30, "Housekeeping," prohibit storage and limit the amount of combustibles permitted in the plant, and ensure that potential fire hazards are kept to a minimum in all areas of the plant including those areas where Thermo-Lag fire barriers are required to meet fire protection safe shutdown requirements. Therefore, instantaneous spreading of a fire throughout this fire area is highly unlikely. In addition, when the Unit 2 Pipe Tunnel was identified in July 1992 as an area of concern under the original NRC Bulletin all Fire Brigades were notified of this condition during shift turnover and a fire drill was staged on July 17, 1992 to help ensure the response time to a fire in the Pipe Tunnel would be minimized. Further, water hose stations and other fire fighting equipment has been located just outside the area. Both the Unit 2 & 3 Pipe Tunnels are in the same general area of the plant and the fire drill and the equipment stationed in this area will ensure the response time to a fire in either pipe tunnel is minimized. The shift was informed that Unit 3 Pipe Tunnel is affected by the Thermo-lag deficiencies.

4) A preliminary evaluation of the safety significance and potential consequences of the proposed request

It is unlikely that a fire should occur in this area because there are no ignition sources and minimal combustible material. Further, the fire fighting equipment and the fire brigade training and drill will ensure that the response time to a fire in the pipe tunnel is minimized.

5) A discussion which justifies the duration of the request

This TWOC was requested to apply until August 29, 1992; at which time a continuous fire watch by use of CCTV in the Unit 3 Pipe Tunnel, Room 19, was initiated. An alternative to a person performing a continuous fire watch in this room is considered good ALARA practice, because this is a locked high radiation area with dose rates in excess of 1000 mR/hr. Therefore, as interim compensatory measures, until the final corrective actions to restore the inoperable fire barriers

to an operable status are implemented, we request approval to use a CCTV to perform an continuous fire watch of room No. 19. The viewing monitor would be located just outside the locked high radiation area where the general area dose rate would be 2 to 20 mR/hr. Use of a CCTV to satisfy TS fire watch requirements has previously been approved by the NRC, e.g., NRC approval for Philadelphia Electric Company's Peach Bottom Atomic Power Station, dated July 17, 1992.

6) The basis for the licensee's conclusion that the request does not involve significant hazards consideration

The requested temporary waiver of compliance to Technical Specification 3.14.D.2 did not involve a significant hazards consideration because operation of Peach Bottom Atomic Power Station with this change did not:

- (1) involve a significant increase in the probability or consequences of an accident previously evaluated. The probability of a fire is related to the presence of combustible material and ignition sources. Both of these factors were minimized before this request was made. The Unit 3 pipe tunnel has minimal combustible materials and ignition sources. The camera adds an insignificant amount of combustible material. Therefore, the probability of a fire in the pipe tunnel is extremely remote. In the unlikely event of such a fire, the consequences are also likely to be minimal; the lack of combustible material would minimize the intensity of a fire and the consequences.
- (2) create the possibility of a new or different kind of accident from any accident previously evaluated. The requested temporary waiver did not involve any changes to plant equipment or effect any accident precursors and therefore in and of itself did not create the possibility of a new or different kind of accident.
- (3) involve a significant reduction in a margin of safety. The minimal combustible material and ignition sources in the pipe tunnel provided a similar margin of safety as previously existed.

7) The basis for the licensee's conclusion that the request does not involve irreversible environmental consequences.

The requested temporary waiver of compliance to the Technical Specifications did not have an environmental impact since the change did not result in any increase in the amount or result in any change in the type of effluent which may be released off-site, and there was no significant increase in individual occupational radiation exposures.

The Plant Operational Review Committee reviewed this requested temporary waiver of compliance and concluded that it did not involve a significant hazards consideration and would not endanger the health and safety of the public.

Discussion of CCTV

The CCTV equipment being used for the remote fire watch for the inoperable fire barriers in the Unit 3 Pipe Tunnel area consists of a television camera and a monitor. The CCTV monitor is an eight (8) inch diagonal black and white display unit. Testing requirements and acceptance criteria for the camera and the monitor are met if the designated fire barriers are clearly visible and positively identified on the remote monitor. The camera provides the capability for a person performing the fire watch to visually monitor the inoperable fire barriers and the general area surrounding the fire barriers. Regardless of any effects of radiation on this equipment, any degradation in video transmission would be readily detected. Should the quality of the video transmission become degraded, the appropriate corrective action will be taken to ensure that the area of concern is maintained under visual surveillance consistent with good ALARA practice.

The use of a CCTV reduces personnel radiation exposure incurred during a fire watch. Posting a fire watch to monitor the inoperable fire barriers in the Pipe Tunnel area by using a CCTV provides a level of protection equivalent to the posting of a fire watch in the room. Locating the fire watch outside of the high radiation area using the CCTV does not reduce the level of protection required by TS, and conforms with accepted ALARA practices.

Very truly yours,



G. J. Beck
Manager
Licensing Section

cc: T. T. Martin, Administrator, Region I, USNRC
J. J. Lyash, USNRC Senior Resident Inspector, PBAPS