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NUCLEAR ENGINEERING & SERVICES DEPARTMENT

July 17, 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 July 16, 1992, this letter is being submitted for two reasons: 1) to request a Temporary Waiver of Compliance (TWOC) to suspend the requirement to have either a continuous fire watch or an hourly fire watch with operable detection for safe shut down areas with inoperable fire barriers and 2) to request 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 is requested to apply until July 21, 1992; at which time either a continuous fire watch by use of CCTV or an hourly fire watch also using CCTV and operable smoke detectors can be installed in the Unit 2 Pipe Tunnel, Room 18, in accordance with good ALARA practices.

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) requests 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

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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 is requesting a Temporary Waiver of Compliance from this Technical Specification requirement until a CCTV and smoke detectors can be installed in the Unit 2 Pipe Tunnel during the upcoming load reduction.

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 is requesting a Temporary Waiver of Compliance from this Technical Specification requirement until a CCTV and smoke detectors can be installed in the Unit 2 Pipe Tunnel during the upcoming load reduction.

- 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.

NRC Bulletin (NRCB) No. 92-01 "Failure of Thermo-Lag 330 Fire Barrier System to Maintain Cabling in Wide Cable Trays and Small Conduits Free from Fire Damage," issued on June 24, 1992, requested licensees to promptly identify the areas of the plant which have Thermo-Lag 330 fire barrier material installed to protect either small conduits or wide cable trays that provide safe shutdown capability, and to implement compensatory measures, such as fire watches, in accordance with either plant TS or an operating license condition for an inoperable fire barrier. Our review of the plant areas which contain Thermo-Lag 330 included Fire Zone 50-130 (i.e., the Unit 2 Pipe Tunnel, Room No. 18). This area contains horizontal sections of a 24 inch wide configuration encapsulating four (4) conduits in Thermo-Lag 330 fire barrier material. Two (2) of these four (4) conduits are required to provide safe shutdown capability for both Units 2 and 3. This fire barrier, as well as all other fire barriers conforming to the description in NRC Bulletin 92-01, were declared inoperable on July 16, 1992.

The PBAPS station recognized on June 25, 1992, that the Thermo-Lag in the Pipe Tunnel was suspect and took immediate compensatory measures; however, a complete evaluation of the status of the Thermo-Lag in the Pipe Tunnel and throughout the plant was not completed until July, 16, 1992. As an immediate compensatory measure on June 25, 1992, an hourly fire watch was first established in those areas of the plant where Thermo-Lag (in configurations described by the bulletin) was used to protect safe shut down capability. The Pipe Tunnel was the only area of concern that did not have fire detection; however, based on dose rate considerations and the low probability of a fire in the area an hourly fire watch rather than a continuous fire watch was established. The dose rate was a concern because Room No. 18 is radiologically controlled as a locked high radiation area, i.e., due to potential dose rates in excess of 1,000 mR/hr.

3) A discussion of compensatory actions

The hourly fire watch that was initiated on June 25, 1992 will continue until the CCTV can be installed. Additional compensatory actions will be in place until the CCTV can be installed. 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. Also, all Fire Brigades will be notified of this condition during shift turnover and a fire drill will be staged by July 17, 1992 to help ensure the response time to a fire in the Pipe Tunnel is minimized. Further, water hose stations and other fire fighting equipment has been located just outside the area.

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 prepositioned 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 is requested to apply until July 21, 1992; at which time either a continuous fire watch by use of CCTV or an hourly fire watch also using CCTV and operable smoke detectors can be installed in the Unit 2 Pipe Tunnel, Room 18, in accordance with good ALARA practices. Currently, PBAPS Unit 2 is in full power operation but a load reduction is scheduled for July 19, 1992. During that load drop it is expected that general area dose rates in the pipe tunnel area will decrease significantly and CCTV can be safely installed to continually monitor the pipe tunnel. An alternative to a person performing a continuous fire watch in this room is considered good ALARA practice. 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. 18. 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 Limerick plant, dated July 2, 1992.

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

The proposed temporary waiver of compliance to Technical Specification 3.14.D.2 does not involve a significant hazards consideration because operation of Peach Bottom Atomic Power Station with this change does 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 have been minimized before this request was made. The Unit 2 pipe tunnel has combustible materials and ignition sources. The cameras add 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. Further, the hourly fire watch that is being and will continue to be performed until the detectors and cameras are in place will ensure that any fire will be detected.
- (2) create the possibility of a new or different kind of accident from any accident previously evaluated. The requested temporary waiver does not involve any changes

to plant equipment or effect any accident precursors and therefore in and of itself does 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 combined with the hourly fire watch provides 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 proposed temporary waiver of compliance to the Technical Specifications does not have an environmental impact since the change will 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 will be no significant increase in individual occupational radiation exposures.

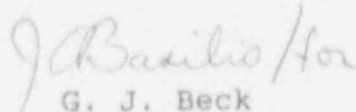
The Plant Operational Review Committee has reviewed this proposed temporary waiver of compliance and has concluded that it does not involve a significant hazards consideration and will not endanger the health and safety of the public.

Discussion of CCTV

The CCTV equipment being used for the remote fire watch for the inoperable fire barriers in the Pipe Tunnel area consists of television cameras and a monitor. The CCTV monitor is an eight (8) inch diagonal black and white display unit. Testing requirements and acceptance criteria for the cameras and monitor are met if the designated fire barriers are clearly visible and positively identified on the remote monitor. The cameras provide the capability for a person performing the fire watch to visually monitor the inoperable fire barrier and the general area surrounding the fire barrier. Regardless of any affects 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