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NUCLEAR ENGINEERING & SERVICES DEPARTMENT

June 8, 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 3.5.F.1, "Minimum Low  
Pressure Cooling and Diesel Generator Availability"  
and TS 4.5.F, Minimum Low Pressure Cooling and Diesel  
Generator Availability.

Dear Sir:

As discussed with the NRC on June 5, 1992, this revision to our previously submitted request for a Temporary Waiver of Compliance is being submitted to include the approved suspension of testing of the remaining Diesel Generators for the duration of the E-4 Diesel Generator outage. Changes included in this revision are indicated by boldface type.

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 3.5.F.1, "Minimum Low Pressure Cooling and Diesel Generator Availability" and TS 4.5.F.1, "Minimum Low Pressure Cooling and Diesel Generator Availability."

Technical Specification 3.5.F.1 states: "During any period when one diesel generator is inoperable, continued reactor operation is permissible only during the succeeding seven days unless such diesel generator is sooner made operable provided that the remaining diesel generators and the low pressure core and containment cooling systems which are powered by the remaining diesel generators are operable. If this requirement

cannot be met, an orderly shutdown shall be initiated and the reactor shall be placed in the Cold Shutdown Condition within 24 hours." TS 4.5.F states: "When it is determined that one diesel generator is inoperable, the operable diesel generators shall be demonstrated to be operable immediately and daily thereafter." PECO is requesting a Temporary Waiver of Compliance from these Technical Specification requirements so the E-4 Diesel Generator allowable out of service time can be extended 48 hours and during the time the E-4 Diesel is not operable, testing in accordance with TS 4.5.F.1 can be temporarily suspended.

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 3.5.F.1 states: "During any period when one diesel generator is inoperable, continued reactor operation is permissible only during the succeeding seven days unless such diesel generator is sooner made operable provided that the remaining diesel generators and the low pressure core and containment cooling systems which are powered by the remaining diesel generators are operable. If this requirement cannot be met, an orderly shutdown shall be initiated and the reactor shall be placed in the Cold Shutdown Condition within 24 hours." TS 4.5.F states: "When it is determined that one diesel generator is inoperable, the operable diesel generators shall be demonstrated to be operable immediately and daily thereafter."

We are requesting that this seven day period and the suspension of Diesel Generator testing be extended 48 hours and during the time the E-4 Diesel is not operable, testing in accordance with TS 4.5.F.1 can be temporarily suspended.

- 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 Peach Bottom Atomic Power Station (PBAPS) Emergency Diesel Generator (E-4) was removed from service on June 1, 1992 at 00:01 hours to replace all 12 cylinder liners as recommended by the manufacturer. In addition to the liner replacement, the mechanical portion of the normal periodic maintenance inspection was scheduled to be performed. The decision to include the mechanical inspection was made in order to reduce future unavailability of the E-4 Diesel Generator during its periodic maintenance inspection.

A detailed schedule was developed, extensive mock-up training was conducted on our training diesel engine, and pre-staging of liners and associated parts was completed

prior to taking the E-4 Diesel Generator out of service. The cylinder liner replacement and mechanical portion of the periodic maintenance inspection would not have required more than the allowable seven days to complete; however, several leaks were identified on the jacket coolant lines and the cylinder inlet adapters and a bearing on the vertical drive was found to be out of tolerance which increased the out of service time and added an estimated 48 hours to an already aggressive schedule. Up to the point of hydrostatic testing of the diesel generator, the outage was progressing well and on schedule. Additional time was required to repair the leaks, replace a bearing on the vertical drive, and perform additional hydrostatic tests.

Philadelphia Electric is requesting an additional 48 hours to return the E-4 Diesel Generator to service. The additional time is needed to complete necessary engine run-in tests (36 hours) required by the manufacturer whenever engine wear-in parts are replaced (e.g. cylinder liners).

3) A discussion of compensatory actions

Activities which may challenge the availability of redundant or critical plant equipment have been minimized. This includes Instrument and Controls (I&C) work, as well as preventative maintenance on the high and low pressure emergency core cooling systems, station batteries and the battery chargers, Emergency Service Water, Emergency Cooling Water system and discretionary work at the North and South Substations.

To further assure reliability of the off site power supply the Load Dispatcher responsible for the two incoming supplies has been requested to minimize switching and other activities which may jeopardize the reliability of the off-site power supplies.

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

Both units are currently operating at steady state. Initiating a dual unit shutdown would subject the plant to problems/challenges that operating at steady state conditions would not. This is especially relevant because PECO believes the E-4 Diesel Generator will be available for approximately half of the duration of the extension request and will be fully operable within 48 hours of exceeding the LCO. If a shutdown were required, both units would be returned to their previous power levels when the Diesel Generator is returned to service. This power cycling is a

challenge to the plant which could be avoided by the continued steady state operation of both units.

A probabilistic risk assessment has been conducted to determine the increase in the probability of a core damage accident. There is an insignificant increase in the already extremely low likelihood of a core damage accident with one Diesel Generator out of service for an additional two days.

By waiving the requirements of TS 4.5.F.1 the remaining diesel generators are not subjected to the wear and possible failure mechanisms associated with demonstrating their operability on a daily basis. Further, because of the high degree of reliability of our diesel generators, we believe that they will be available to respond as designed if they are required. The reliability of the 4Kv system will be enhanced because the normal system line up will not be disturbed. Further, deletion of the accelerated testing is consistent with our pending TS Change Request 88-08 and with Standard TS requirements.

5) A discussion which justifies the duration of the request

We are requesting a temporary waiver of compliance for an additional two days to the 7 day LCO. These two days will allow the staff at Peach Bottom to complete the Diesel Generator maintenance and testing. It is expected that repairs and restoration will be completed by the end of the existing LCO and the run-in testing will take an additional 36 hours. It should be noted in comparison that an orderly shutdown and cooldown as required by Technical Specification 3.5.F would be completed in approximately one day.

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 3.5.F 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. Continued steady state operation is less of a challenge to equipment and personnel than a required dual unit shutdown. The Peach Bottom standby AC power system is designed with sufficient redundancy such that one diesel generator may be removed from service for testing, inspection, or repairs in the time provided in the current Technical Specifications. The remaining three diesel generators are still capable of carrying sufficient loads to mitigate the consequences of an accident and maintain the Units in the safe shutdown

condition. Therefore, the probability or consequences of an accident previously evaluated is not significantly increased by the additional time requested.

- (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 Peach Bottom standby AC system is designed with sufficient redundancy such that one diesel generator may be removed from service for testing, inspection or repairs and the remaining three diesel generators are capable of carrying sufficient loads to satisfy the Updated Final Safety Analysis Report requirements for shutdown of both units. Considering this fact, as well as the high reliability of the remaining diesel generators and off-site power sources, adding two days to the existing LCO and suspending the testing requirements does not reduce the margin of safety.

- 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 have concluded that it does not involve a significant hazards consideration and will not endanger the health and safety of the public.

Very truly yours,



G. J. Beck  
Manager  
Licensing Section  
Nuclear Engineering & Services

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