



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D. C. 20555

November 25, 1991

Docket No. 50-278

Mr. George J. Beck  
Director-Licensing, MC 5-2A-5  
Philadelphia Electric Company  
Nuclear Group Headquarters  
Correspondence Control Desk  
P.O. Box No. 195  
Wayne, Pennsylvania 19087-0195

Dear Mr. Beck:

SUBJECT: TEMPORARY WAIVER OF COMPLIANCE RELATING TO LOADING OF FUEL WITHOUT ALL CONTROL RODS FULLY INSERTED, PEACH BOTTOM ATOMIC POWER STATION, UNIT 3 (TAC NO. MB2155)

By letter dated November 22, 1991, Philadelphia Electric Company (PECo) requested a temporary waiver of compliance from the requirements of Peach Bottom Atomic Power Station, Unit 3 Technical Specification Section 3.10.A.2, "Refueling Interlocks". This specification requires that "fuel shall not be loaded into the reactor core unless all control rods are fully inserted." The requested relief would allow the loading of fuel into the core with several control rods removed from the core provided that certain compensatory actions are implemented. These actions are described by the licensee in an emergency amendment technical specification change request dated November 21, 1991 and are discussed below.

The refueling interlocks are designed to back up procedural core reactivity controls during refueling operations. The interlocks prevent an inadvertent criticality during refueling operations when the reactivity potential of the core is being altered. Peach Bottom Unit 3, is currently in a refueling outage. During fuel inspections associated with several fuel failures that occurred during Cycle 8 operations, debris was observed in a number of fuel bundles. The bottom head drain of the reactor was also determined to be clogged and it is presumed to be clogged with the same type of debris as was observed in the fuel. In order to prevent additional debris induced failures during Cycle 9 operation, it was decided to implement a cleaning and inspection program on all fuel bundles that had been reinserted from Cycle 8. This program will involve offloading individual fuel bundles to the spent fuel pool, cleaning and inspecting them and reinserting them into the core.

In addition, it was decided to implement a program to clean and inspect the reactor bottom head drain. This program will involve removing several fuel cells and their associated control rods from the core in the vicinity of the bottom head drain. The bottom head drain cleaning is expected to take from several days to several weeks. In order to conduct both the fuel and bottom head cleaning in parallel, the licensee has requested a temporary waiver from the requirements of Technical Specification 3.10.A.2.

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The NRC staff's review of the licensee's November 21, 1991 submittal, requesting an emergency amendment technical specification change, is ongoing. That submittal commits to several compensatory measures to support the change to 3.10.A.2, which would provide an exception to the prohibition against loading fuel unless all control rods are fully inserted. Those compensatory measures include: (1) for any core cell which is to have its control rod withdrawn, the four fuel assemblies surrounding the control rod must be removed from the cell; (2) all fueled cells face or diagonally adjacent to a cell with its control rod withdrawn must have its control rod fully inserted and its directional control valves electrically disarmed; and (3) require that prior to loading fuel without all control rods fully inserted, it must be shown by analysis that the core is subcritical by at least 1% delta k assuming a single fuel loading error into a cell with its control rod withdrawn.

Information submitted to support the request for a temporary waiver of compliance includes: (1) a discussion of the requirements for which the waiver is requested; (2) a discussion of the circumstances surrounding the situation, including the need for prompt action; (3) a discussion of the above compensatory actions; (4) a preliminary evaluation of the safety significance and potential consequences of the proposed request; (5) a discussion which justifies the duration of the proposed request; (6) the basis for the licensee's conclusion that the request does not involve a significant hazards consideration; and (7) the basis for the licensee's conclusion that the request does not involve irreversible environmental consequences.

Based on review of the submitted information, including the proposed compensatory measures, we find that the requested relief from the technical specifications presents no significant effect on the safety of the plant and presents no undue risk to the health and safety of the public. Therefore, we conclude that a temporary waiver of compliance from Technical Specification 3.10.A.2 regarding loading fuel without all control rods inserted should be granted.

Accordingly, we hereby grant the requested Temporary Waiver of Compliance. It shall be effective immediately and is to remain in effect until the proposed license amendment is issued.

Sincerely,

/s/

Jose A. Calvo, Assistant Director  
for Region I Reactors  
Division of Reactor Projects - 1/11  
Office of Nuclear Reactor Regulation

cc: See next page

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\*Previously Concurred

*Concurrence by Steve JAC*

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Sincerely,



Jose A. Calvo, Assistant Director  
for Region I Reactors  
Division of Reactor Projects - I/II  
Office of Nuclear Reactor Regulation

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Mr. George J. Beck  
Philadelphia Electric Company

Peach Bottom Atomic Power Station,  
Units 2 and 3

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