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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NOS. 47 AND 47 TO FACILITY LICENSE NOS. DPR-44 AND DPR-56

PHILADELPHIA ELECTRIC COMPANY
PUBLIC SERVICE ELECTRIC AND GAS COMPANY
DELMARVA POWER AND LIGHT COMPANY
ATLANTIC CITY ELECTRIC COMPANY

PEACH BOTTOM ATOMIC POWER STATION UNITS NOS. 2 AND 3

DOCKETS NOS. 50-277 AND 50-278

Introduction

By letters dated May 26, and September 5, 1978, the Philadelphia Electric Company (the licensee) proposed changes to the Technical Specifications appended to Operating License Nos. DPR-44 and DPR-56 for the Peach Bottom Atomic Power Station Units Nos. 2 and 3. The changes relate to: (1) the instrumentation that initiates or controls the core and containment cooling systems, (2) Administrative Controls, (3) addition of safety related snubbers, (4) certain revisions that would conform to the staff's Standard Technical Specifications, and (5) various editorial changes to clarify the meaning or correct errors in the existing specifications.

Evaluation

1. Timing Relays

The licensee proposed changes to two types of timing relays in conjunction with the recommendations of the General Electric Company (GE) as described in Service Information Letter (SIL) No. 230, and SIL No. 230, Supplement No. 1, dated June 6, 1977 and December 30, 1977, respectively.

One of the proposed changes would revise the setting of the Automatic Depressurization System (ADS) timing relays from the present Technical Specification setting of 120 $\pm$ 5 seconds to $\leq$120 seconds. This change moves the upper setpoint limit to a lower, more

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conservative value. As indicated in Table 7.4.2 of the Peach Bottom Units Nos. 2 and 3 FSAR, only the upper limit of the ADS timer setting is used in the system analysis; therefore, the licensee requested that the lower limit be deleted.

We have reviewed the licensee's submittal and determined that the proposed revision to the upper setpoint limit is acceptable on the basis that it is being revised to a lower, more conservative value. However, during our review, we questioned the advisability of deleting the lower setpoint limit. As stated in Section 7.4.3.3.3 of the Peach Bottom FSAR, an ADS time delay "is chosen to be long enough so that the HPCIS has time to start,...". Thus, the basic purpose of the ADS time delay is not consistent with a zero setpoint. We discussed this with the licensee and recommended a lower setpoint of 90 seconds as recommended in GE SIL 230. The licensee agreed. Therefore, we find the licensee's proposal, as modified by the staff to be acceptable.

The second request related to timing relays involves the modification of the Low Pressure Coolant Injection (LPCI) system pump start circuits by replacing the presently installed "0 ≤ t ≤ 1 second" time delay relays, which are set at essentially zero seconds, with auxiliary relays. The "0 ≤ t ≤ 1 second" relays were provided by General Electric as part of their generic design.

Our review of the licensee's request and of the system design indicates that a time delay is not necessary for the Peach Bottom Units since the Peach Bottom design of the four LPCI pump start circuits consists of four separate circuits, one for each pump. Sequencing of the 4 pumps is not a part of the design. Therefore, replacing the timers with auxiliary relays will enhance system reliability. We find this requested change to be acceptable.

2. LPCI System Pump Start Circuits

Another of the licensee's requested changes involves the modification of the Low Pressure Coolant Injection (LPCI) System pump start circuits by the installation of additional time delay relays.

When the LPCI system recirculation loop selection logic was deleted in conjunction with Amendments Nos. 14 and 12 to License Nos. DPR-44 and DPR-56, respectively, the design of the LPCI logic was modified by adding a redundant signal to each pump start circuit. Further review of this design by the licensee indicated the desirability of adding four additional timers so that each pump start signal will have its own time delay relay. This improves system reliability by reducing the impact of certain postulated single failures.

Because of a licensee misunderstanding concerning the listing of the timers in Table 3.2.B, this modification was made on Unit No. 2 during the 1977 refueling outage without application for a Technical Specification change request. This event was reported to the NRC in LER 78-021/3L-0 (Unit 2). Accordingly, for Unit No. 2, the licensee requested that Table 3.2.B be modified by increasing the "Minimum Number of Operable Instrument Channels per Trip System" from "1" to "2" for both the "5 $\pm$ 1 second" and the "0< t<1 second" LPCI Pump Start Timers, and by increasing the "Number of Instrument Channels Provided by Design" from "2 timers" to "4 timers" for the same sets of timers.

We have reviewed the licensee's request and determined that these changes constitute a correction to conform the Technical Specifications to the installed design of the LPCI pump start circuits. Further we have determined that the installation of additional timers improves system reliability and is acceptable.

The above described modification has not been performed on Unit No. 3. The licensee proposed to perform this modification in conjunction with his request to replace 0< t<1 second timers with auxiliary relays (as discussed in IIA above). Based on our foregoing discussion and evaluation, we find this change to be acceptable.

3. Editorial Correction to Table 3.2.B

The licensee requested a change to Table 3.2.B to correct an error in the Core Spray Pumps Starter Timing by changing the Minimum Number of Operable Instrument Channels per Trip System to "2" rather than "1" as previously listed. We have reviewed the licensee's submittal and determined that the revision will conform the Technical Specifications with the design of the Core Spray Pumps Starter Timing, as previously reviewed. This change is an editorial correction and is acceptable.

4. Administrative Controls

The licensee proposed changes to the Administrative Controls portion of the Technical Specifications. Some of the changes are editorial in nature whereas others would conform certain specifications to staff guidance as set forth in NUREG 0123 (Ref. 1). Each of these changes is discussed below:

a. The licensee proposed to change the titles of two members of the Operation and Safety Review (OSR) Committee to reflect changes in the management organization of the company.

We have reviewed the proposal and determined that since there are no changes to the qualifications of the membership, the revision is pro forma in nature and has no safety or environmental significance.

b. The licensee requested to delete the specific reference to the meeting frequency of the OSR Committee during the initial year of facility operation. Since this specific requirement is no longer applicable, we have determined the change to be editorial in nature and is acceptable.

c. The licensee proposed certain changes to clarify the specification involved: the definition of a quorum of the ORS Committee would add the Vice Chairman or his designated alternative as a member of the quorum; the November 1972 edition of Regulatory Guide 1.33 would be the specific reference for plant procedures; the approval mechanism and method for approval and periodic review of plant procedures would be revised to be consistent with other specifications and the Peach Bottom Operations Phase Quality Assurance Program which was previously approved by the staff (Ref. 2); the Commission's addressee for the Monthly Operating Report would be changed to reflect a title change within the NRC; the time period for submittal of the Primary and Secondary Containment leak rate test results would be specifically identified (consistent with 10 CFR 50, Appendix J, Section V.B.). We have reviewed each of the identified changes and determined that they are editorial in nature, more clearly identify staff approved procedures and requirements and are therefore acceptable.

d. The licensee proposed to modify the requirements for control of radiation areas by conforming this specification to the staff's published guidance (Ref. 1, Section 6.12). We have reviewed the licensee's submittal and determined that the proposal is consistent with the staff's previously approved alternative to the control device or alarm signal specified in paragraph 20.203(c)(2) of 10 CFR 20 and is acceptable.

5. Addition of Safety Related Shock Suppressors

The licensee proposed to add certain snubbers to the Table of Safety Related Shock Suppressors to reflect the recent addition of snubbers on Unit No. 3. This request is consistent with the

current specifications as implemented by Amendment No. 32 to DPR-56, dated April 28, 1977, which states that snubbers may be added to safety related systems without prior approval provided the licensee proposes a revision to the Table. Therefore, we find the change to be an administrative action which implements a previously reviewed and approved amendment.

6. Rod Worth Minimizer

The licensee proposed to revise the surveillance requirements associated with the verification of the correctness of the control rod withdrawal sequence input to the Rod Worth Minimizer (RWM) computer. The revision would incorporate the staff's guidance (Ref. 1, paragraph 4.1.4.1.1.b) for verification following any loading of the program into the computer rather than the current specification which requires verification prior to each startup and shutdown.

The other surveillance requirements associated with RWM operability include diagnostic testing and verification of out-of-sequence rod withdrawal tests and associated annunciation. Therefore, we find that limiting the verification of the correctness of the input program to each loading operation is sufficient to provide adequate assurance of proper RWM operability.

7. Surveillance Testing of Valves and Pumps

The licensee proposed revision to certain of the specifications related to the surveillance requirements for the Standby Liquid Control System and the Core and Containment Cooling Systems. The changes would identify the specific type of valves involved and would increase the frequency of pump and valve operability tests for the Containment Cooling Subsystem from once/3 months to once/month to be consistent with testing requirements for other cooling systems.

The objective of surveillance testing of the cooling systems is to verify the operability of active components should they be required to respond to a facility abnormality. As such, the routine testing of manually operated valves is not a part of system response. This type of valve is routinely tested as part of the licensee's Inservice Inspection and Testing Program. Accordingly, we have determined that specifically identifying the type of valves (i.e., motor operated valves) is an editorial change to clarify the specification and is acceptable. The increased frequency of testing for the Containment Cooling Subsystem

will provide additional assurance of operability and is also acceptable.

8. Recirculation Loop Discharge Valve Bypass Line

The licensee requested that the surveillance requirement for the recirculation loop discharge valve bypass line valve (RPDV BV) be deleted from the Unit No. 2 specifications and annotated for Unit No. 3 to provide the option to remove this bypass line at some future date. Prior to the issuance of Amendment No. 32 to DPR-44 dated February 24, 1977, the licensee removed the RPDV BP line. This modification was performed to eliminate the possibility of cracking in this line as was experienced in other Boiling Water Reactors. The surveillance requirements imposed by Amendment No. 32 resulted from the staff's review of the failure of RPDV or BV to close upon a Low Pressure Coolant Injection Signal. As stated in the Safety Evaluation supporting that Amendment, "We consider it necessary to require that surveillance be performed on the RPDV and BV (if installed)...". Accordingly, we find the proposed change to the Technical Specifications as a correction to the Unit No. 2 specification and an implementation of a previously reviewed and approved modification for Unit No. 3.

9. Staff Identified Change

During the course of the staff's review of the above described changes we identified a specification related to inoperable Primary Containment Isolation Valves (PCIV) that should be clarified. Specification 3.7.D.3 requires that if (1) a PCIV is inoperable and (2) the line having an inoperable valve cannot be placed in an isolated mode, an orderly shutdown shall be initiated and the reactor shall be in a Cold Shutdown Condition within 24 hours.

As presently worded, the specification provides no capability to resume operation should the malfunction be cleared, i.e., the inoperable valve made operable or the line placed in an isolated mode before expiration of the stated 24 hour period. As stated in the staff's guidance for limiting conditions of operation (Ref. 1, Spec. 3.0.2), "In the event the Limiting Condition for Operation is restored prior to expiration of the specified time interval, completion of the ACTION statement is not required". Therefore, Specification 3.7.D.3 has been revised to provide this clarification. This change was discussed with the licensee and he agrees.

Environmental Considerations

We have determined that the amendments do not involve a change in effluent types or total amounts nor an increase in power level and will not result in any significant environmental impact. Having made this determination, we have further concluded that the amendments involve an action which is insignificant from the standpoint of environmental impact and pursuant to 10 CFR Section 51.5(d)(4) that an environmental impact statement or negative declaration and environmental impact appraisal need not be prepared in connection with the issuance of these amendments.

Conclusions

We have concluded, based on the considerations discussed above, that: (1) because the amendments do not involve a significant increase in the probability or consequences of accidents previously considered and do not involve a significant decrease in a safety margin, the amendments do not involve a significant hazards consideration, (2) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, and (3) such activities will be conducted in compliance with the Commission's regulations and the issuance of these amendments will not be inimical to the common defense and security or to the health and safety of the public.

Dated: October 10, 1978

REFERENCES:

1. NUREG - 0123, Rev. 1; Standard Technical Specifications for General Electric Boiling Water Reactors, April 1, 1978.

2. Letter, NRC (Lear) to PECo (Bauer) dated November 18, 1977.