

PHILADELPHIA ELECTRIC COMPANY

2301 MARKET STREET

P.O. BOX 8699

PHILADELPHIA, PA. 19101

(215) 841-5001

SHIELDS L. DALTROFF
VICE PRESIDENT
ELECTRIC PRODUCTION

50-277
50-278
June 20, 1980

Mr. Darrell G. Eisenhut, Director
Division of Licensing
U.S. Nuclear Regulatory Commission
Washington, DC 20555

SUBJECT: Additional TMI-2 Related Requirements
to Operating Reactors

Reference: Letter from D. G. Eisenhut, NRC,
to All Operating Nuclear Power
Plants, dated May 7, 1980, titled:
"Five Additional TMI-2 Related
Requirements to Operating Reactors"

Dear Mr. Eisenhut:

In the referenced letter, Philadelphia Electric Company was requested to commit to implementation of the requirements contained therein per the schedule provided. Enclosure 1 to this letter contains our position on each requirement specified in your May 7, 1980, letter.

Many of the modification requirements are generic to all Boiling Water Reactor facilities, and will be subjected to a review by the General Electric Boiling Water Reactor Owners Group, which was created specifically to address the issues raised by the Three Mile Island accident. Philadelphia Electric Company is participating on the committees evaluating implementation of these requirements. Well-defined acceptance criteria and safety evaluations for many of the requirements are needed in order to ensure timely implementation. These acceptance criteria and safety evaluations, when fully developed, may impact implementation schedules due to the availability of resources for conducting the required studies and developing the required designs.

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A complete assessment of the impact of the modification requirements has not been possible in the time available to make this response. Following a comprehensive review of the requirements, discussions with the NRC staff regarding alternatives to the strict interpretation of some requirements may be appropriate. Thus, we believe a degree of flexibility is necessary in the implementation schedules for good cause shown. However, within the constraints described above, it is our intent to meet the requirements and schedules of the referenced letter.

Item II.K.3.46 requires the licensees to evaluate the February 21, 1980, General Electric response to Michelson concerns and report their conclusions to the NRC by July 1, 1980. Enclosure 2 to this letter reports the results of our evaluation.

It is noted that the implementation dates for items II.K.3.30 and II.K.3.31 differ among Enclosure 1, Enclosure 3 part 1, and Enclosure 3 part 2 of the NRC's May 7, 1980, letter. We would appreciate clarification of the implementation schedule for these requirements.

We trust this letter is responsive to the requirements. If additional clarification of our position is necessary, please advise us.

Very truly yours,

A handwritten signature in cursive script, appearing to be "D. G. Eisenhut", is written over the typed name "Darrell G. Eisenhut".

Enclosure

Enclosure 1

Peach Bottom Atomic Power Station
Implementation Commitments to the NRC May 7, 1980 Letter
On Additional TMI-2 Related Requirements

Item I.A.1.3 - Shift Manning

The shift personnel requirements specified by item I.A.1.3 of NUREG-0660, "NRC Action Plan Developed as a Result of the TMI-2 Accident" are incorporated into the Peach Bottom shift organization presently in effect. As stated in the May 7, 1980 letter, "Five Additional TMI-2 Related Requirements to Operating Reactors", additional NRC requirements regarding this action item will be forthcoming in a separate correspondence. We will respond to the additional requirements following receipt of this correspondence.

Item I.A.3.1 - Revise Scope and Criteria for Licensing Examinations

All the May 1, 1980 items identified in the March 28, 1980 letter, H. R. Denton, NRC to "All Power Reactor Applicants and Licensees", have been implemented as requested.

Item I.C.5 - Procedures for Feedback of Operating Experience to Plant Staff

Several mechanisms have been in effect to assure that operating information originating both within and outside the Philadelphia Electric organization is continually supplied to operators and other personnel as appropriate. The Operating Experience Assessment Group, consisting of representatives of the Mechanical Engineering, Electrical Engineering, Quality Assurance, Licensing, and Plant Operating organizations, evaluate operational experience supplied from many sources and disseminate information to the appropriate individuals and organizations. The onsite safety committee performs a similar role in the dissemination of information in the interest of educating operating personnel, and assuring that appropriate evaluations and corrective actions are undertaken. Formal distribution of material, daily operating shift meetings under the direction of shift supervision, and the periodic study assignments associated with the operator requalification training program are examples of mechanisms used at Peach Bottom for the dissemination of operating information. The Peach Bottom procedures will be reviewed and revised to ensure that these types of activities are controlled by formalized procedures.

Item I.K.3.3 - Reporting Safety and Relief Valve Failures and Challenges

Failures of a safety and relief valve to close will be reported promptly to the NRC, and challenges to the safety and relief valves will be documented in an annual report as requested by the NRC.

Item II.k.3.13 - Separation of HPCI and RCIC Initiation Levels

This item will be analyzed by the BWR Owners Group on a generic basis by October 1, 1980 as requested. Based on the extent of the anticipated modifications, flexibility in the implementation date of April 1, 1981 may be requested.

Item II.k.3.14 - Isolation of Isolation Condensers

The Peach Bottom Atomic Power Station design does not utilize an isolation condenser. Therefore this item is not applicable.

Item II.k.3.15 - Modify Break Detection Logic to Prevent Isolation of HPCI and RCIC

Although inadvertent HPCI and RCIC isolation due to pressure spikes has not been a problem at Peach Bottom, we will evaluate this item to determine the need for modifications. If modifications are determined not to be necessary, we will submit to the NRC by October 1, 1980, an analysis justifying this position. If modifications are required, they will be implemented by January 1, 1981, if equipment availability permits.

Item II.k.3.16 - Reduction of Challenges and Failures of Relief Valves

The relief valve actuation setpoints at Peach Bottom have been previously raised, based on a safety evaluation, to reduce the potential for valve actuation. An investigation of the feasibility of reducing challenges to the relief valves by use of additional methods proposed in the NRC May 7, 1980 letter will be conducted. Other methods may also be considered by the study. The feasibility study will be submitted to the NRC by January 1, 1981. Any modifications resulting from this feasibility study will be proposed by January 1, 1982 and implemented during a refueling outage following Commission approval as provided for in the NRC implementation schedule.

Item II.K.3.17 - Report on Outages of ECC Systems

The information requested on ECC System outages during the last five years will be submitted to the NRC by January 1, 1981.

Item II.k.3.18 - Modifications of ADS Logic

A feasibility and risk assessment study will be performed to determine the optimum approach for modifying the ADS actuation logic to eliminate the need for manual actuation to assure adequate core cooling. The feasibility study will be submitted to the NRC by January 1, 1981. If any modifications result from the feasibility study, they will be proposed by January 1, 1982 and implemented during a refueling outage following Commission approval as provided for in the NRC implementation schedule.

Item II.k.3.19 - Interlock on Recirculation Pump Loops

This item is applicable to plants without jet pumps and also applicable to Humbolt Bay. Since the Peach Bottom Atomic Power Station design includes jet pumps, this item is not applicable.

Item II.k.3.21 - Restart of Core Spray and LPCI on Low Level

This item will be evaluated by our Engineering Department to determine the need for modifications. If modifications are determined not to be necessary, we will submit to the NRC by October 1, 1980, an analysis justifying this position. If modifications are required, the design will be developed by January 1, 1981 and if equipment availability permits, will be implemented during a refueling outage following Commission approval as provided for in the NRC implementation schedule.

Item II.k.3.22 - Automatic Switchover of RCIC Suction

The design of the RCIC system will be evaluated to determine the propriety of an automatic switchover of the RCIC pump suction from the condensate storage tank to the torus, and, if modifications are appropriate, they will be implemented by January 1, 1982, if equipment availability permits. The procedures will be reviewed, and revised by January 1, 1981 if necessary, to ensure that explicit procedural controls exist for the manual switchover of the RCIC system suction from the condensate storage tank to the suppression pool.

Item II.k.3.24 - Adequacy of Space Cooling for HPCI and RCIC

We will examine the adequacy of space cooling for the HPCI and RCIC systems. If modifications are required, they will be implemented by January 1, 1982, if equipment availability permits.

Item II.k.3.25 - Loss of AC Power on Pump Seals

We will evaluate the consequences of a loss of cooling water to the reactor recirculation pump seal coolers and report the results to the NRC. If modifications are necessary, implementation will be effected by January 1, 1982, if equipment availability permits.

Item II.k.3.27 - Common Reference Level for Vessel Level Instrumentation

Most of the reactor vessel water level instrumentation is currently referenced to the same point. The remaining instrumentation will be modified by October 1, 1980 to comply with this criteria provided our evaluation does not uncover any adverse consequences.

Item II.k.3.28 - Qualifications of Accumulators on ADS Valves

This item will be examined by the BWR Owners Group on a generic basis to determine functional design criteria. We will review the qualifications of the accumulators of the ADS valves with respect to the functional design criteria. The results of this review will be submitted to the NRC by January 1, 1982.

Item II.k.3.29 - Performance of Isolation Condensers with Non-condensibles

Peach Bottom Atomic Power Station does not utilize isolation condensers. Therefore this item is not applicable.

Item II.k.3.30 - Small-break LOCA Analysis - Compliance with App. K

General Electric Company is preparing, on behalf of all licensees, a response to the NRC that addresses the conclusions and recommendations regarding small-break LOCA analytical methods set forth in items 1-5 of Section 4.2.10 of NUREG-0626. We believe General Electric's response will satisfy all NRC concerns. General Electric's response will be submitted by the required date.

Item II.k.3.31 - Plant Specific Small-break LOCA Analysis

We believe the need to perform plant specific small break LOCA calculations may not be required after the NRC reviews General Electric's response to NUREG-0626 as discussed in item II.k.3.30. If, after reviewing General Electric's response to NUREG-0626, the NRC still believes that plant specific analyses are required, we will submit such analysis by the required date.

Item II.k.3.44 - Anticipated Transients with Single Failure

Anticipated transients combined with the worst single failure will be analyzed by the BWR Owners Group on a generic basis. The results of this analysis will be submitted to the NRC by January 1, 1981.

Item II.k.3.45 - Depressurization With Other Than ADS

An analysis to support depressurization modes other than full activation of the ADS will be performed. The results of this analysis will be submitted to the NRC by January 1, 1981.

Item II.k.3.46 - ACRS Consultant Concerns

The results of our evaluation of Mr. Michelson's concerns as they relate to Peach Bottom Atomic Power Station are presented in Enclosure 2.

Item II.K.3.57 - Identify Water Sources Prior to Manual Activation
of ADS

The requirement to verify that a source of cooling water is available prior to manual actuation of the automatic depressurization system (ADS) has been previously incorporated into the Peach Bottom Emergency Procedures.

Item III.D.3.4 - Control Room Habitability

A review of Control Room habitability for conformance with Regulatory Guides 1.78 and 1.95, Sections 2.2.1, 2.2.3, and 6.4 of the Standard Review Plan, will be performed by January 1, 1981 by our engineering Department with support from outside consultants. Modifications, deemed necessary by the review will be implemented by January 1, 1983 if equipment availability permits.

Enclosure 2

Peach Bottom Atomic Power Station
Response to Michelson's Concerns

A letter, D. F. Ross to T. D. Keenan, "Information Required to Address Michelson's Concerns for Boiling Water Reactors," dated October 17, 1979, requested that the BWR Owners' Group review and respond to questions posed by Mr. Michelson (ACRS Consultant). General Electric has reviewed these questions and prepared responses on behalf of the BWR Owners' Group. Item II.K.3.46 of the May 7, 1980 letter, "Five Additional TMI-2 Related Requirements to Operating Reactors," requests each licensee to assess applicability and adequacy of the G.E. response to their plants.

Our evaluation of the G.E. responses concludes that they accurately reflect the Peach Bottom system designs and method of operation. We concur with all the conclusions presented in the General Electric evaluations. The only additional information we consider appropriate is in regards to Michelson's question No. 7 regarding the sharing of common piping by the HPCI and RHR systems. The RHR pumps do not share common piping with the HPCI or RCIC systems. The HPCI and RCIC systems have a common section of suction pipe from the condensate storage tank. The suction piping for these systems has been sized such that adequate NPSH is ensured during all simultaneous operating modes of these systems.

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