DCS

NOV 16 1990

Docket Nos. 50-277/DPR-44
50-278/DPR-56

Philadelphia Electric Company
Correspondence Control Desk
ATTN: Mr. D. M. Smith
Senior Vice President-Nuclear
P. O. Box 195
Wayne, PA 19087-0195

Gentlemen:

Subject: Combined Inspection 50-277/90-17, 50-278/90-17

The referenced Inspection Report described two events at your Peach Bottom facility during which you found reactor vessel water level monitoring instrumentation indicating non-conservatively. In each case certain Technical Specification (TS) protective action setpoints were violated. Your assessment of these events, and immediate corrective actions implemented, was discussed during an Enforcement Conference conducted in Region I on October 26, 1990. The information provided by your staff during the conference was well organized, relevant and useful in our deliberations regarding NRC action in this matter.

During late August, 1990, one reference leg used by the Unit 2 wide range reactor water level instruments experienced an inventory reduction. The reduction occurred over a period of about two weeks. The effect was that instrumentation using this leg provided falsely high reactor water level indication. The level offset resulted in exceeding the TS initiation setpoints for several protective actions, including emergency core cooling system (ECCS) and primary containment isolation system (PCIS) initiation. While the TS setpoints were exceeded, all instruments remained functional. Following analysis of the potential impact of the offset your staff concluded that the safety significance was small, as described in Licensee Event Report (LER) 2-90-021. The cause of the reference leg inventory reduction appears to be a combination of design weakness coupled with the presence of a small leak. We do not believe that these factors could have been foreseen given the information available. Further, your staff identified the problem within a reasonable time and implemented prompt corrective action, including a plant shutdown. We have concluded that this issue should be treated as a licensee identified violation (NCV 90-17-05), and therefore no Notice of Violation (NOV) will be issued.

On September 11, 1990, you discovered that indications derived from Unit 3 reactor water level transmitters LT 3-2-3-99C and LT 3-2-3-99D were abnormally high when compared to actual reactor water level. This offset resulted in the trip functions generated from the outputs being non-functional. The trip devices would not have acted to provide their PCIS Group I isolation

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signal if called upon. This condition apparently existed since startup of the unit in November, 1989. LER 3-90-12 describes your assessment of the potential significance of this event, and concludes that sufficient redundant and diverse instrumentation was available to ensure completion of the appropriate protective actions. You have not established the root cause of this event. It appears likely that technicians miscalibrated the instruments prior to startup. Additional investigation to find the probable root causes for this event is warranted.

These instruments are subject to daily channel checks, as required by the TS. During review of the event it was noted that the channel check procedures did not include adequate acceptance criteria and operator guidance to ensure that significant instrument problems, such as those related to this event, are identified and evaluated. More effective channel check procedures may have prevented this condition from existing for an extended time.

While the channel check procedures were weak, their implementation did result in the operations staff identifying the discrepant instrument readings as early as December, 1989, and subsequently on several occasions. In each case operators initiated maintenance request forms (MRF). Investigations in response to these MRFs were performed by staff members possessing incomplete information, and the MRFs were either canceled or deferred until the next planned outage. The sequence of events surrounding follow-up of this problem suggests that your process for review, prioritization and disposition of MRFs may not provide the requisite level of assurance, particularly regarding cancellation of MRFs.

A complicating factor in operations and maintenance staff follow-up was the lack of a thorough understanding of the effect of recirculation flow rate on wide range level indication. Comprehensive coverage of critical instrument response in staff training programs is important.

Based on the materials presented during the Enforcement Conference we believe that you have undertaken significant actions to assess and resolve these deficiencies. After evaluating the safety significance of the event and considering your proposed corrective actions, we have concluded that a NOV, Severity Level IV, for failure to implement prompt corrective action is appropriate (NV4 90-17-03). The NOV is enclosed as Appendix A. In responding, please address the issues described above. We appreciate your cooperation.

Sincerely,

Original Signed By:

Charles W. Hehl, Director
Division of Reactor Projects

Enclosure:
Appendix A, Notice of Violation

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cc w/encl:
D. B. Miller, Vice President, Peach Bottom Atomic Power Station
D. R. Helwig, Vice President, Nuclear Engineering and Services
J. F. Franz, Plant Manager, Peach Bottom Atomic Power Station
E. P. Fogarty, Project Manager, Peach Bottom Atomic Power Station
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G. A. Hunger, Jr., Director, Licensing Section
R. J. Lees, Chairman, Nuclear Review Board
A. A. Fulvio, Regulatory Engineer, Peach Bottom Atomic Power Station
J. Urban, General Manager, Fuels Department, Delmarva Power
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B. W. Gorman, Manager-External Affairs, Public Service Electric & Gas Co.
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Public Document Room (DPR)
Local Public Document Room (LPDR)
Nuclear Safety Information Center (NSIC)
NRC Resident Inspector
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bcc w/encl:
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OB. Troskoski in accord with proposed action

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