



PECO ENERGY

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08/22/94

Document Control Desk
U. S. Nuclear Regulatory Commission
Washington, DC 20555

Docket Nos. 50-277 & 50-278

SUBJECT: Licensee Event Report
Peach Bottom Atomic Power Station - Units 2 and 3

This LER concerns a Technical Specification violation when the Torus Water Level Instrumentation was found to be incorrectly calibrated.

Reference: Docket Nos. 50-277 & 50-278
Report Number: 2-94-005
Revision Number: 00
Discovery Date: 07/22/94
Report Date: 08/22/94
Facility: Peach Bottom Atomic Power Station
RD1, Box 208, Delta, PA 17314

This LER is being submitted pursuant to the requirements of 10 CFR 50.73(a)(2)(i)(B).

Sincerely,

GDE/GAJ:gaj

enclosure

cc: R.A.Burricelli, Public Service Electric & Gas
R. R. Janati, Commonwealth of Pennsylvania
INPO Records Center
T. T. Martin, US NRC, Administrator, Region I
R. I. McLean, State of Maryland
W. L. Schmidt, US NRC, Resident Inspector
A. F. Kirby III, DelMarVa Power
H. C. Schwemm, VP - Atlantic Electric

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CCN 94-14129

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ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 500 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (P 530), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

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LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

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FACILITY NAME (1)

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TEXT (If more space is required, use additional NRC Form 366A's) (17)

Requirements for the Report

This LER is being submitted pursuant to the requirements of 10 CFR 50.73 (a)(2)(i)(B) due to a violation of the Unit 2 & 3 Technical Specification (Tech Spec) 3.7.A.1.a and 3.7.A.7 when the Torus water level was found to be low due to an instrument calibration problem.

Unit Conditions at the time of the Event

Unit 2 was in the "RUN" mode at approximately 86 % power and Unit 3 was in the "RUN" mode at approximately 100% power. There were no inoperable structures, systems or components that contributed to this event.

Description of the Event

On 07/22/94, it was determined that the Torus Water Level Narrow Range Instrumentation (LR/LI-8(9)027) (EIS:LT) was indicating up to 1" high on Unit 3 and 3.30" high on Unit 2. This means that the actual Torus level was less than that indicated on the narrow range instrumentation. Tech Spec 3.7.A.1.a and b require that Torus inventory be maintained between 122,900 cubic feet and 127,300 cubic feet of water. This corresponds to a indicated instrument level of 14.6' and 14.9' respectively. In addition, Tech Spec 3.7.A.7 specifies "If the specifications of 3.7.A.1 through 3.7.A.5 cannot be met, an orderly shutdown shall be initiated and the reactor shall be in a cold shutdown condition within 24 hours." Since actual Torus water level historically went below the 122,900 cubic feet limit and the plants were not shutdown at these times, a Tech Spec violation occurred. Following discovery of the condition, actions were taken to maintain Torus level between the Tech Spec limits and the appropriate Surveillance Instructions were performed to make actual Torus level match indicated Torus level.

Torus Water Level Narrow Range Instrumentation was installed based on structural drawing references as part of a modification in 1977. To support instrument calibrations, reference marks were placed on the instruments. These marks were based on plant construction survey marks at that time. Subsequently, in 1990, placards were installed on each instrument to replace the original reference markings. There are a total of two placards on Unit 2 and two placards on Unit 3. These placards were hung based on the assumption that the initial reference markings were accurate. Recently during the performance of a Surveillance Instruction (SI) on a Unit 2 Torus Narrow Range Level Transmitter, a technician expressed a concern about the instrument's performance. However, the SI was able to be completed satisfactorily and an investigation into the concern was initiated. As a result of this investigation, it was believed that the reference placards had been accidentally shifted since their last use. Therefore, the decision was made to rehang a new single placard for both instruments instead of having two placards,

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one for each instrument. Single point transit surveys off of the torus bottom were performed on both units. The results of these single point surveys were validated by independent eight point surveys of the torus bottom. New placards were mounted on both units to reflect the new survey data. On 7/22/94, analysis of survey data revealed that Unit 2 Torus Water Level Instrumentation was actually inoperable due to the instrument being calibrated to an incorrect reference. The applicable 7 day Limiting Conditions For Operation (LCO) on Unit 2 was entered since both narrow range instruments on Unit 2 were inoperable. The applicable 24 hour LCO on Unit 2 was entered since Torus Volume was less than specified in the Tech Specs. Operations immediately started raising Unit 2 Torus level to compensate for the error. The LCO was exited when actual Torus water level exceeded 14.6'. Analysis of calibration data revealed that the Unit 3 Torus water level was within the Tech Spec inventory limits so no actions were required. Following discovery of the condition, the Torus Water Level Instrumentation was properly recalibrated on both units and the remaining Torus level LCOs were exited.

Cause of the Event

The cause of this event was that the initial reference markings used to support calibration activities were not correct. In addition, it was noted that the initial placards installed in 1990 were secured using tie wraps instead of a more rigid fastener. This condition may have allowed instrument reference point changes due to placard movement during calibration or maintenance activities. This resulted in indicated Torus water level being higher than the actual Torus level. Therefore, with an indicated torus level at just above 14.6', the actual level was just under the Tech Spec 14.6' value.

Analysis of the Event

There were no actual safety consequences as a result of this event. Had a design bases accident occurred while at 100 % on either unit, adequate Torus water inventory was available to ensure that all Emergency Core Cooling Systems and the Containment system would have been capable of performing their design basis function even with Torus water level approximately 3-1/3" lower than the Tech Spec minimum level.

Corrective Actions

Following discovery of the condition, actions were taken to maintain actual Torus level between the Tech Spec limits and the appropriate Surveillance Instructions were performed to make actual Torus level match indicated Torus level.

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New placards were mounted on both units to reflect the new survey points. In addition, the placards have been more rigidly secured.

An evaluation was performed to determine if similar type placards are utilized for calibration purposes in other places in the plant. The evaluation concluded that this was the only situation where a placard is used as a calibration reference point which requires critical survey data from another location.

The pertinent information from the event will be provided to the appropriate Station Engineering and I&C personnel.

Previous Similar Events

No previous similar events have been identified which involve calibration offsets due to the use of incorrect calibration reference points.