

LICENSEE EVENT REPORT (LER)

APPROVED OMB NO. 3160-0104 EXPIRES - 6/31/85

FACILITY NAME (1) Peach Bottom Atomic Power Station - Unit 3 DOCKET NUMBER (2) 05000278 PAGE (3) 1 OF 4

TITLE (4) Group II-B Isolation When Wrong Fuse Removed

Table with columns: EVENT DATE (8), LER NUMBER (6), REPORT DATE (7), OTHER FACILITIES INVOLVED (8). Includes facility names and docket numbers.

Table for regulatory requirements: OPERATING MODE (9), POWER LEVEL (10), and various CFR sections (20.402, 20.406, 80.73, 73.71).

LICENSEE CONTACT FOR THIS LER (12) NAME: W. C. Birely, Senior Engineer - Licensing Section TELEPHONE NUMBER: 215 841-5048

Table for component failures: COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13). Columns include CAUSE, SYSTEM, COMPONENT, MANUFACTURER, REPORTABLE TO NRPDS.

SUPPLEMENTAL REPORT EXPECTED (14) YES (if yes, complete EXPECTED SUBMISSION DATE) NO. EXPECTED SUBMISSION DATE (15) 02 17 86

ABSTRACT (Limit to 1400 spaces, i.e., approximately fifteen single-space typewritten lines) (16) Abstract: 3-85-23 On November 17, 1985 at 1830 hours when the control room operator proceeded to establish shutdown cooling, the suction valves to the system would not open. Investigation revealed that on November 15, 1985 at 1315 hours while applying a maintenance permit to the Primary Containment Isolation System (PCIS), a plant operator unknowingly removed the wrong fuse. This electrically blocked the Residual Heat Removal system shutdown cooling suction valves, MO-3-10-17 and MO-3-10-18, and head spray isolation valves, MO-3-10-32 and MO-3-10-33, in the closed position. These valves were in the closed position at the time; therefore, they did not move. At the time of the event, Unit 3 was shutdown for refueling. Investigation revealed that although the plant operator removed the fuse which was labeled F2, as the permit required, this was not the correct fuse. Apparently, the label had slid down such that fuse F3 appeared to be F2. Fuse F3 was installed and the isolation was reset. The label was moved to its correct position. The Independent Safety Engineering Group is investigating this incident and formulating corrective actions to prevent recurrence.

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

Unit Conditions Prior to Event:

Reactor Power 0%
Refuel Mode with Reactor Vessel Head Removed

Description of the Event:

On November 17, 1985 at 1830 hours when the control room operator proceeded to place the Residual Heat Removal system in the shutdown cooling mode, the suction valves would not open. Investigation revealed that on November 15, 1985 at approximately 1315 hours when a plant operator applied a maintenance permit to the Unit 3 Primary Containment Isolation System (PCIS), he removed the wrong fuse. The permit required removal of fuse F2 on terminal strip BB in panel 30C42. However, the operator removed fuse F3 instead of F2 due to a misleading label.

Fuse F3 is in the electrical feed to a relay in the PCIS logic circuitry for the isolation of the shutdown cooling suction valves, MO-3-10-17 and MO-3-10-18, and head spray isolation valves, MO-3-10-32 and MO-3-10-33, when reactor vessel pressure is greater than 75 psig. By removing fuse F3, the relay in the PCIS logic was de-energized and an isolation signal for the shutdown cooling suction valves was initiated. Because the MO-3-10-17, MO-3-10-18, MO-3-10-32, and MO-3-10-33 valves were in the closed position at the time, no valve movement occurred. With this isolation initiated and unable to be reset because the fuse was removed, the control room operator could not open the suction valves when he attempted to establish shutdown cooling.

This isolation is part of a Group II isolation; however, in this case only the MO-3-10-17, MO-3-10-18, MO-3-10-32, and MO-3-10-33 valves were affected due to the location of this fuse in the circuitry.

The EIIS code for the affected system is JM, PCIS.

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TEXT (If more space is required, use additional NRC Form 2664 (17))

Consequences of the Event:

Fuse F2 had been removed previously by another permit. Thus, the equipment that should have been de-energized by this permit was de-energized.

Refueling of the Unit 3 vessel was completed on November 14, 1985, only one day before the event (three days before discovery). At the time of this occurrence, decay heat removal was provided by the fuel pool cooling system. Circulation between the reactor vessel and the fuel pool was provided by temporary pumps and the reactor cavity to fuel pool slot until the pumps were removed on November 15, 1985. Also, the decay heat load in the reactor vessel was low because the unit had been shutdown since July 15, 1985 and approximately 35% of the fuel bundles had been replaced with new bundles during the fuel reloading. Shutdown cooling operation was not needed at the time of the discovery, but was being placed in service to prepare for installation of the fuel pool gates, which prevent flow between the fuel pool and the reactor cavity. Therefore, decay heat removal was not in jeopardy because of this event.

Cause of Event:

The non-licensed plant operator removed the wrong fuse because the label strip identified the wrong fuse as F2. The strip of fuse labels, which is located behind the row of fuses, had slipped down. Because fuse F3 is located directly below fuse F2, fuse F3 appeared to be fuse F2. Consequently, the operator unknowingly committed a personnel error.

Corrective Actions:

Fuse F3 was installed at approximately 2000 hours on November 17, 1985 and the isolation was reset. Subsequently, the labels were moved up to their correct position.

The Independent Safety Engineering Group is investigating this incident to assess its impact on the plant and determine the extent to which this type of problem exists elsewhere in the

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TEXT (If more space is required, use additional NRC Form 360A (1))

plant. Reactor Protection System, Emergency Core Cooling Systems and Primary Containment Isolation System fuse labeling are being evaluated to determine the potential for a similar occurrence. Recommendations to preclude such an event will be made based on the investigation findings. Preliminary investigation has revealed that the use of adhesive on the existing labels or relabeling may be appropriate long-term solutions. These possible solutions will be evaluated.

A revision to this LER will be submitted when recommendations are developed and accepted. We expect to submit the revised LER by February 17, 1986.

Previous Similar Occurrences:

None.

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December 17, 1985

Docket No. 50-278

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

SUBJECT: Licensee Event Report
Peach Bottom Atomic Power Station - Unit 3

This LER concerns an inadvertent actuation of a portion of the Primary Containment Isolation System with Unit 3 shutdown for refueling. While in the closed position the shutdown cooling suction valves and the head spray isolation valves received an isolation signal.

Reference:	Docket 50-278
Report Number:	3-85-23
Revision Number:	00
Event Date:	November 15, 1985
Discovery Date:	November 17, 1985
Report Date:	December 17, 1985
Facility:	Peach Bottom Atomic Power Station RD 1, Box 208, Delta, PA 17314

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

Very truly yours,



W. T. Ullrich
Superintendent
Nuclear Generation Division

cc: Dr. Thomas E. Murley, Administrator, Region I, USNRC
T. P. Johnson, NRC Resident Inspector

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