

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

FACILITY NAME (1) Peach Bottom Atomic Power Station Unit 3	DOCKET NUMBER (2) 050002788	LER NUMBER (8)			PAGE (3)	
		YEAR 88	SEQUENTIAL NUMBER 008	REVISION NUMBER 00	02	OF 03

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

Requirement for the Report

This report is required per 10CFR50.73(a)(2)(iv) because of the unexpected actuation of an Engineered Safety Feature (ESF).

Unit Conditions Prior to Event

Unit 3 was in the refuel mode with the core offloaded. The 3A Reactor Protection System (EIIIS:JC) motor-generator (RPS m/g) set (EIIIS:MG) was being powered by it's alternate source (EIIIS:JX), manual and automatic scram signals were in place, and the standby gas treatment system (SBGTS) (EIIIS:BH) was blocked for modification work.

Description of the Event

On August 29, 1988, at 5:12 AM and 9:27 AM, Primary Containment Isolation System Group III inboard isolations (EIIIS:JM) occurred as the result of an RPS alternate feed breaker (EIIIS:BKR) trip. A Group III isolation includes selected containment and reactor building ventilation trips, such as opening and closing of various ventilat valves and dampers, and the tripping of the reactor building fans and refuel floor fans. The trips resulted from an undervoltage condition on the E-13 emergency bus (EIIIS:B-), which at the time of the events was supplying the 3A RPS m/g set through it's alternate source, E-134-W-A. The first undervoltage condition was caused by starting the 2B condensate pump (EIIIS:P), the second by starting the 2A condensate pump. The breaker trip removed power to the 3A RPS m/g set and inboard PCIS logic. The loss of power to the PCIS logic resulted in the de-energization of PCIS inboard logic relays which caused a Group III inboard isolation. As a result of the first event the alternate feed to the 3A RPS m/g set was out of service for 13 minutes and the isolation signal existed for 21 minutes. After the second event the alternate feed was out for approximately 24 hours and the isolation signal existed for approximately 47 hours. This was necessary to allow time for testing the RPS alternate feed voltage sensing relays.

Due to the fact that manual and automatic scram signals were in place prior to both events, there was no scram signal generated when the alternate feed breaker tripped. During each event the reactor building and refuel floor ventilation isolated but the SBGTS did not actuate because it was blocked out of service for modification work.

Cause of Event

The present alternate source does not have the ability to assure a constant voltage to RPS/PCIS logic during bus loading. Additionally, ST 2.30.25C, Calibration Check of RPS Alternate Feed Relays, was completed and it was found that the undervoltage relay (EIIIS:27) trip setpoint was 118.1VAC (should be 113VAC +/- 1VAC) and the overvoltage relay (EIIIS:59) trip setpoint was 128.4VAC (should be 131VAC +/- 1VAC). The fact that the undervoltage relay was out of calibration was a contributing factor to the trip because this relay would cause the breaker to trip at a higher voltage than normal.

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FACILITY NAME (1) Peach Bottom Atomic Power Station Unit 3	DOCKET NUMBER (2) 0 5 0 0 0 2 7 8 8	LER NUMBER (6)			PAGE (3)	
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER		
		8 8	- 0 0 8	- 0 0	0 3	OF 0 3

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Analysis of Event

There were no actual or potential adverse consequences resulting from this event. At the time of this event the unit was in the refueling mode with the core offloaded and manual and automatic scrams in place. All systems functioned properly. If this event had occurred at power it would have resulted in a half scram and a PCIS Group III inboard isolation, neither of which would produce any adverse consequences.

Corrective Actions

As an immediate corrective action, the undervoltage and overvoltage relays were calibrated. The following actions are being taken to reduce the probability of similar events occurring in the future. A modification will relocate the RPS alternate feed to a distribution panel that will be supplied by a static inverter (E1IS:INVT). The inverter distribution panel will provide a more reliable voltage source to the RPS alternate feed. This modification is scheduled to be completed prior to the restart of Unit 3. A second modification will replace the RPS overvoltage and undervoltage protective relays with a different model relay. This modification is also scheduled to be completed prior to the restart of Unit 3.

Previous Similar Events

There were three previous similar events, LER 2-86-04, 2-86-06, and 3-86-01. As a result of these LER's the modification to supply the RPS alternate feed by a new static inverter was initiated. This modification is completed on Unit 2.



PEACH BOTTOM—THE POWER OF EXCELLENCE

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Docket No. 50-278

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U. S. Nuclear Regulatory Commission
Washington, DC 20555

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

This LER concerns two Primary Containment Isolations that occurred as the result of Reactor Protection System alternate feed breaker trips.

Reference: Docket No. 50-278
Report Number: 3-88-008
Revision Number: 00
Event Date: 08-29-88
Report Date: 09-26-88
Facility: Peach Bottom Atomic Power Station
RD 1, Box 208A, Delta, PA 17314

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

Very truly yours,

cc: W. T. Russell, Administrator, Region I, USNRC
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