

OCONEE NUCLEAR STATION  
UNIT 1

ABNORMAL OCCURRENCE REPORT AO-269/73-9  
MOMENTARY INOPERABILITY OF REACTOR BUILDING SPRAY SYSTEM

Description of Incident

On December 8, 1973, the Reactor Building Remotely-Operated Isolation Valves and Engineered Safeguards Valves Functional Test was being performed in accordance with Periodic Test Procedure PT/O/A/0150/15A. During the execution of this test, both trains of the Unit 1 Reactor Building Spray System were inadvertently momentarily removed from service.

The purpose of the periodic test is to verify the operability of engineered safeguards valves BS-1 and BS-2 from the engineered safeguards panel in the Control Room. BS-1 and BS-2 are engineered safeguards valves in the A train and B train, respectively, of the Reactor Building Spray System and function to allow water to the reactor building spray nozzles in the event of a loss of coolant accident. For the execution of the test on BS-1, the reactor building spray pump suction valve BS-3 was closed (reference Figure 6-3 of the Final Safety Analysis Report) and the breaker for reactor building spray pump A was racked out. At the conclusion of the test on BS-1, the Control Room was notified that the breaker for reactor building spray pump A was racked in and its white tag removed. An operator at the control board then actuated the opening of BS-3 to return the system to normal status. The operator obtained both the red and green indicating lights showing that BS-3 had moved from its completely closed condition and that the valve was traveling. Another operator in the area of the reactor building spray pump breakers was notified by telephone by the operator in the Control Room to rack out and white tag the breaker for reactor building spray pump B.

Approximately 10 minutes later, the operator noticed that both the red and green indicating lights for BS-3 were "on," which indicated that the valve had not completed its travel to the full open position. An operator was then dispatched to open the valve manually. The valve was manually unseated and traveled out to its open position normally. Since the breaker for reactor

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building spray pump B had been racked out and BS-3 had not traveled to the fully open position, both trains of the reactor building spray system were inoperable for approximately 15 minutes.

Regulatory Operations, Region II, was informed on December 8, 1973 that a limiting condition for operation had been exceeded.

#### Corrective Action

Immediate corrective action by the operators to unseat BS-3 and return it to its open position placed one train of reactor building spray in service. Testing of BS-2 was resumed after RBS train A was returned to service and was completed within approximately 40 minutes--both trains of reactor building spray then being in service.

The Station Review Committee has reviewed the incident and recommended that all periodic test procedures involving engineered safeguards systems contain the following statement when a single train is to be removed from service: "Prior to removing the next train from service, verify that all valves, breakers, and pumps have been returned to their normal ES lineup." Also, a sign-off blank will be included to the left of this statement in the procedure requiring the operator to verify this step as having been completed before continuing additional testing.

#### Safety Analysis

In the event of a situation requiring engineered safeguards actuation, at least two reactor building cooling fans and associated cooling units as required by Technical Specification 3.3.1 would have been available. It is recognized that the reactor building spray system would not have been immediately available but both trains could have been made available by operator action within approximately five minutes. Figure 14-63H of the Final Safety Analysis Report shows the variation in reactor building pressure versus time for a loss of coolant accident, five square foot break, with no reactor building spray and with three, two, one, or zero reactor building coolers.

It is concluded that the operator made an error in judgment in assuming that BS-3 would open completely when actuated instead of verifying that BS-3 was

completely oper before removing reactor building spray pump B from service. However, the incident did not adversely affect the safe operation of the unit or the health and safety of the public.