DUKE POWER COMPANY
OCONEE UNIT 1

Report No.: UE-269/74-2

Report Date: June 7, 1974

Event Date: May 10, 1974

Facility: Oconee Unit 1, Seneca, South Carolina

Identification of Event: Excessive main steam stop valve closure time

Conditions Prior to Event: Cold shutdown

Description of Event:

Oconee Technical Specification 4.8.1 requires that the operation of each of the main steam stop valves be tested to demonstrate a closure time of one second or less for Channel A and a closure time of 15 seconds or less for Channel B. Channel A closes the main steam stop valves by tripping the turbine through the electro-hydraulic control system normal trip circuitry. Channel B provides a redundant method of closing the stop valves by supplying closing current to solenoids which actuate stop valves nos. 1, 3, and 4. During normal operation, these solenoids are used only for valve testing. Stop valve 2 is servo-controlled for chest/shell warming and operated satisfactorily during the test.

On May 10, 1974, a periodic test was performed to measure stop valve closure time with the following results:

Valve Number	Closure Time (Seconds)
1	22.5
3	23.0
4	18.0
2	9.5

Designation of Apparent Cause of Event:

It was found that the slow closure time of the valves was due to orifices which had been installed in the drain ports of the valve operators. These orifices had been installed during startup testing of Unit 1 by vendor representatives to prevent the valves closing too fast during testing.

Analysis of Event:

Channel B actuation of the main steam stop valves provides a redundant method for valve closure. The normal trip circuitry (Channel A) was tested on May 28, 1974. All stop valves closed in less than 0.5 seconds. It is concluded that this incident did not affect the safe operation of the plant or the health and safety of the public.

Corrective Action:

The orifices were removed from the valve actuator drain ports controlled by the test solenoids for stop valves 1, 3, and 4. The valves were re-tested on May 28, 1974 with the following results:

Valve Number	Closure Time (Seconds)
1	7.5
3	7.3
4	6.5
2	8.5