

## **LER 281/83-005**

Event Description: Trip with AFW Pump Inoperable

Date of Event: February 11, 1983

Plant: Surry 2

### **Summary**

Surry Unit 2 was operating at full power on February 11, 1983 when the turbine-driven auxiliary feedwater (AFW) pump tripped during testing. The turbine governor was found to be defective, causing the turbine to trip on over-speed. Corrosion in the regulator piston in the pump governor valve prevented the piston from moving freely, which led to a pump over-speed trip.

Since a trip was reported on February 8, 1983, this event was modeled as a trip with the turbine-driven AFW pump assumed to be inoperable. The conditional core damage probability estimated for this event is  $3.8 \times 10^{-6}$ . The dominant sequence involves a transient with reactor trip success, failure of main and auxiliary feed water, and failure of feed-and-bleed cooling.