

LER 321/83-122

Event Description: Trip with HPCI Inoperable

Date of Event: December 28, 1983

Plant: Hatch 1

Summary

On December 28, 1983 while Hatch 1 was at 12% power during startup, a surveillance test was performed on the HPCI system. After high-pressure coolant injection (HPCI) was started, it exhibited an "erratic response" and was tripped and declared inoperable. The event was found to have been caused by faulty components in the electronic control system for HPCI. In addition, the control oil pressure regulator was determined to be set wrong. On December 27, 1983, Hatch 1 experienced a reactor scram following a condensate booster pump trip and, presumably, a loss of feedwater.

This event was modeled as a scram and loss of feedwater (LOFW) with HPCI assumed to be unavailable. The conditional core damage probability estimated for this event is 6.5×10^{-6} . The dominant core damage sequence involves the observed trip, failure of the power conversion system, failure of two safety relief valve (SRVs) to close, unavailability of HPCI, and failure of the automatic depressurization system (ADS).