

**LER 272/82-069**

Event Description: Trip with One Charging Pump Inoperable

Date of Event: August 31, 1982

Plant: Salem 1

**Summary**

During routine operation on August 31, 1982, the primary equipment operator discovered a service water leak on the lubrication oil cooler for the 12 centrifugal charging pump and the pump was declared inoperable. The cause of the leak was determined to be erosion of the pipe by silt in the service water. An inoperable charging pump renders one train of both high-pressure injection (HPI) and feed and bleed failed in the accident sequence precursor (ASP) models.

Since it is not known how long the leak existed prior to discovery, it was assumed that it existed during a plant trip that occurred three days earlier and that the leak was serious enough to fault the charging pump. The event was modeled as a transient with one train of HPI and one train of feed and bleed failed. The conditional core damage probabilities (CCDP) was estimated to be  $1.1 \times 10^{-6}$ . The dominant sequence involved a successful reactor trip, failure of auxiliary feed water (AFW), failure of main feed water (MFW), and failure of feed and bleed.