

REGULATOR INFORMATION DISTRIBUTION SYSTEM (RIDS)

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 Region 3, Chicago, Office of the Director

SUBJECT: LER 80-029/01T-0: on 800712 during reactor core isolation cooling sys water level reduction, low level alarm did not annunciate. Caused by design deficiency & instrument failure. Restored water level & initiated design review.

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DUANE ARNOLD ENERGY CENTER
Iowa Electric Light and Power Company
Licensee Event Report - Supplemental Data

Docket No. 050-0331

Licensee Event Report Date: July 25, 1980

Reportable Occurrence No: 80-029

Event Description

Following a plant shutdown on June 12, 1980 the RCIC System was being used to control reactor pressure. Due to operation of the RCIC System, suppression chamber water level began increasing and Operations personnel initiated action to lower the water level. During the water level reduction the suppression chamber low water level alarm did not annunciate and the water volume in the suppression chamber was inadvertently reduced to 57,000 cubic feet. The minimum suppression chamber water volume allowed by Technical Specification 3.7.A.1 is 58,900 cubic feet. There have been no previous occurrences in which the minimum suppression chamber water volume limit was exceeded.

Cause Description

The cause was determined to be a human engineering design deficiency with a contributing cause of instrument failure. Presently the torus level indication is located in the back panel area of the control room and is not readily available to the operator. The cause of the alarm failure was determined to be bad connections between the alarm relay and the time delay relay associated with it. The time delay relay is a Potter and Brumfield Model R15.

Corrective Action

The minimum required water volume was restored approximately 14 minutes after discovery of the low water condition. A design review will be initiated to investigate providing suppression chamber level indication in a location more accessible to the plant operator. Pending resolution, appropriate procedures will be modified to require more frequent torus level monitoring during draining operations. The faulty connections in the alarm circuitry were resoldered and the alarm functionally tested.