

PRECURSOR DESCRIPTION AND DATA

NSIC Accession Number: 85566

Date:

Title: Complete Loss of a.c. Power Causes RCIC and HPCI to be Inoperable.

The failure sequence was:

1. In preparation for the turbogenerator trip and loss of offsite power test, the 4 kv unit boards were placed in manual to prevent automatic transfer.
2. The turbine was manually tripped because of increased vibration. This resulted in a scram since offsite power could no longer be supplied, (because of 1.)
3. The RCIC and the HPCI systems could not be started until the standby diesels were energized, since their reset logic required a.c. power.

Corrective action:

The power source for some RCIC/HPCI relays was changed and the manual reset was eliminated.

Design purpose of failed system or component:

1. RCIC provides a source of water should the reactor become isolated.
2. HPCI provides a high pressure coolant supply during a small LOCA.

Unavailability of system per WASH 1400: *
RCIC: $8.0 \times 10^{-2}/D$
HPCI: $8.8 \times 10^{-2}/D$

Unavailability of component per WASH 1400: *

* Unavailabilities are in units of per demand D^{-1} . Failure rates are in units of per hour HR^{-1} .

CATEGORIZATION OF ACCIDENT SEQUENCE PRECURSORS

NSIC ACCESSION NUMBER: 85566

DATE OF LER: November 19, 1973

DATE OF EVENT: ~

SYSTEM INVOLVED: RCIC/HPCI

COMPONENT INVOLVED: RCIC/HPCI tripping logic

CAUSE: Design error

SEQUENCE OF INTEREST: Loss of Feedwater Flow

ACTUAL OCCURRENCE: Complete Loss of a.c. Power Causes RCIC and HPCI to be inoperable.

REACTOR NAME: Browns Ferry 1

DOCKET NUMBER: 259

REACTOR TYPE: BWR

DESIGN ELECTRICAL RATING: 1065 MWe

REACTOR AGE: .18 yr

VENDOR: General Electric

ARCHITECT-ENGINEERS: TVA

OPERATORS: TVA

LOCATION: 10 miles NW of Decatur, AL

DURATION: N/A

PLANT OPERATING CONDITION: Just scrambled during testing

SAFETY FEATURE TYPE OF FAILURE: (a) inadequate performance; (b) failed to start; (c) made inoperable; (d) _____

DISCOVERY METHOD: Operational Event.

COMMENT: Common Mode Design Error, a.c. requirement.