

## PRECURSOR DESCRIPTION AND DATA

NSIC Accession Number: 85738

Date:

Title: RCIC and HPCI Failure During Testing at Browns Ferry 1

The failure sequence was:

1. During startup testing the RCIC system failed to operate when manually initiated. The steam supply valve failed to open.
2. HPCI was then manually initiated to maintain vessel water level. However, it isolated and tripped.
3. The operator reset the isolation circuit and reinitiated HPCI which operated successfully.

Corrective action:

1. The RCIC steam supply valve was repaired.
2. No cause for the HPCI trip could be found.

Design purpose of failed system or component:

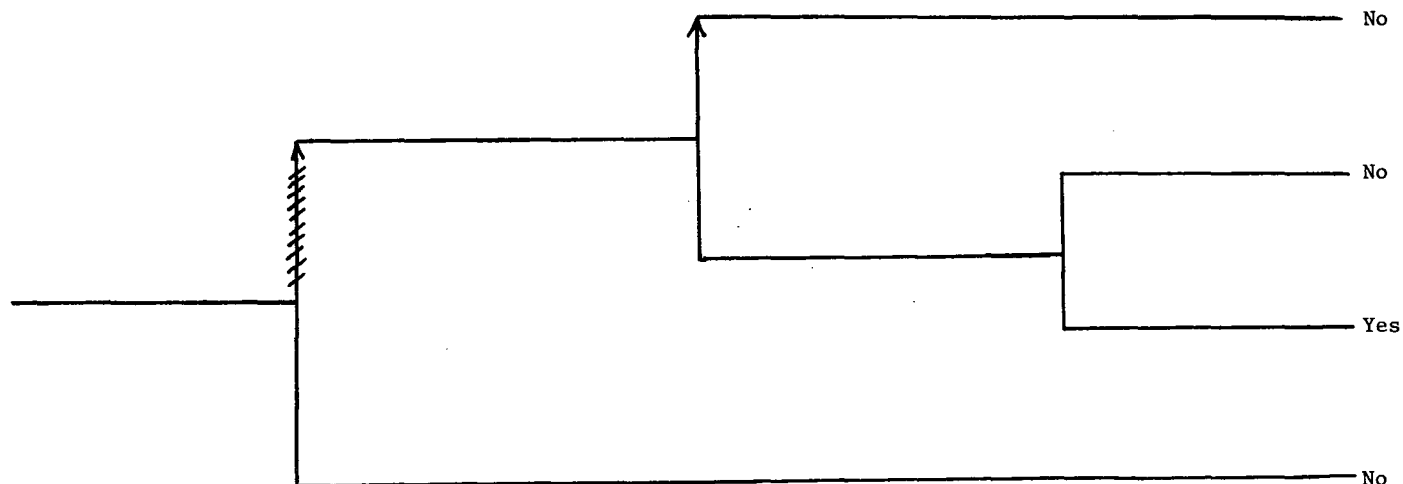
1. RCIC provides a source of water should the reactor become isolated.
2. HPCI provides a high pressure coolant supply during a small LOCA.

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

Unavailability of component per WASH 1400:\*

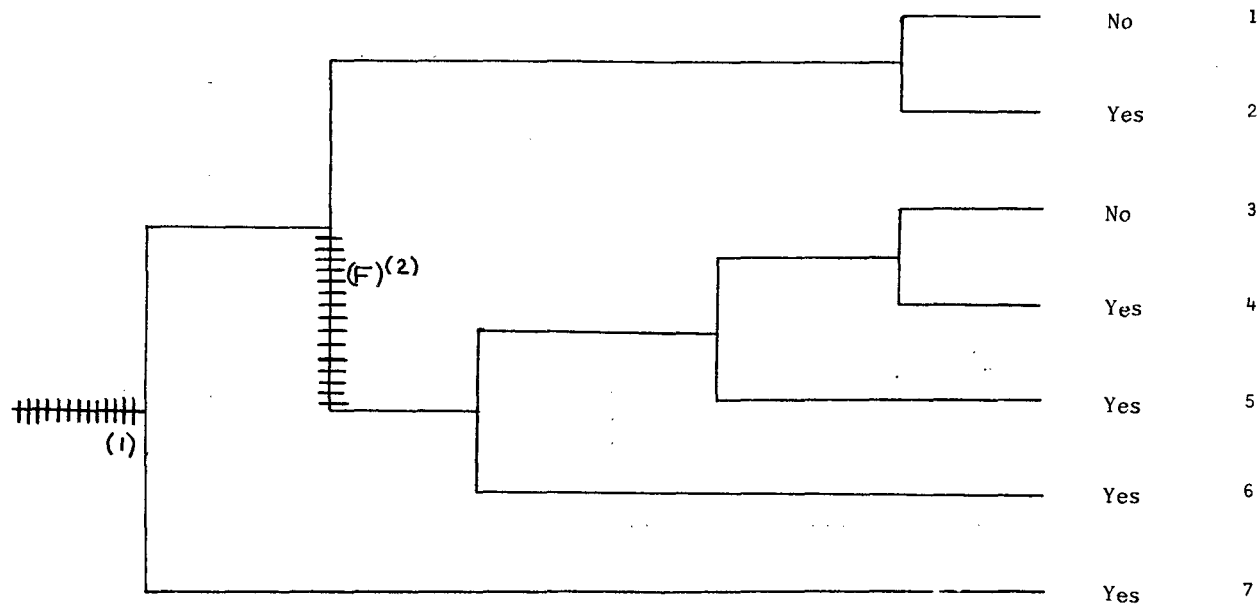
\* Unavailabilities are in units of per demand  $D^{-1}$ . Failure rates are in units of per hour  $HR^{-1}$ .

Startup Testing Was Underway and Feed-water Was Lost	RCIC Becames Inoperable When its Steam Supply Valve Fails to Open	HPCI Successfully Injected Water into the Reactor Vessel After its Initial Failure to Start	ADS and Low Pressure Systems Successful	Potential Severe Core Damage
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NSIC 85738 - Actual Occurrence of RCIC and HPCI Failure During Testing at Browns Ferry 1

Loss of Feedwater Flow	Reactor Subcritical	RCIC/HPCI Response Adequate	Automatic Depressurization System Operates	LPCI or CS Response Adequate	Long Term Core Cooling	Potential Severe Core Damage	Sequence No.
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NSIC 85738 — Sequence of Interest for RCIC and HPCI Failures During Testing at Browns Ferry 1

<sup>1</sup>An apparent loss of feedwater.

<sup>2</sup>HPCI was manually reset and operated satisfactorily.

CATEGORIZATION OF ACCIDENT SEQUENCE PRECURSORS

NSIC ACCESSION NUMBER: 85738

DATE OF LER: November 19, 1973

DATE OF EVENT:

SYSTEM INVOLVED: RCIC/HPCI

COMPONENT INVOLVED: Steam supply valve, Isolation circuits

CAUSE: Mechanical Failure

SEQUENCE OF INTEREST: Loss of Feedwater

ACTUAL OCCURRENCE: HPCI and RCIC Failures during testing.

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: Start up testing

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

DISCOVERY METHOD: Operational Event while startup testing.

COMMENT: No LER