

PRECURSOR DESCRIPTION AND DATA

NSIC Accession Number: 149961

Date: June 3, 1979

Title: HPCI Fails to Start When Turbine Stop Valve Fails to Open at Hatch 2

The failure sequence was:

1. During power ascension the reactor tripped due to a condensate system trip.
2. HPCI failed to initiate on low-low water level due to a failed turbine stop valve. Water from HPCI mechanical seal cooling lines was leaking into the bracket drain cavity. The bracket drain cavity line had a valve installed for unknown reasons. This valve was closed which caused water to back up into the adjacent bearing housing and thus contaminate the pump oil.
3. The RCIC was out of service for unspecified reasons.
4. The reactor was placed in hot shutdown using the immediately repaired condensate system.

Corrective action:

1. The leaking seal line was replaced.
2. The oil system was drained, flushed and twice refilled.
3. The turbine bearing was inspected and found to be undamaged.
4. The valve in the bracket drain line was locked open and an investigation initiated to determine its significance.

Design purpose of failed system or component:

1. The HPCI system is designed to control water level given a small LOCA.
2. The RCIC is designed to control water level given a loss of feedwater.

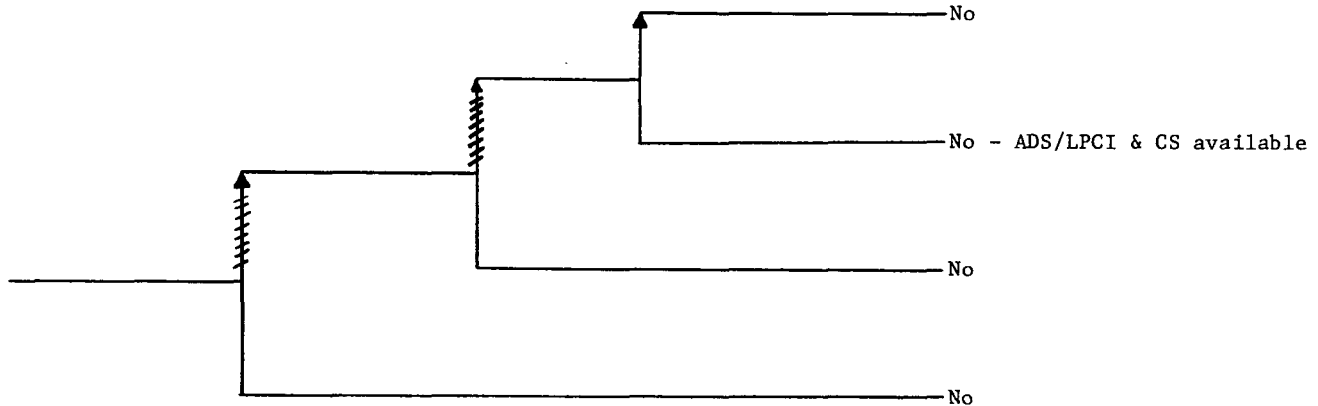
Unavailability of system per WASH 1400:* HPCI: $8.8 \times 10^{-2}/D$
RCIC: $8.0 \times 10^{-2}/D$

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} .

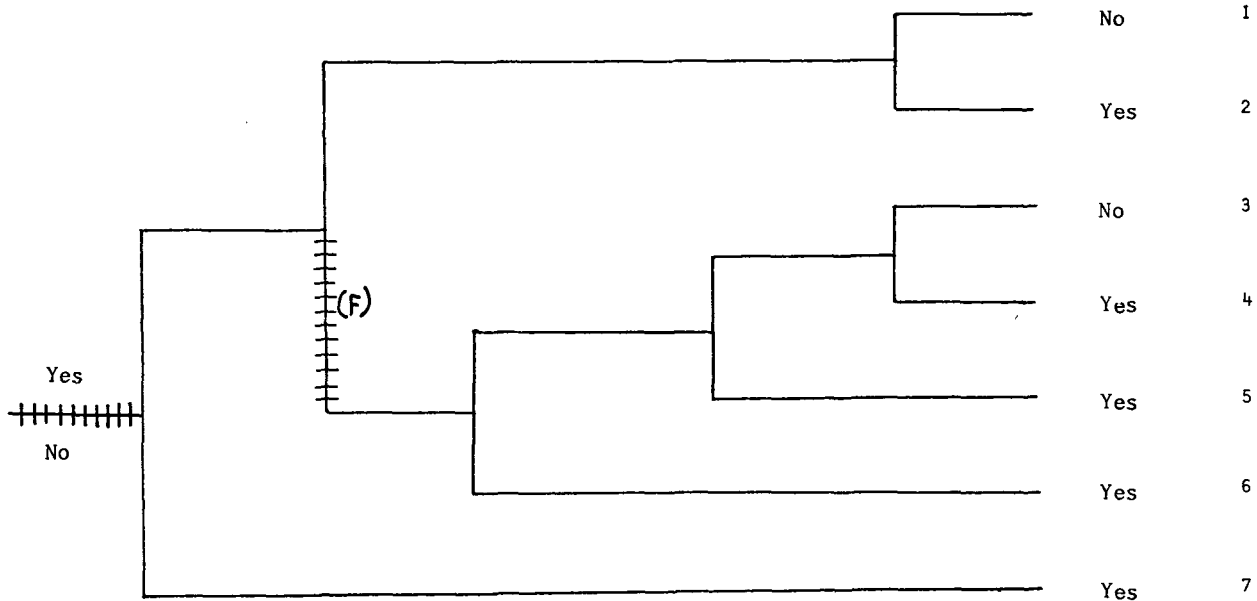
Reactor trip during power accession due to condensate system trip	HPCI failed to initiate on low-low reactor water inventory due to failed turbine stop valve	RCIC system was out of service	Reactor water level controlled by condensate system which had been immediately repaired
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Potential
Severe
Core
Damage



NSIC 149961 - Actual Occurrence for HPCI Fails to Start When Its Turbine Stop Valve Fails to Open at Hatch 2

Loss of Feedwater Flow	Reactor Subcritical	RCIC/HPCI ¹ 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 149961 - Sequence of Interest for HPCI Fails to Start When the Turbine Stop Valve Fails to Open at Hatch 2

¹ RCIC was out of service.

CATEGORIZATION OF ACCIDENT SEQUENCE PRECURSORS

NSIC ACCESSION NUMBER: 149961

DATE OF LER: June 11, 1979

DATE OF EVENT: June 3, 1979

SYSTEM INVOLVED: HPCI

COMPONENT INVOLVED: water line, valves

CAUSE: valve improperly closed, leaky water line, (human error)

SEQUENCE OF INTEREST: loss of feedwater flow

ACTUAL OCCURRENCE: HPCI fails to start when turbine stop valve fails to open at Hatch 2

REACTOR NAME: Hatch 2

DOCKET NUMBER: 50-366

REACTOR TYPE: BWR

DESIGN ELECTRICAL RATING: 784 MWe

REACTOR AGE: .9 yr

VENDOR: General Electric

ARCHITECT-ENGINEERS: Southern Services/Bechtel

OPERATORS: Georgia Power Company

LOCATION: 11 miles N of Baxley, Ga.

DURATION: N/A

PLANT OPERATING CONDITION: hot shutdown

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

DISCOVERY METHOD: operational event

COMMENT: -