

PRECURSOR DESCRIPTION AND DATA

NSIC Accession Number: 106333

Date: August 30, 1975

Title: HPCI Found Inoperable at Quad Cities 2

The failure sequence was:

1. The RCIC system had failed for reasons unspecified.
2. A test was initiated to determine the operability of HPCI
3. This test revealed that HPCI was also inoperable due to a broken auxiliary oil pump line.
4. Since both RCIC and HPCI were inoperable an orderly shutdown was initiated.

Corrective action:

1. The reactor was shutdown in an orderly fashion.
2. The HPCI auxiliary oil pump line was replaced with the same type of line.

Design purpose of failed system or component:

1. RCIC provides for core cooling when feedwater is unavailable.
2. HPCI provides emergency cooling water when the system pressure is above the LPCI and CS operating pressures.
3. The auxiliary oil pump provides lubrication to the HPCI turbine prior to initiation of the turbine driven lube oil pump.

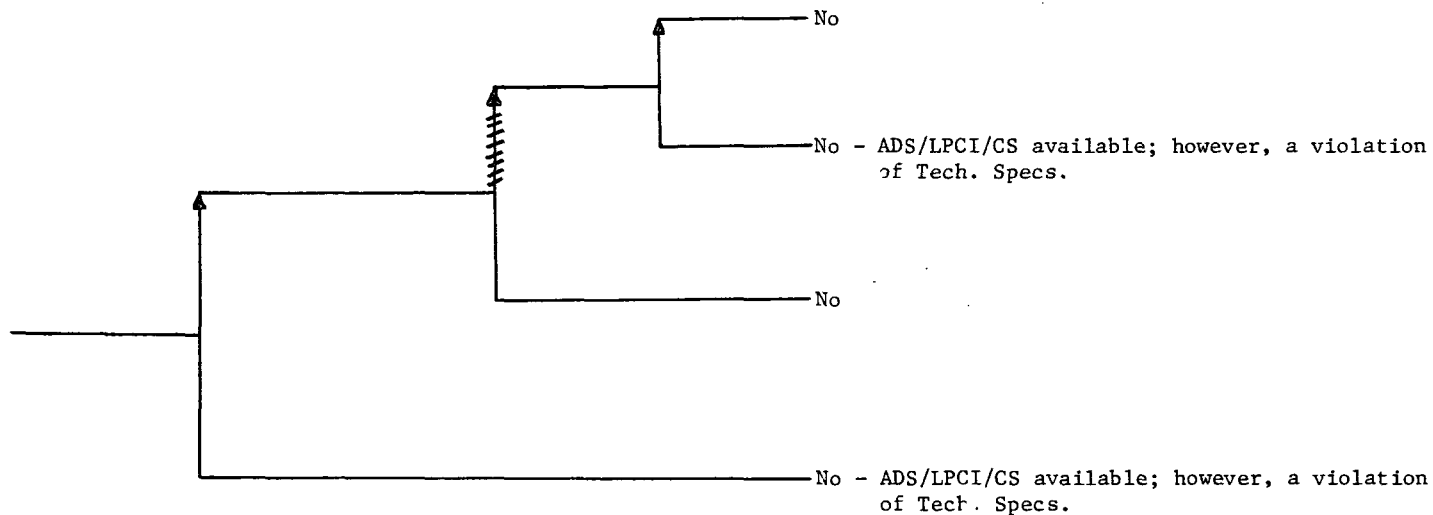
Unavailability of system per WASH 1400:* HPCI: $8.8 \times 10^{-2}/D$

Unavailability of component per WASH 1400:* pump failure to start: $1 \times 10^{-3}/D$

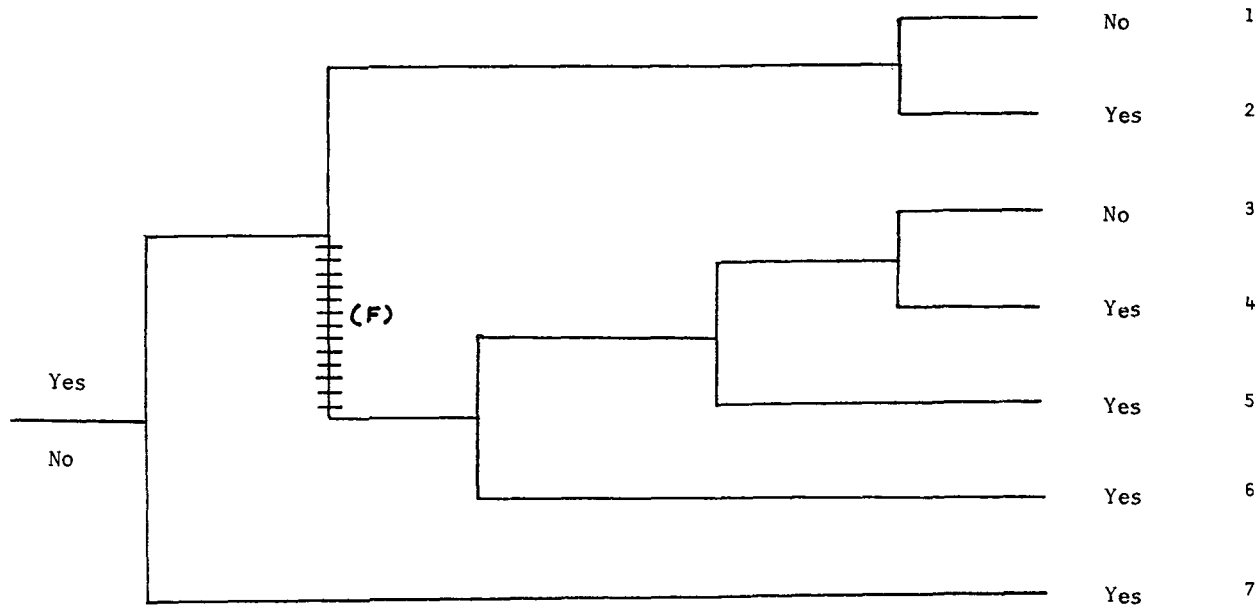
*Unavailabilities are in units of per demand D^{-1} . Failure rates are in units of per hour HR^{-1} .

RCIC inoperable	Surveillance testing on HPCI to prove operability	HPCI inoperable	Reactor shutdown
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Potential
Severe
Core
Damage



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 106333 — Sequence of Interest for HPCI Found Inoperable at Quad Cities 2

CATEGORIZATION OF ACCIDENT SEQUENCE PRECURSORS

NSIC ACCESSION NUMBER: 106333

DATE OF LER: September 9, 1975

DATE OF EVENT: August 31, 1975

SYSTEM INVOLVED: HPCI

COMPONENT INVOLVED: aux lube oil pump

CAUSE: broken oil line

SEQUENCE OF INTEREST: loss of feedwater flow

ACTUAL OCCURRENCE: HPCI found inoperable at Quad Cities 2

REACTOR NAME: Quad Cities 2

DOCKET NUMBER: 50-265

REACTOR TYPE: BWR

DESIGN ELECTRICAL RATING: 789 MWe

REACTOR AGE: 3.4 yr

VENDOR: General Electric

ARCHITECT-ENGINEERS: Sargent & Lundy

OPERATORS: Commonwealth Edison

LOCATION: 20 miles NE of Moline

DURATION: 360(a) hours

PLANT OPERATING CONDITION: 69% power

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

DISCOVERY METHOD: surveillance testing

COMMENT: -