

PRECURSOR DESCRIPTION AND DATA

NSIC Accession Number: 161906

Date: November 24, 1980

Title: RCIC and HPCI Inoperable at Quad-Cities 2

The failure sequence was:

1. During performance test of the monthly operability at 99% power, the RCIC discharge isolation valve would not open from the control room. This caused RCIC to be inoperable. A torque switch on the valve was faulty.
2. HPCI was subsequently declared inoperable due to an oil leak in the HPCI turbine stop valve actuator cover.
3. An orderly shut down was commenced.

Corrective action:

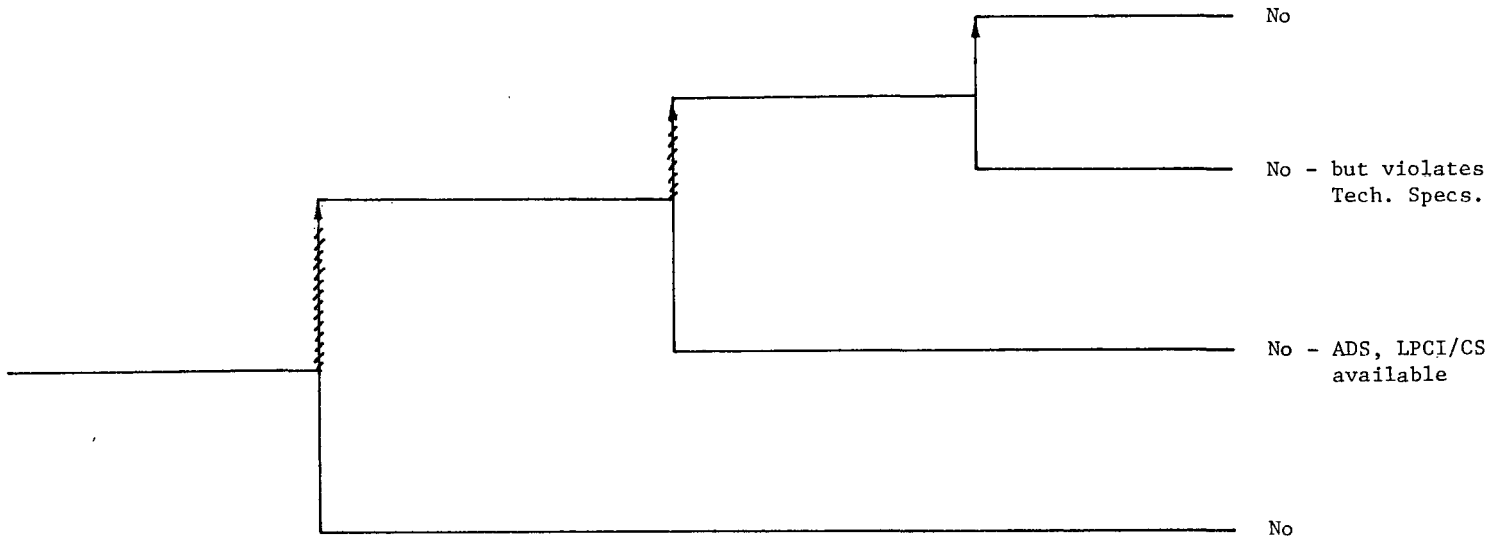
1. The RCIC torque switch was replaced before shutdown was reached and the shutdown was terminated.
2. The HPCI valve actuator cover was replaced with a cover from Unit 1.
3. About 10 h was required to correct the simultaneous loss of RCIC and HPCI.

Design purpose of failed system or component:

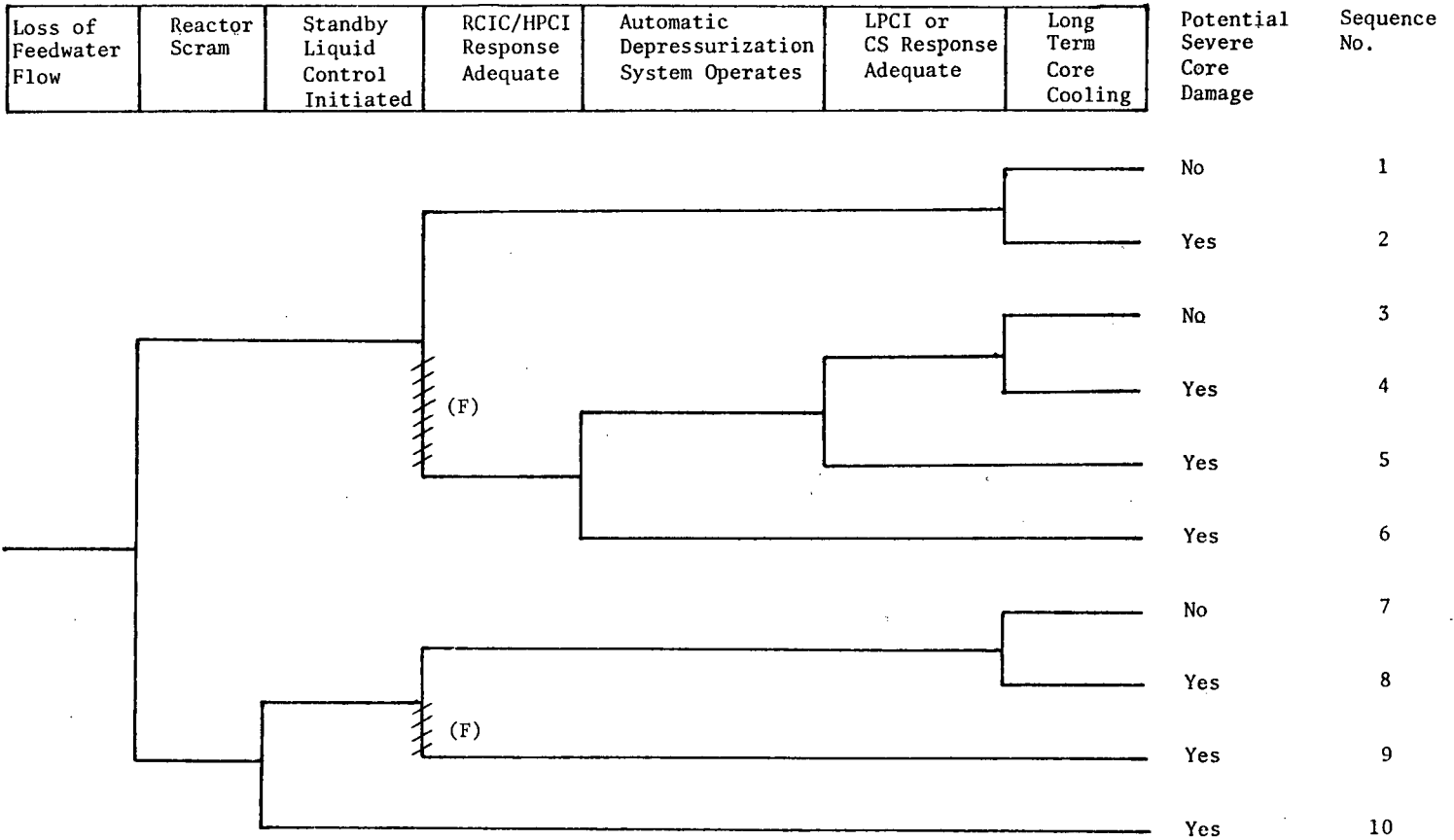
1. RCIC provides for reactor water level control given a loss of feed-water.
2. HPCI provides for water level control given a small break LOCA.

RCIC performance tests were under way while at full reactor power	The RCIC discharge isolation valve fails to open, leaving RCIC inoperable	HPCI fails to run during required surveillance testing	An orderly shutdown was commenced
---	---	--	-----------------------------------

Potential Severe Core Damage



NSIC 161906 - Actual Occurrence of RCIC and HPCI Inoperable at Quad Cities 2



NSIC 161906 - Sequence of Interest for RCIC and HPCI Inoperable at Quad Cities 2

CATEGORIZATION OF ACCIDENT SEQUENCE PRECURSORS

NSIC ACCESSION NUMBER: 161906

LER NO.: 80-077

DATE OF LER: November 24, 1980

DATE OF EVENT: November 16, 1980

SYSTEM INVOLVED: RCIC and HPCI systems

COMPONENT INVOLVED: Torque switch; turbine stop valve

CAUSE: Failure of the torque switch; oil leak

SEQUENCE OF INTEREST: Loss of feedwater

ACTUAL OCCURRENCE: RCIC and HPCI inoperable at Quad-Cities 2

REACTOR NAME: Quad-Cities 2

DOCKET NUMBER: 265

REACTOR TYPE: BWR

DESIGN ELECTRICAL RATING: 789 MWe

REACTOR AGE: 8.6 years

VENDOR: General Electric

ARCHITECT-ENGINEERS: Sargent & Lundy

OPERATORS: Commonwealth Edison Co.

LOCATION: 20 miles NE of Moline, Illinois

DURATION: 360 h (estimated)

PLANT OPERATING CONDITION: 99% power

TYPE OF FAILURE: Failed to start;  
made inoperable

DISCOVERY METHOD: Testing

COMMENT: ADS, LPCI, and core spray were available as backup systems.