

PRECURSOR DESCRIPTION AND DATA

NSIC Accession Number: 150742

Date: June 22, 1979

Title: Main Stock Sampling System Lost at Peach Bottom 2

The failure sequence was:

1. During a severe electrical storm lightning struck at or near the Unit 2 main stack.
2. This resulted in initiation of HPCI and RCIC on Unit 3, tripped the unit 3 startup and emergency feed with emergency transfer to unit 2, and initiated a half scram in both units. The ability to autostart HPCI and RCIC was lost on unit 3 due to the inverter supplying power to the HPCI and RCIC.
3. A shutdown of unit 3 was commenced due to the inability of HPCI and RCIC to start automatically.

Corrective action:

1. The blown fuses in the inverter were replaced.

Design purpose of failed system or component:

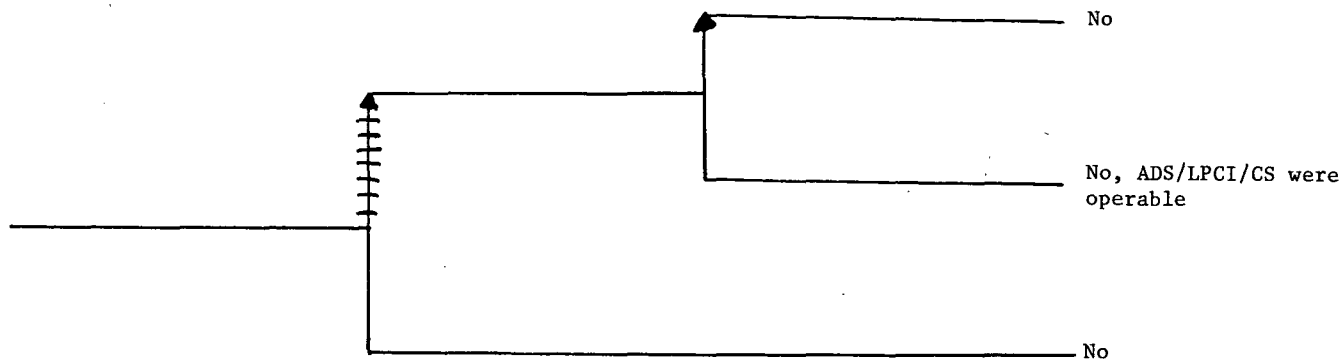
1. RCIC provides a source of water during loss of feedwater event.
2. HPCI provides a source of high pressure water during a small LOCA.

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: * FUSES, Premature open: $1.10^{-6}/Hr.$

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

Lightning Struck The Main Stack During An Electrical Storm	This Caused The Fuse In The Inverter Feeding HPCI/RCIC To Blow	HPCI/RCIC Was Not Demanded During The 45 Minutes Requires To Replace The Fuses	Potential Severe Core Damage
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NSIC 150742 — Actual Occurrence of Main Stack Sampling System Lost at Peach Bottom 2

CATEGORIZATION OF ACCIDENT SEQUENCE PRECURSORS

NSIC ACCESSION NUMBER: 150742

DATE OF LER: July 20, 1979

DATE OF EVENT: June 22, 1979

SYSTEM INVOLVED: HPCI/RCIC

COMPONENT INVOLVED: Inverter fuse

CAUSE: Lightning striking at or near the mainstack during an electrical storm.

SEQUENCE OF INTEREST: Loss of Feedwater

ACTUAL OCCURRENCE: Main Stack Sampling System Lost

REACTOR NAME: Peach Bottom 3

DOCKET NUMBER: 278

REACTOR TYPE: BWR

DESIGN ELECTRICAL RATING: 1065 MWe

REACTOR AGE: 5.9 yr

VENDOR: General Electric

ARCHITECT-ENGINEERS:

OPERATORS: Philadelphia Electric Company

LOCATION: Nineteen miles S of Lancaster

DURATION: 5.0 hours

PLANT OPERATING CONDITION: 100% power

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

DISCOVERY METHOD: Operational Event

COMMENT: RCIC & HPCI are fed from the same inverter