

PRECURSOR DESCRIPTION AND DATA

NSIC Accession Number: 59484

Date: January 22, 1971

Title: Failure of Containment Sump Isolation Valves at Point Beach 1

The failure sequence was:

1. During a routine check of the containment tendon access gallery with the plant at power, air was observed leaking from the packing of one of the sump isolation valves.
2. When an attempt was made to open the valve it would not open due to a shorted solenoid in the valve hydraulic positioner.
3. The redundant containment sump isolation valve was also found inoperable because of a stuck solenoid in the valve hydraulic positioner.

Corrective action:

1. Both valves were repaired and tested.
2. Both valves were added to the list of valves requiring a monthly check to verify operability.

Design purpose of failed system or component:

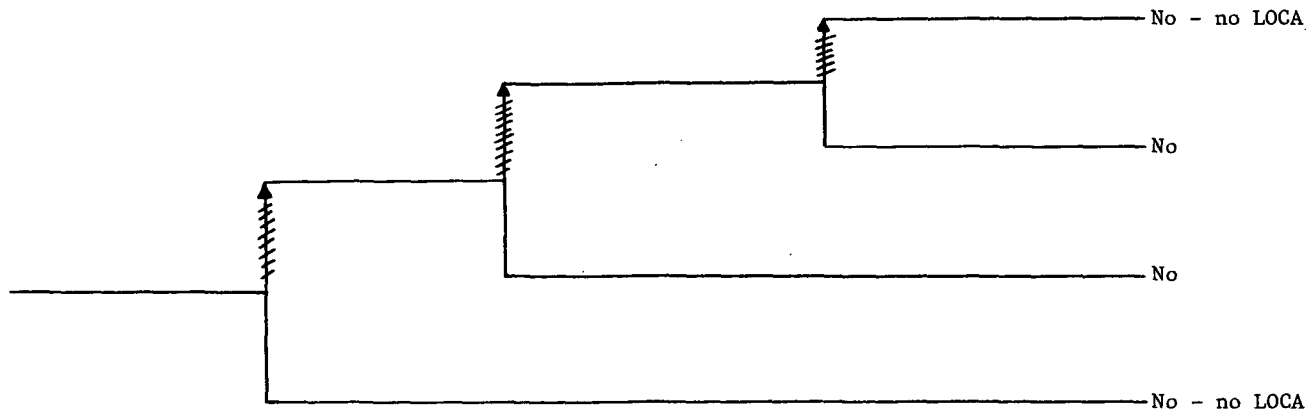
The valves isolate the containment sump from the low pressure injection/recirculation system during normal operation. After the RWST is emptied following a LOCA, these valves are opened to provide suction flow to the low pressure recirculation system.

Unavailability of system per WASH 1400:* low pressure recirculation: $1.3 \times 10^{-2}/D$

Unavailability of component per WASH 1400:* valves, motor operated, failure to operate: $1 \times 10^{-3}/D$
valves, air-fluid operated, failure to operate: $3 \times 10^{-4}/D$

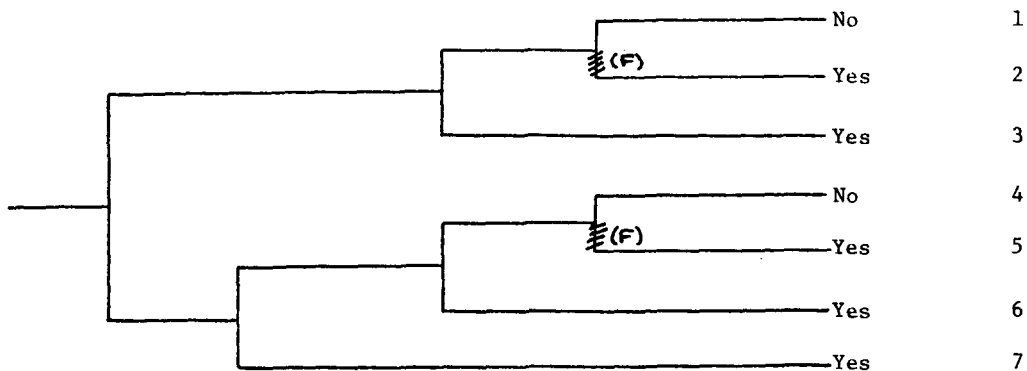
*Unavailabilities are in units of per demand D^{-1} . Failure rates are in units of per hour HR^{-1} .

Reactor at 90% power and containment tendon access gallery check in progress	Containment sump isolation valve packing leak (air) observed	Containment sump isolation valve failed to open for attempted reseating due to failed solenoid	Redundant containment sump isolation valve found failed due to failed solenoid valve	Potential Severe Core Damage
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NSIC 59484 — Actual Occurrence for Failure of Sump Isolation Valves at Point Beach 1

Small LOCA	Reactor Trip	Auxiliary Feedwater and Secondary Heat Removal	High Pressure Injection	Low Pressure Recirculation and LPR/HPI Cross-Connect	Potential Severe Core Damage	Sequence No.
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NSIC 59484 - Sequence of Interest for Failure of Sump Isolation Valves at Point Beach 1

CATEGORIZATION OF ACCIDENT SEQUENCE PRECURSORS

NSIC ACCESSION NUMBER: 59484

DATE OF LER: January 22, 1971

DATE OF EVENT: January 12, 1971

SYSTEM INVOLVED: low pressure recirculation

COMPONENT INVOLVED: containment sump isolation valves

CAUSE: valves failed closed due to failed solenoids in the hydraulic operators

SEQUENCE OF INTEREST: LOCA

ACTUAL OCCURRENCE: sump isolation valves failed closed during testing

REACTOR NAME: Point Beach 1

DOCKET NUMBER: 50-266

REACTOR TYPE: PWR

DESIGN ELECTRICAL RATING: 497 MWe

REACTOR AGE: .2 yr

VENDOR: Westinghouse

ARCHITECT-ENGINEERS: Bechtel

OPERATORS: Wisconsin Electric Power Co.

LOCATION: 15 miles north of Manitowoc, Wisc.

DURATION: 1750 hours

PLANT OPERATING CONDITION: 90% power

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

DISCOVERY METHOD: area surveillance

COMMENT: