

PRECURSOR DESCRIPTION AND DATA

NSIC Accession Number: 149250

Date: April 14, 1979

Title: Two Main Steam Isolation Valves Fail to Close at Trojan

The failure sequence was:

1. With the reactor in hot standby, main steam isolation valve testing was in progress.
2. Two of the main steam isolation valves failed to close when manually initiated due to binding between the valve stem and packing.

Corrective action:

1. The valve packings were adjusted so the valves operated freely.

Design purpose of failed system or component:

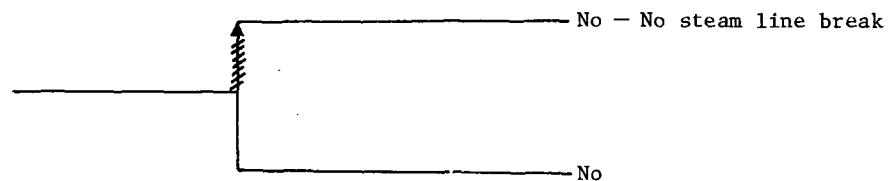
The main steam isolation valves isolate the steam generators during a steam line break, and prevent blowdown of more than one steam generator.

Unavailability of system per WASH 1400:* —

Unavailability of component per WASH 1400:* valve, failure to operate: 10^{-3}

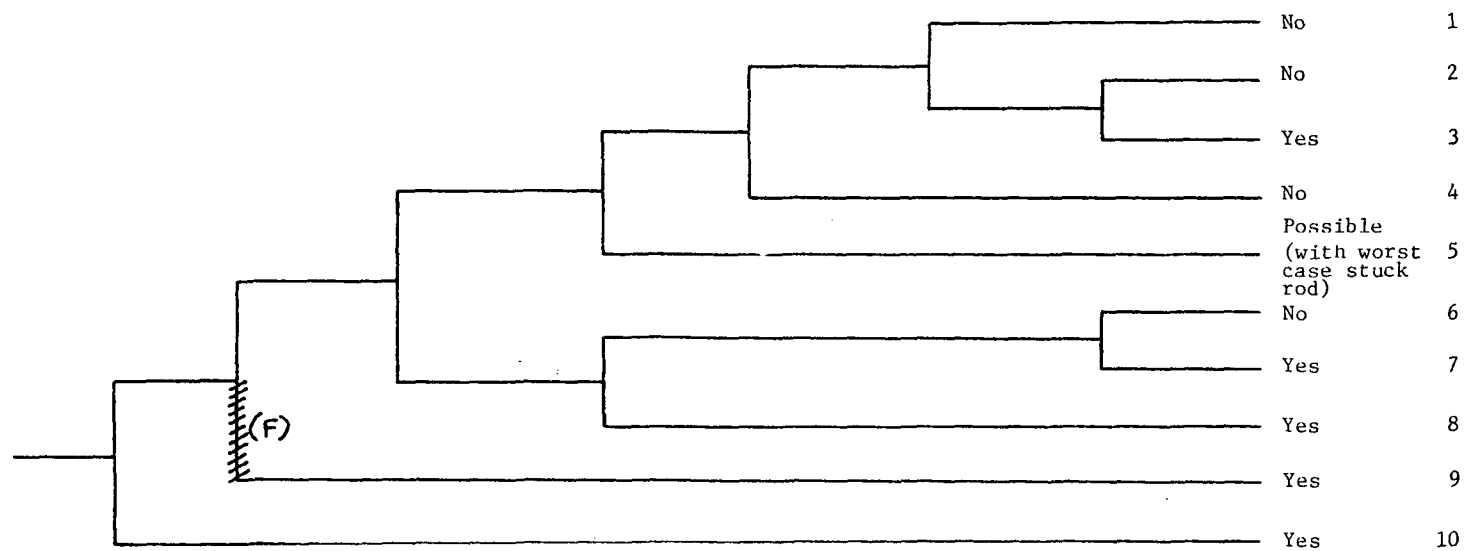
*Unavailabilities are in units of per demand D^{-1} . Failure rates are in units of per hour HR^{-1} .

Reactor in Hot Standby and Main Steam Isolation Valve Testing in Progress	Main Steam Isolation Valves CV-2256 and CV-2276 Fail to Close Due to Binding Between the Valve Stem and Packing	Potential Severe Core Damage
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NSIC 149250 - Actual Occurrence for Two Main Steam Isolation Valves Fail to Close at Trojan

Steam Line Break	Reactor Trip	Steam Generator Isolation	Auxiliary Feedwater and Secondary Heat Removal	High Pressure Injection	PORV Opened Due to Con- tinued HPI	PORV or PORV Isola- tion Valve Closure	Long Term Core Cooling	Potential Severe Core Damage	Sequence No.
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NSIC 149250 - Sequence of Interest for Two Main Steam Isolation Valves Fail to Close at Trojan

CATEGORIZATION OF ACCIDENT SEQUENCE PRECURSORS

NSIC ACCESSION NUMBER: 149250

DATE OF LER: April 27, 1979

DATE OF EVENT: April 14, 1979

SYSTEM INVOLVED: Main steam

COMPONENT INVOLVED: Main steam isolation valves

CAUSE: Valves failed to close due to binding between valve stem and packing.

SEQUENCE OF INTEREST: Steam line break

ACTUAL OCCURRENCE: Valve failed to close during testing.

REACTOR NAME: Trojan

DOCKET NUMBER: 50-344

REACTOR TYPE: PWR

DESIGN ELECTRICAL RATING: 1130 MWe

REACTOR AGE: 3.3 yr

VENDOR: Westinghouse

ARCHITECT-ENGINEERS: Bechtel

OPERATORS: Portland General Electric Co.

LOCATION: 42 miles north of Portland, Oregon

DURATION: 360(a) hours

PLANT OPERATING CONDITION: Hot standby

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

DISCOVERY METHOD: During testing.

COMMENT: —