PRECURSOR DESCRIPTION AND DATA

NSIC Accession Number: 152183

Date: August 13, 1979

Title: Pressurizer Power Operated Relief Valve Opens at Connecticut Yankee

The failure sequence was:

1. With the reactor at 100% power, a bistable in a pressurizer pressure controller failed and resulted in the opening of pressurizer power operated relief valve V-570 and its isolation valve MOV-569 and consequent RCS blowdown.

Corrective action:

1. The operator overrode the pressure controller signal and closed the PORV isolation valve.
2. The failed bistable was repaired.

Design purpose of failed system or component:

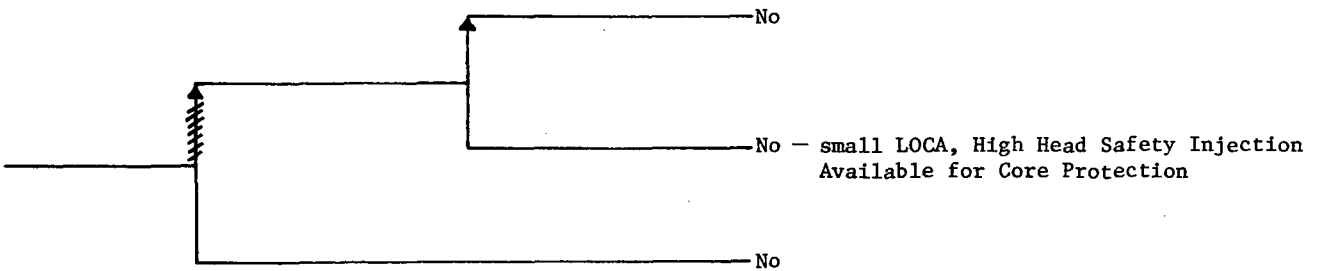
The pressure controller provides a control signal to one of two pressurizer power operated relief valves, opening the valve when the pressurizer pressure reaches a preset point.

Unavailability of system per WASH 1400:* not addressed

Unavailability of component per WASH 1400:* bistable (instrumentation — low power application): 1×10^{-6}/hr.

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

Reactor at 100% Power	Pressurizer Power Operated Relief Valve V-570 and Its Isolation Valve MOV-569 Open Due to Pressure Controller Bistable Failure	Operator Overrides Controller Signal and Closes PORV Isolation Valve	Potential Severe Core Damage



NSIC 152183 — Actual Occurrence for Pressurizer Power Operated Relief Valve Opens at Connecticut Yankee

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.
					No	1
					Yes	2
					Yes	3
*					No	4
					Yes	5
					Yes	6
					Yes	7

NSIC 152183 — Sequence of Interest for Pressurizer Power Operated Relief Valve Opens at Connecticut Yankee

*Failure requires the operator to fail to close the PORV isolation valve.

CATEGORIZATION OF ACCIDENT SEQUENCE PRECURSORS

NSIC ACCESSION NUMBER: 152183

DATE OF LER: September 7, 1979

DATE OF EVENT: August 13, 1979

SYSTEM INVOLVED: pressure relief

COMPONENT INVOLVED: power operated relief valve and its isolation valve

CAUSE: failed pressure controller bistable

SEQUENCE OF INTEREST: small LOCA

ACTUAL OCCURRENCE: open power operated relief valve and isolation valve

REACTOR NAME: Connecticut Yankee

DOCKET NUMBER: 50-213

REACTOR TYPE: PWR

DESIGN ELECTRICAL RATING: 575 MWe

REACTOR ACE: 12.1 yr

VENDOR: Westinghouse

ARCHITECT-ENGINEERS: Stone & Webster

OPERATORS: Connecticut Yankee Atomic Power Co.

LOCATION: 13 miles east of Meriden, Conn.

DURATION: N/A

PLANT OPERATING CONDITION: 100% power

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

DISCOVERY METHOD: operator observation

COMMENT: According to the plant's FSAR, the PORV isolation valve is not controlled by the pressure controller, only manually.