

PRECURSOR DESCRIPTION AND DATA

NSIC Accession Number: 169587

Date: November 4, 1981

Title: Safety Injection Path to RCS Obstructed at Turkey Point 4

The failure sequence was:

1. At the beginning of a refueling outage and while conducting a routine periodic test during partial draining of the RCS, the flow path to the RCS associated with the boron injection tank (BIT) was found obstructed.
2. The apparent cause of the obstruction was reduced temperature resulting from missing insulation in the vicinity of a 4-in. tee at the inlet to the BIT.
3. As a result of the obstruction, the safety injection flow path from all high head safety injection pumps to the RCS cold legs were blocked. A flow path to the hot legs was verified to be operable by establishing flow.

Corrective action:

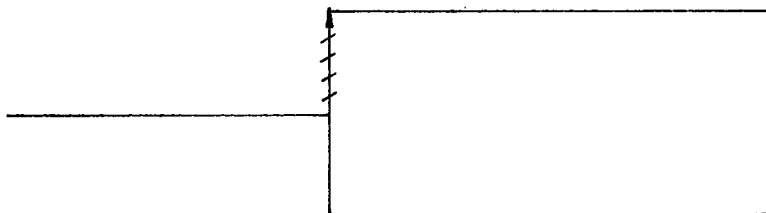
1. The flow path was reestablished by alternating pump operation and raising the thermostat setting for the related heat tracing.

Design purpose of failed system or component:

The safety injection system provides high-pressure replacement water to the RCS during a LOCA and steam line break. This system also provides boron injection for steam break return to power considerations.

Reactor beginning refueling outage	Safety injection system blocked by boric acid solidification
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Potential
Severe
Core
Damage

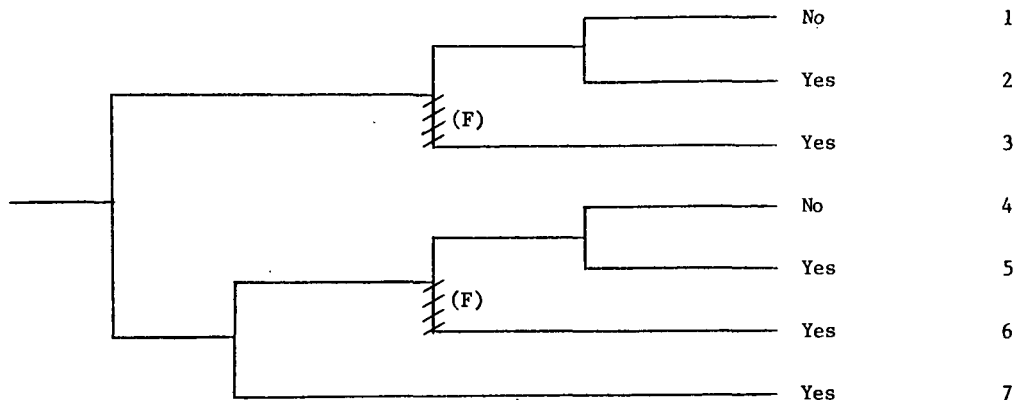


No - no requirement for safety injection

No

NSIC 169587 - Actual Occurrence for Safety Injection Path to RCS Obstructed at Turkey Point 4

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 169587 - Sequence of Interest for Safety Injection Path to RCS Obstructed
at Turkey Point 4

CATEGORIZATION OF ACCIDENT SEQUENCE PRECURSORS

NSIC ACCESSION NUMBER: 169587

LER NO.: 81-011

DATE OF LER: November 4, 1981

DATE OF EVENT: October 21, 1981

SYSTEM INVOLVED: Safety injection

COMPONENT INVOLVED: 4-in. piping tee

CAUSE: Boric acid solidification blocked tee

SEQUENCE OF INTEREST: LOCA

ACTUAL OCCURRENCE: Unavailability of high head safety injection paths

REACTOR NAME: Turkey Point 4

DOCKET NUMBER: 50-251

REACTOR TYPE: PWR

DESIGN ELECTRICAL RATING: 693 MWe

REACTOR AGE: 8.4 years

VENDOR: Westinghouse

ARCHITECT-ENGINEERS: Bechtel

OPERATORS: Florida Power & Light

LOCATION: 25 miles south of Miami, Florida

DURATION: 360 h (estimated)

PLANT OPERATING CONDITION: Entering refueling shutdown

TYPE OF FAILURE: Made inoperable

DISCOVERY METHOD: Testing

COMMENT: