

PRECURSOR DESCRIPTION AND DATA

NSIC Accession Number: 74242

Date: December 31, 1971

Title: High Coolant Level at Nine Mile Point

The failure sequence was:

1. Surveillance testing of the reactor protection system high/low water sensors was being conducted. The sensor support was accidentally bumped causing a turbine trip and an anticipatory reactor trip.
2. Following the trip the reactor water level began to decrease rapidly, causing the feedwater system to respond by overfeeding, as it should, in the automatic mode.
3. After 20 seconds the operator took manual control since in his opinion the feedwater flow was high.
4. The manual transfer of control was slow and some water spilled into the main steamline.

Corrective action:

Since the automatic response of the feedwater system was correct, a review of the expected system response to transients was given to the operating staff.

Design purpose of failed system or component:

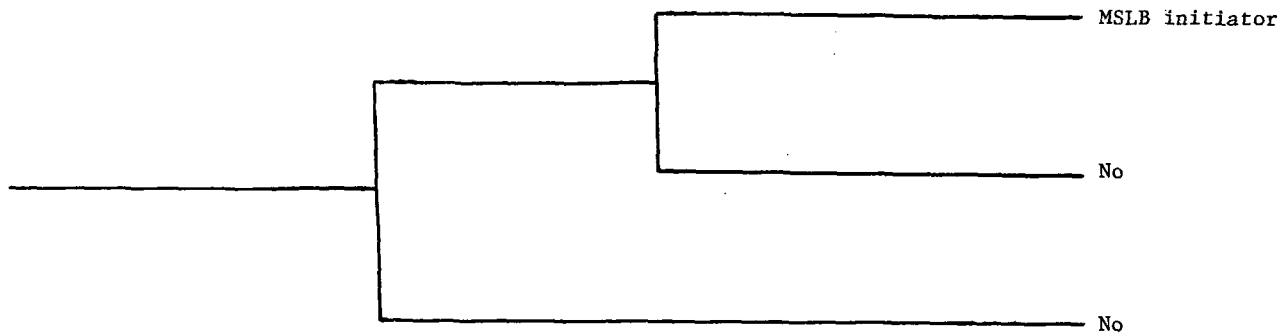
The feedwater system is part of the steam cycle and provides makeup water to the nuclear boiler.

Unavailability of system per WASH 1400: * -

Unavailability of component per WASH 1400: * -

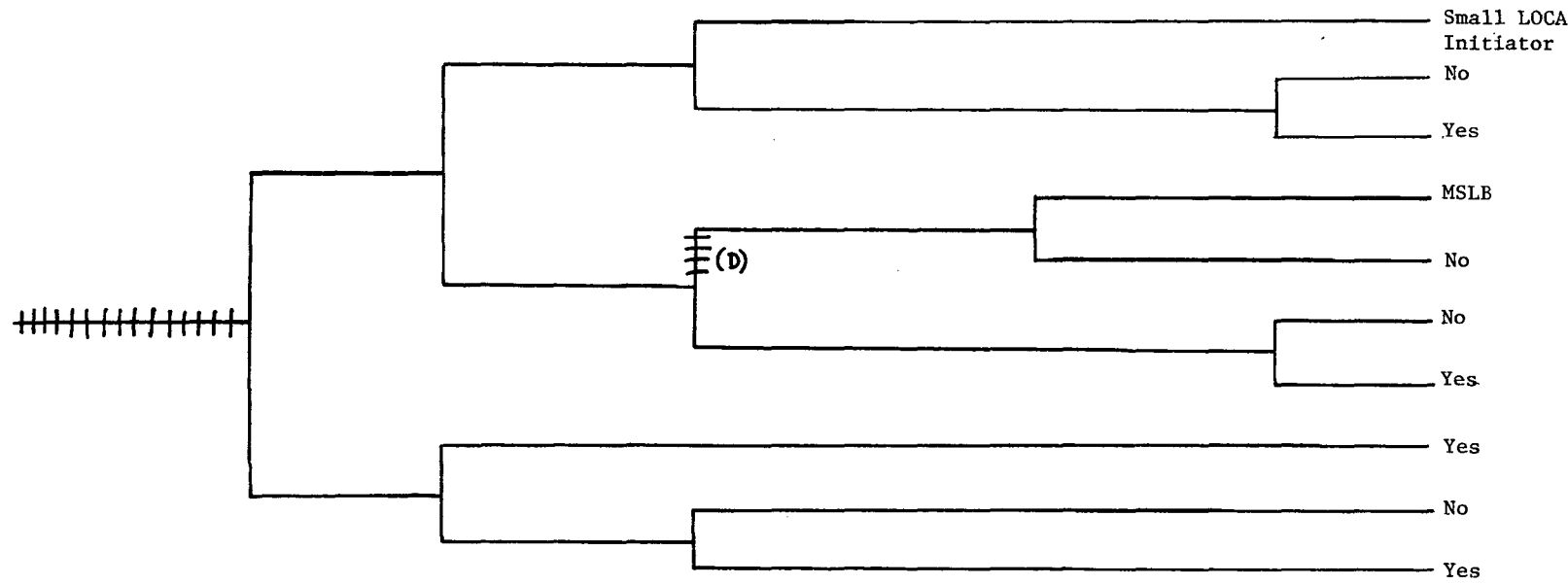
* Unavailabilities are in units of per demand D^{-1} . Failure rates are in units of per hour HR^{-1} .

A Turbine/Reactor Trip Occurred During Surveillance Testing of the High/Low Level Scram Sensors	The Feedwater System Overfeed The Reactor to Compensate for the Shrinking Water Level	The Operator Incorrectly Took Control of the Feedwater System and Caused Water to Flow Into the Steam Lines	Potential Severe Core Damage
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NSIC 74242 -- Actual Occurrence of High Coolant Level at Nine Mile Point

Excessive Coolant Inventory	Reactor Scram	Reactor Vessel or Turbine Isolate	Reactor Coolant Overflows Into Steam Lines, Is Discharged Through Relief Valves, Which Stick Open	Steam Line Break Due to Turbine Missiles, etc.	Long Term Core Cooling Success	Potential Severe Core Damage
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NSIC 74242 — Sequence of Interest for High Coolant Level at Nine Mile Point

CATEGORIZATION OF ACCIDENT SEQUENCE PRECURSORS

NSIC ACCESSION NUMBER: 74242

DATE OF LER: January 20, 1972

DATE OF EVENT: December 31, 1971

SYSTEM INVOLVED: Feedwater

COMPONENT INVOLVED: Controls

CAUSE: Operator Error

SEQUENCE OF INTEREST: Excessive Coolant Inventory Transient

ACTUAL OCCURRENCE: High Coolant Level

REACTOR NAME: Nine Mile Point

DOCKET NUMBER: 50-220

REACTOR TYPE: BWR

DESIGN ELECTRICAL RATING: 620 MWe

REACTOR AGE: 2.4 yr

VENDOR: General Electric

ARCHITECT-ENGINEERS: Utility

OPERATORS: Niagara Mohawk Power Company

LOCATION: 8 miles NE of Oswego, NY

DURATION: N/A

PLANT OPERATING CONDITION: Greater than 45% of rated load

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

DISCOVERY METHOD: operational transient

COMMENT: