

PRECURSOR DESCRIPTION AND DATA

NSIC Accession Number: 47814

Date: June 5, 1970

Title: Depressurization Incident at Dresden 2

The failure sequence was:

1. A spurious signal in the reactor pressure control system occurred causing the turbine control valve to open from 75% to 80% and turbine bypass valve to open 100%.
2. The reactor scrammed and the water level began to drop. The pen in the water level stuck on the low water level mark. Due to this incorrect signal the operator took manual control of the feedwater system and began to increase flow to the reactor.
3. After no change in water level indication the operator realized the pen was stuck. He tapped the pen, however water was already blowing through the relief valves.
4. The feedwater flow was throttled back.

Corrective action:

The plant was shutdown for an extended period for repair of minor damage and inspection.

Design purpose of failed system or component:

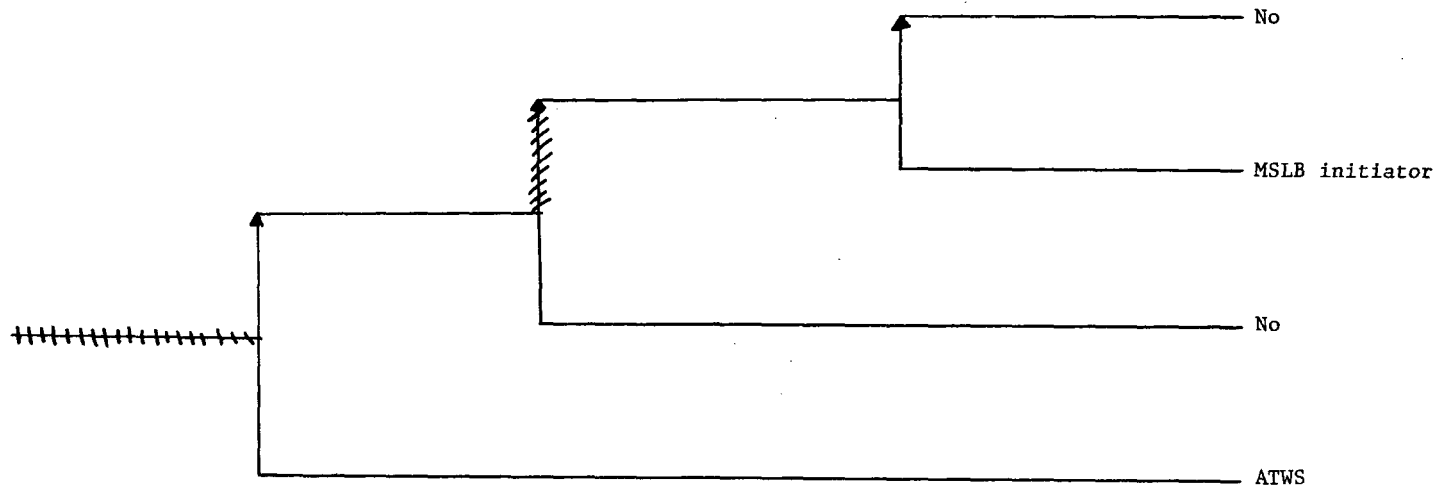
The reactor water level instrumentation indicates the water level in the reactor vessel.

Unavailability of system per WASH 1400: *

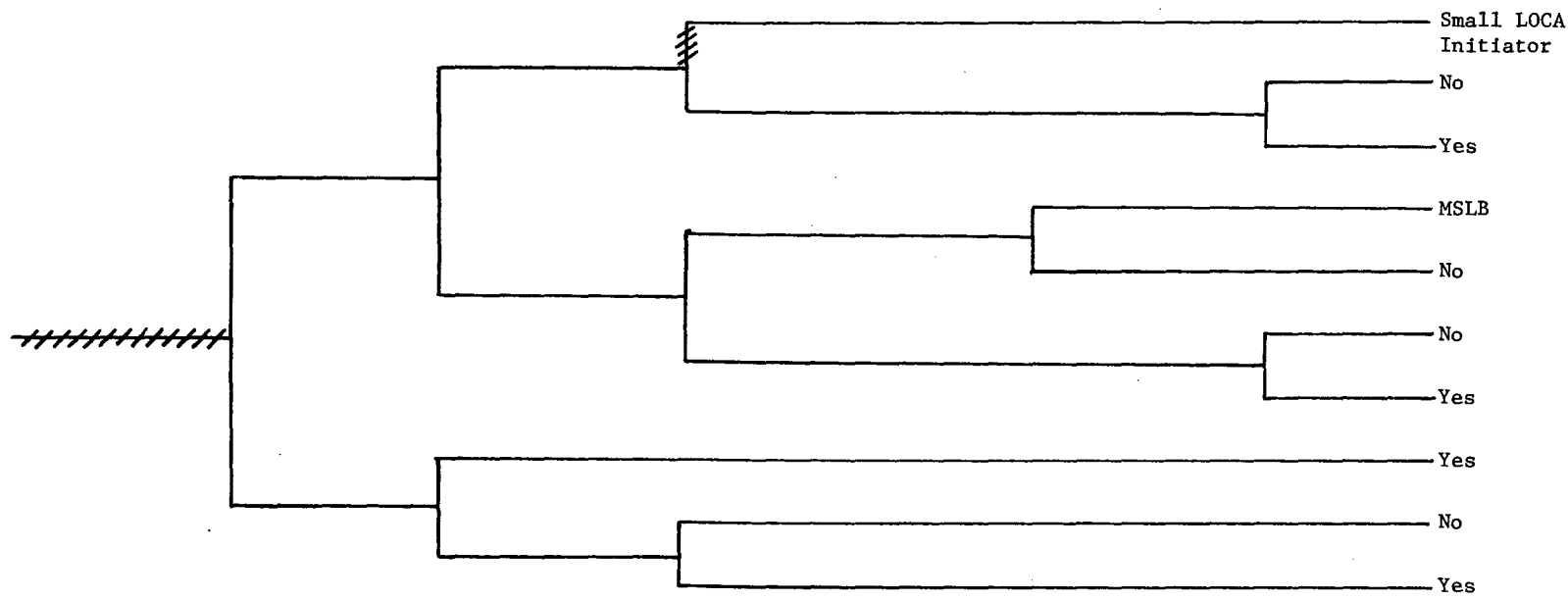
Unavailability of component per WASH 1400: *

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

A Spurious Signal Initiates a Feed-water Transient	The Reactor Tripped	Due to an Erroneous Signal the Operator Took Control of the Feedwater Controls and Overfilled the Vessel	Feedwater Was Throttled Back and the Reactor Placed in Cold Shutdown	Potential Severe Core Damage
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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 47814 — Sequence of Interest for the Depressurization Incident at Dresden 2

CATEGORIZATION OF ACCIDENT SEQUENCE PRECURSORS

NSIC ACCESSION NUMBER: 47814

DATE OF LER: July 6, 1970

DATE OF EVENT: June 5, 1970

SYSTEM INVOLVED: Feedwater

COMPONENT INVOLVED: Reactor Water Level Indicator.

CAUSE: Component failure

SEQUENCE OF INTEREST: Excessive Coolant Inventory

ACTUAL OCCURRENCE: Depressurization Incident

REACTOR NAME: Dresden 2

DOCKET NUMBER: 50-237

REACTOR TYPE: BWR

DESIGN ELECTRICAL RATING: 794 MWe

REACTOR AGE: 0.4 yr

VENDOR: General Electric

ARCHITECT-ENGINEERS: Sargents and Lundy

OPERATORS: Commonwealth Edison

LOCATION: Nine miles from Morris, Ill.

DURATION: N/A

PLANT OPERATING CONDITION: 75%

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

DISCOVERY METHOD: operational event

COMMENT: