

PRECURSOR DESCRIPTION AND DATA

NSIC Accession Number: 65969

Date: September 16, 1971

Title: Unclear Wiring Diagrams Result in Depressurization at Palisades

The failure sequence was:

1. With the plant in hot shutdown, a technician de-energized breakers to the reactor protective system. This resulted in loss of power to the electromatic relief valve pilot valve solenoids opening the valves.
2. One of the electromatic relief valves was isolated because its isolation valve was closed; however, the open, unisolated relief valve permitted RCS blowdown to the quench tank.
3. Safety injection was initiated on both safety injection channels, however channel A was blocked by the operator.
4. The operator closed the electromatic relief valve isolation valve and started the third charging pump.

(Continued on attached sheet)

Corrective action;

1. The reactor protective system drawings were to be corrected to indicate the "as-built" plant condition using standard notation.
2. The electromatic relief valve control scheme was to be reviewed to determine if any changes were desirable to lessen the probability of a second incident.

Design purpose of failed system or component:

1. The electromatic relief valves provide RCS overpressure protection at a pressure below the RCS safety valve set points.

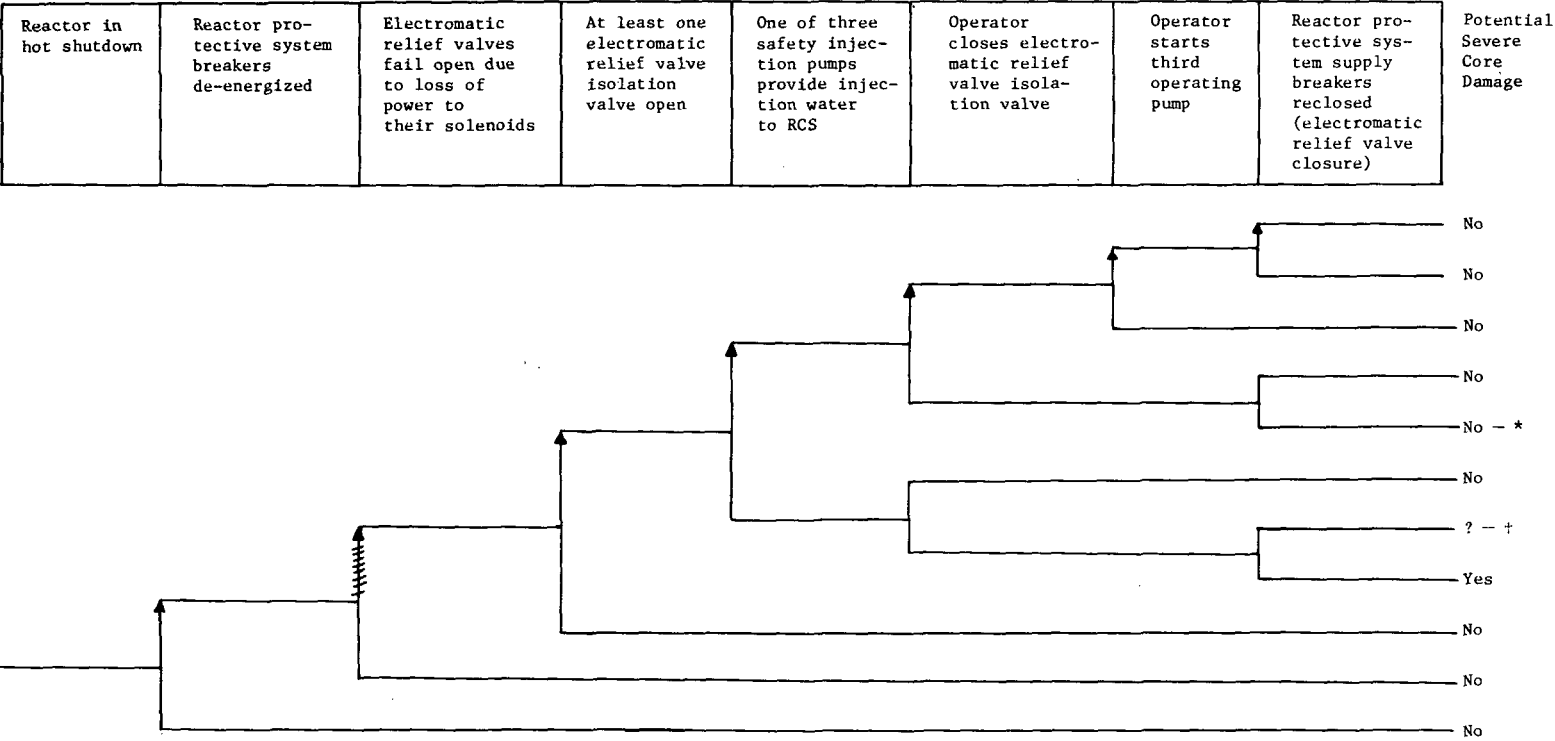
Unavailability of system per WASH 1400:* —

Unavailability of component per WASH 1400:* relief valve, failure to reseal: $10^{-2}/D$

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

The failure sequence was: (continued)

5. The RCS depressurized to 1280 psia in approximately two minutes.
6. The reactor protective system breakers were reclosed, restoring power to the electromatic relief valve solenoids and thus closing the relief valves.



NSIC 65969 - Actual Occurrence for Unclear Wiring Diagrams Result in Depressurization at Palisades

* safety injection available for small break mitigation
 + 8 minute RCS blowdown, system would have been saturated

CATEGORIZATION OF ACCIDENT SEQUENCE PRECURSORS

NSIC ACCESSION NUMBER: 65969

DATE OF LER: September 16, 1971

DATE OF EVENT: September 8, 1971

SYSTEM INVOLVED: Reactor Coolant System, Reactor Protective System

COMPONENT INVOLVED: Electromatic Relief Valves

CAUSE: Opening of reactor protective system supply breakers resulted in opening of
electromatic relief valves

SEQUENCE OF INTEREST: small LOCA (open electromatic relief valve)

ACTUAL OCCURRENCE: open electromatic relief valve

REACTOR NAME: Palisades

DOCKET NUMBER: 50-255

REACTOR TYPE: PWR

DESIGN ELECTRICAL RATING: 805 MWe

REACTOR AGE: .3 yr

VENDOR: Combustion Engineering

ARCHITECT-ENGINEERS: Bechtel

OPERATORS: Consumers Power Co.

LOCATION: 5 miles south of South Haven, Mich.

DURATION: N/A

PLANT OPERATING CONDITION: hot shutdown

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

DISCOVERY METHOD: During operation

COMMENT: —