

PRECURSOR DESCRIPTION AND DATA

NSIC Accession Number: 97578

Date: November 15, 1974

Title: Loss of Offsite Power During SIS Testing at Palisades

The failure sequence was:

1. With the plant in a hot standby condition, the right channel safety injection test button was pushed to initiate a quarterly test.
2. Offsite power was lost due to the inadvertent operation of the differential relay system.
3. The diesel generators started and powered safety-related loads.

Corrective action:

The three-phase differential relays were removed from service pending a review and potential redesign of the system. Over-current protection devices remained installed to provide transformer protection.

Design purpose of failed system or component:

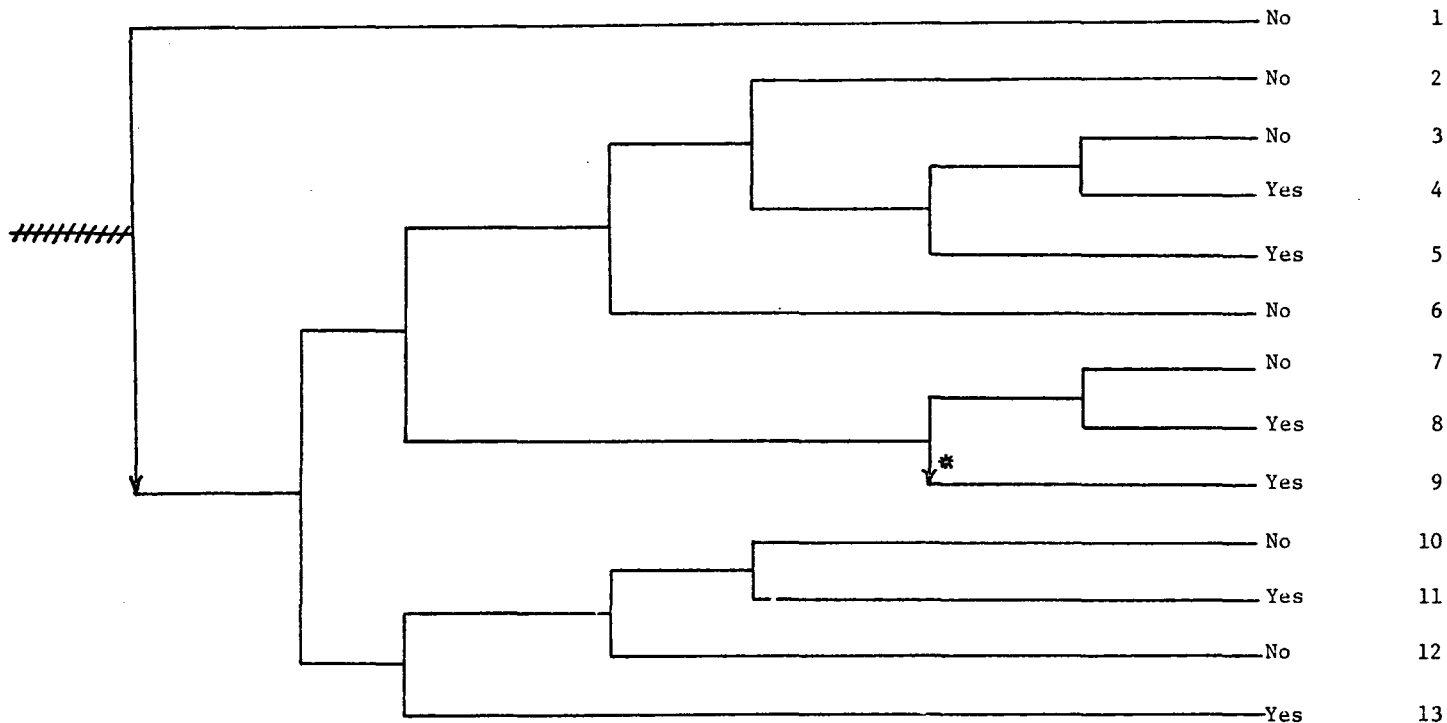
The differential relays provided overcurrent protection for the startup transformers.

Unavailability of system per WASH 1400:* Offsite power: $2 \times 10^{-5}/\text{hr}$

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} .

Loss of Offsite Power	Turbine Generator Runs Back and Assumes House Loads	Emergency Power	Auxiliary Feedwater and Secondary Heat Removal	PORV Demanded	PORV or PORV Isolation Valve Closure	High Pressure Injection	Long Term Core Cooling	Potential Severe Core Damage	Sequence No.
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NSIC 97578 - Sequence of Interest for Loss of Offsite Power During SIS Testing at Palisades

* Not included in mitigation sequence.

CATEGORIZATION OF ACCIDENT SEQUENCE PRECURSORS

NSIC ACCESSION NUMBER: 97578

DATE OF LER: November 15, 1974

DATE OF EVENT: October 17, 1974

SYSTEM INVOLVED: Offsite Power

COMPONENT INVOLVED: Differential Relays

CAUSE: Improperly designed Differential Relay System

SEQUENCE OF INTEREST: Loss of offsite power

ACTUAL OCCURRENCE: Loss of offsite power during SIS testing

REACTOR NAME: Palisades

DOCKET NUMBER: 50-255

REACTOR TYPE: PWR

DESIGN ELECTRICAL RATING: 805 MWe

REACTOR AGE: 3.4 yr

VENDOR: Combustion Engineering

ARCHITECT-ENGINEERS: Bechtel

OPERATORS: Consumers Power Company

LOCATION: 5 miles south of South Haven, Mich.

DURATION: N/A

PLANT OPERATING CONDITION: hot standby

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

DISCOVERY METHOD: testing

COMMENT: This event is the second of its type at Palisades. After the first event (NSIC 71694, 5/17/72), the differential relays were removed pending a design review. They were reinstalled in January 1974 after modification.