

PRECURSOR DESCRIPTION AND DATA

NSIC Accession Number: 115875

Date: July 9, 1976

Title: Total Loss of 115 KV Station Service Power Occurs at Connecticut Yankee

The failure sequence was:

1. During refueling, maintenance was being performed on one of the two incoming 115 KV station service lines.
2. While switching to restore this line to service, protective relays sensed a spurious 115 KV fault signal (due to improperly located backup relaying potential sensing circuits) and tripped the automatic circuit breaker on the station service transformer associated with the operating 115 KV line, resulting in a loss of offsite power (3 times).
3. The diesel generators started and loaded safety related loads.

Corrective action:

1. The position of the applicable backup relaying potential sensing circuits were changed.

Design purpose of failed system or component:

Offsite power provides power to safety-related plant loads when the unit generator is not operating.

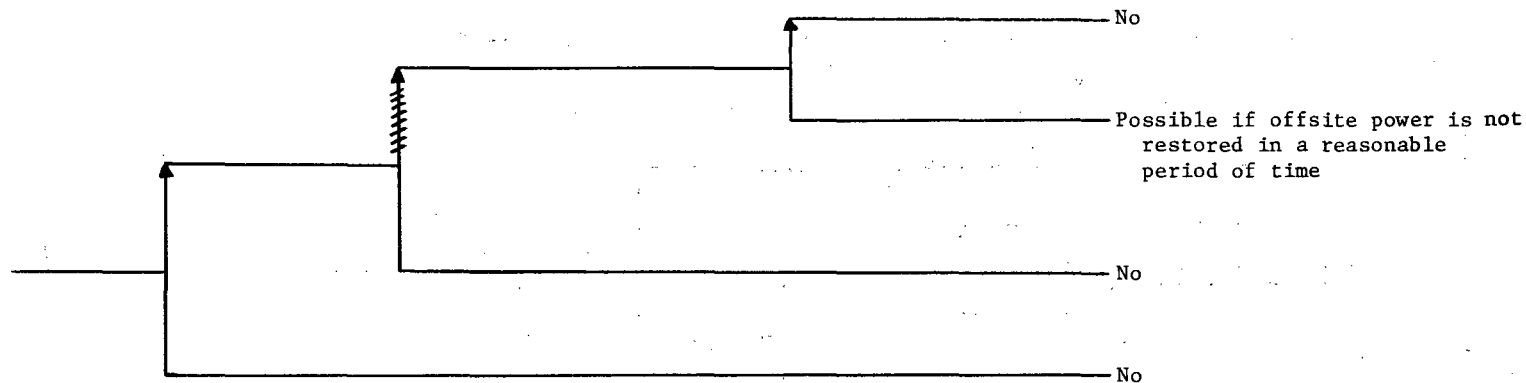
Unavailability of system per WASH 1400:\* Offsite power:  $2 \times 10^{-5}$ /hr.

Unavailability of component per WASH 1400:\* --

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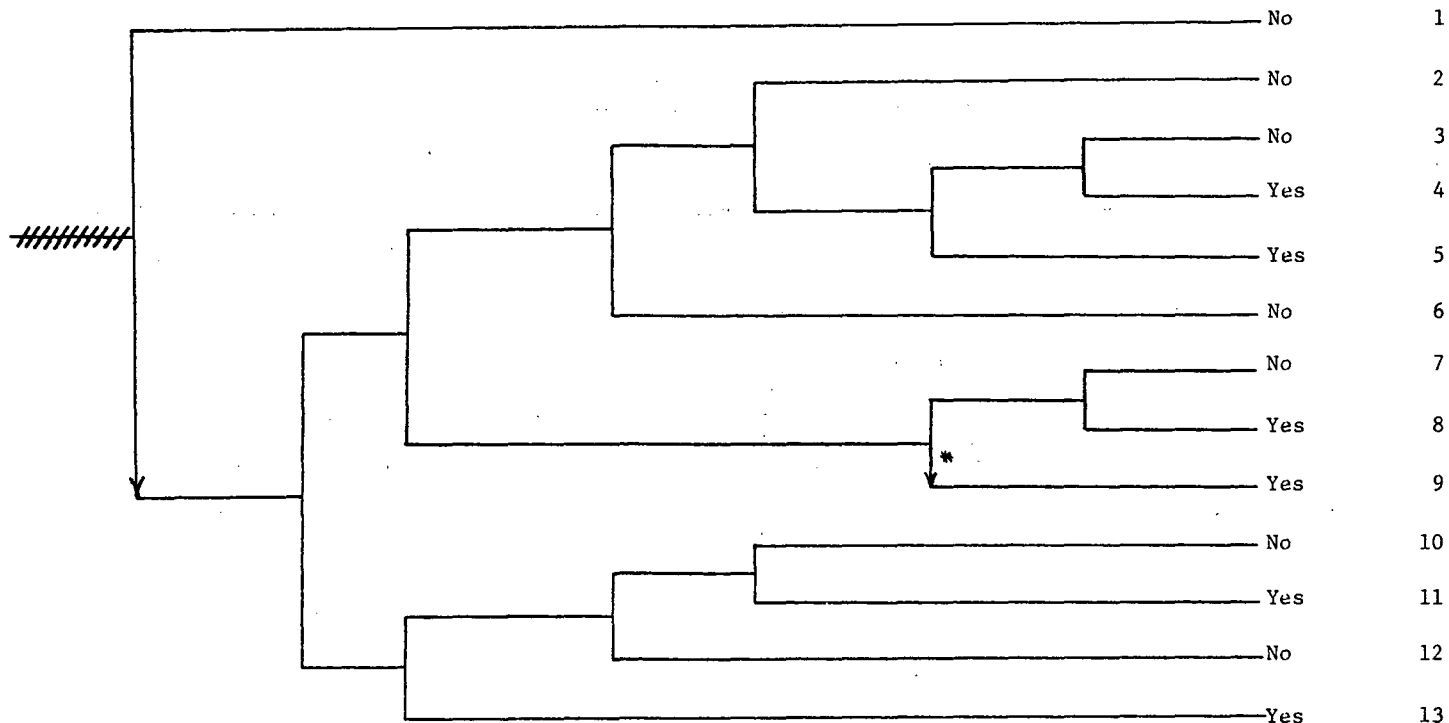
\* Unavailabilities are in units of per demand  $D^{-1}$ . Failure rates are in units of per hour  $HR^{-1}$ .

Reactor in refueling shutdown	Maintenance in progress on one of two incoming 115kv station service lines	During switching to restore line to service, improperly placed backup relaying potential sensing circuits sense a spurious 115kv fault and trip a circuit breaker associated with the operating 115kv line	Diesel generators start and assume safety related loads	Potential Severe Core Damage
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NSIC 115875 — Actual Occurrence for Total Loss of 115kv Station Power Occurs at Connecticut Yankee

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 115875 — Sequence of Interest for Total Loss of 115kv Station Power Occurs at Connecticut Yankee

\* not part of mitigation procedure

CATEGORIZATION OF ACCIDENT SEQUENCE PRECURSORS

NSIC ACCESSION NUMBER: 115875

DATE OF LER: July 9, 1976

DATE OF EVENT: June 26, 1976

SYSTEM INVOLVED: offsite power

COMPONENT INVOLVED: backup relaying potential sensing circuits

CAUSE: improper placement of sensing circuits

SEQUENCE OF INTEREST: loss of offsite power

ACTUAL OCCURRENCE: loss of offsite power during refueling.

REACTOR NAME: Haddam Neck

DOCKET NUMBER: 50-213

REACTOR TYPE: PWR

DESIGN ELECTRICAL RATING: 575 MWe

REACTOR AGE: 9 yr

VENDOR: Westinghouse

ARCHITECT-ENGINEERS: Stone & Webster

OPERATORS: Connecticut Yankee Atomic Power Co.

LOCATION: 13 mi. East of Meridan, Conn.

DURATION: N/A

PLANT OPERATING CONDITION: refueling

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

DISCOVERY METHOD: operational event

COMMENT: