

PRECURSOR DESCRIPTION AND DATA

NSIC Accession Number: 63144

Date: April 7, 1971

Title: Both Diesels Fail to Start at Robinson 2

The failure sequence was:

1. Due to a history of set point drift in the diesel generator low lube oil pressure switches, the switches were replaced with switches considered more reliable. To reduce the effects of vibration on the new switches, the switches were mounted on the room walls and connected to the diesels using approximately 15' of 1/4" copper tubing.
2. During subsequent testing, both diesels failed to run due to low indicated lube oil pressure at the pressure switches; a result of trapped air and high viscosity cold lube oil in the small tubing, which prevented transmission of the correct oil pressure to the pressure switches.

Corrective action:

The pressure switch lines were replaced with 3/8" tubing which included a vent connection.

Design purpose of failed system or component:

The diesel generators provide power to safety related loads in the event of unavailability of the unit generator and offsite power sources.

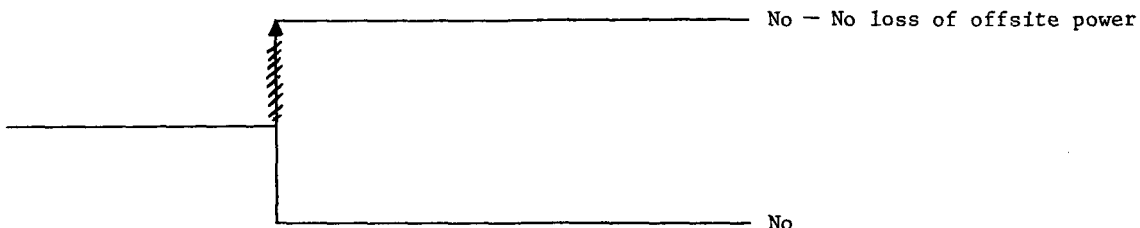
Unavailability of system per WASH 1400:* Emergency power: $1 \times 10^{-2}/D$

Unavailability of component per WASH 1400:* Diesel generator: $3 \times 10^{-2}/D$

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

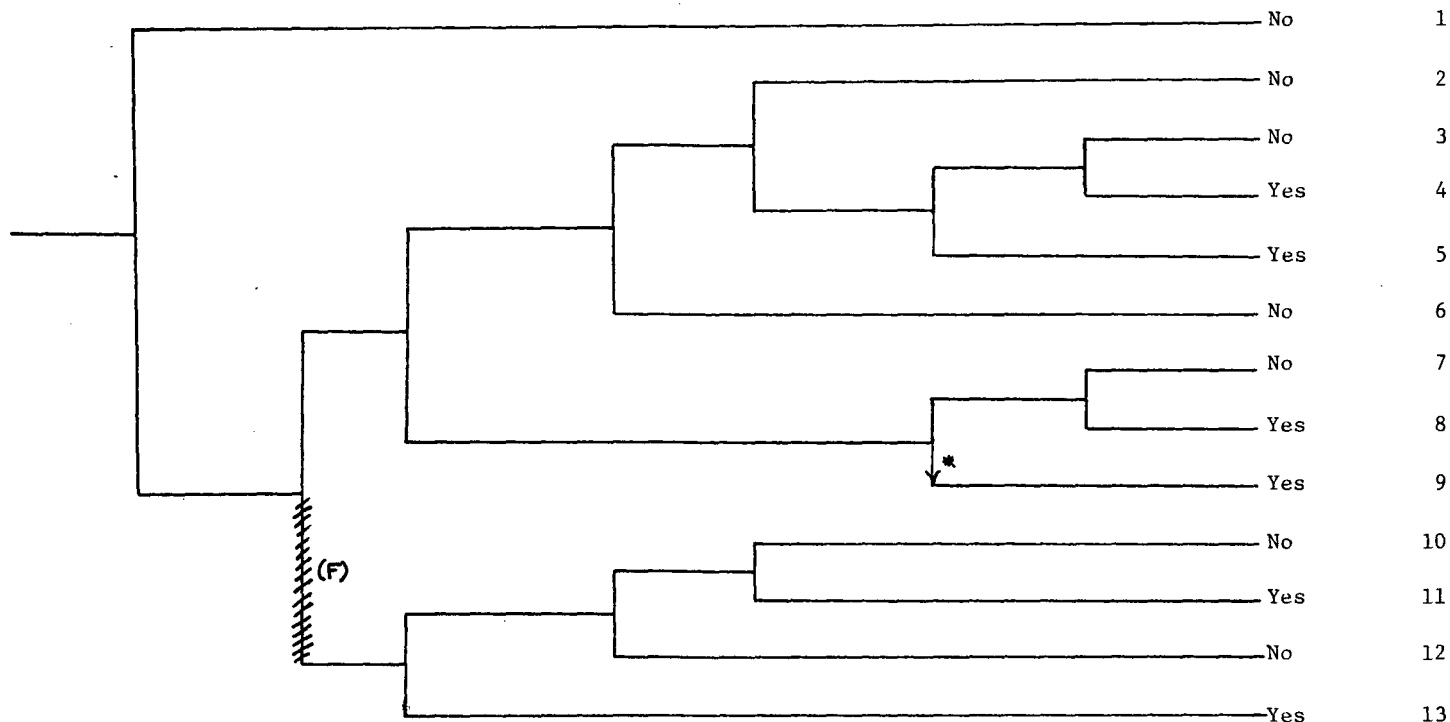
Reactor at Power and Diesel Generator Testing in Progress	Both Diesel Generators Fail to Start Due to Improperly Sized and Vented Hydraulic Lines Between the Diesel Lube Oil System and Low Lube Oil Pressure Switches
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Potential
Severe
Core
Damage



NSIC 63144 - Actual Occurrence for Both Diesel Generator
Fail to Start at Robinson 2

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 63144 - Sequence of Interest for Both Diesel Generators Fail to Start at Robinson 2

*not included in mitigation procedures

CATEGORIZATION OF ACCIDENT SEQUENCE PRECURSORS

NSIC ACCESSION NUMBER: 63144

DATE OF LER: April 7, 1971

DATE OF EVENT: March 8, 1971

SYSTEM INVOLVED: Emergency power

COMPONENT INVOLVED: Diesel generator low lube oil pressure switches

CAUSE: Incorrect hydraulic connection between switches and lube oil system

SEQUENCE OF INTEREST: Loss of offsite power

ACTUAL OCCURRENCE: Diesel generator failure to start during testing

REACTOR NAME: Robinson 2

DOCKET NUMBER: 50-261

REACTOR TYPE: PWR

DESIGN ELECTRICAL RATING: 700 MWe

REACTOR AGE: .43 yr

VENDOR: Westinghouse

ARCHITECT-ENGINEERS: Ebasco

OPERATORS: Carolina Power & Light Co.

LOCATION: 5 miles NW of Hartsville, SC

DURATION: 360(a) hours

PLANT OPERATING CONDITION: At power (level unspecified)

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

DISCOVERY METHOD: Testing

COMMENT: /