

PRECURSOR DESCRIPTION AND DATA

NSIC Accession Number: 147399

Date: March 22, 1979

Title: Both Diesel Generators Unavailable at Kewaunee

The failure sequence was:

1. With the reactor at full power, diesel generator 1B was removed from service for maintenance.
2. During the testing of diesel 1A, manual speed control was lost due to excessive wear to the bronze pinion in the syncho-motor gear housing. The pinion damage was caused by improper gear alignment and failure of a governor limit switch.

Corrective action:

The pinion and limit switch were replaced and adjusted and the diesel generator was tested and returned to service.

Design purpose of failed system or component:

The diesel generators provide power to safety-related equipment when offsite power and the unit generator are unavailable.

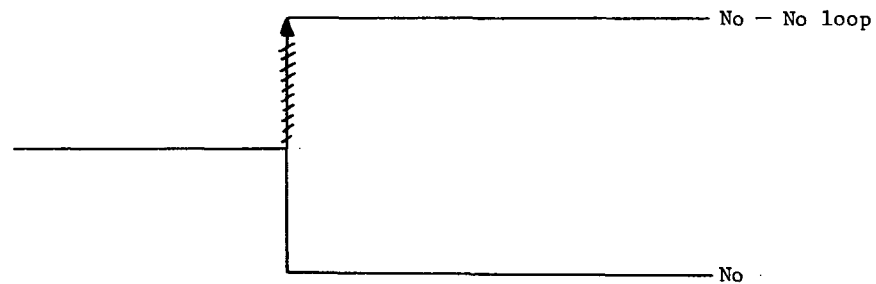
Unavailability of system per WASH 1400: \* Emergency power:  $1 \times 10^{-2}/D$

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

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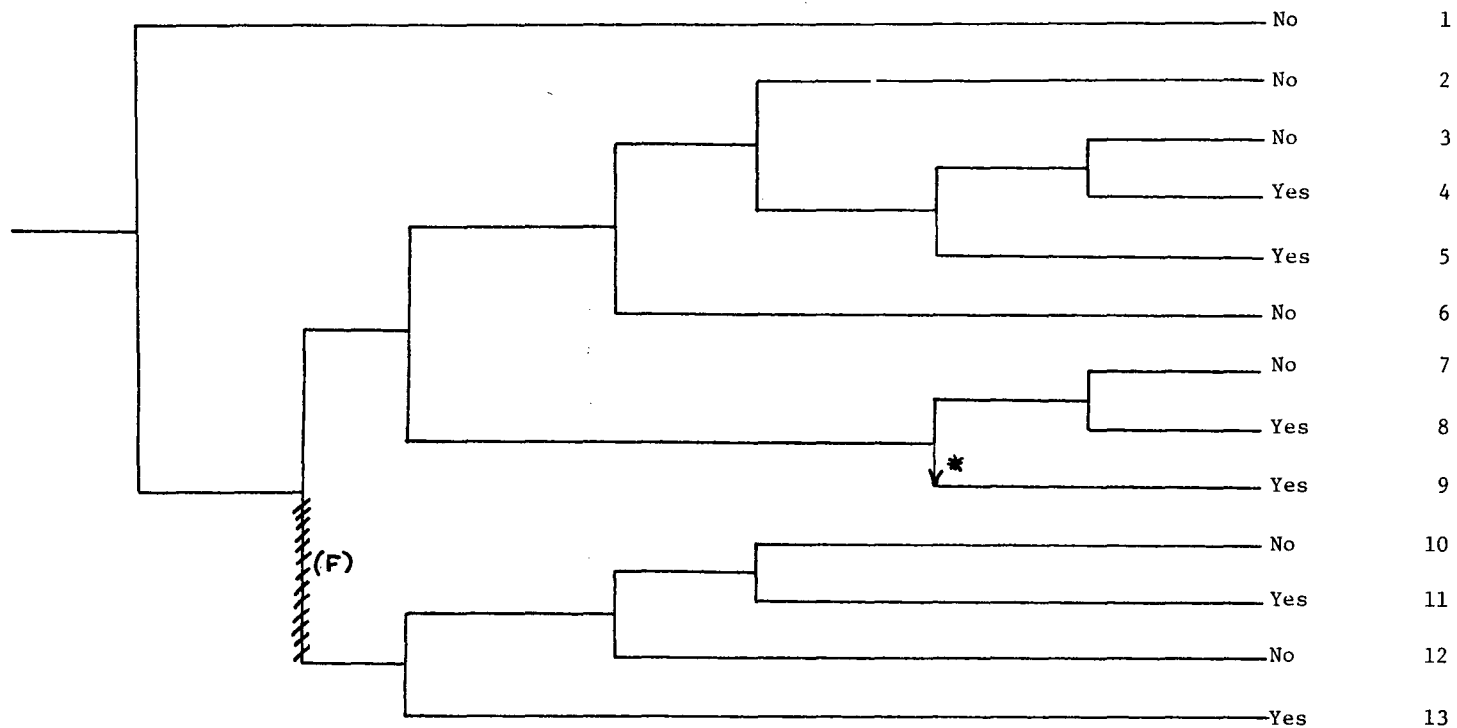
\* Unavailabilities are in units of per demand  $D^{-1}$ . Failure rates are in units of per hour  $HR^{-1}$ .

Reactor at Power and Diesel Gen- erator 1B Removed From Service for Maintenance	Diesel Generator 1A Fails to Run Due to Loss of Manual Speed Control - A Result of a Worm Pinion in the Synchro-Motor Gear Housing and a Failed Limit Switch	Potential Severe Core Damage
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NSIC 147399 - Actual Occurrence for Both Diesel Generators  
Unavailable at Kewaunee

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 147399 — Sequence of Interest for Both Diesel Generators Unavailable at Kewaunee

\*Not included in operating procedures

## CATEGORIZATION OF ACCIDENT SEQUENCE PRECURSORS

NSIC ACCESSION NUMBER: 147399

DATE OF LER: March 22, 1979

DATE OF EVENT: February 21, 1979

SYSTEM INVOLVED: Emergency power

COMPONENT INVOLVED: Diesel generator

CAUSE: Excessive wear on pinion in synchro-gear motor housing plus  
failed limit switch

SEQUENCE OF INTEREST: Loss of offsite power

ACTUAL OCCURRENCE: Unavailability of two diesel generators while at power

REACTOR NAME: Kewaunee

DOCKET NUMBER: 305

REACTOR TYPE: PWR

DESIGN ELECTRICAL RATING: 535 MWe

REACTOR AGE: 5.0 yr

VENDOR: Westinghouse

ARCHITECT-ENGINEERS: Flour Power

OPERATORS: Wisconsin Public Service Corp.

LOCATION: 27 miles East of Green Bay, Wisconsin

DURATION: 4(a) hours

PLANT OPERATING CONDITION: 100% power

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

DISCOVERY METHOD: Testing

COMMENT: