PRECURSOR DESCRIPTION AND DATA

NSIC Accession Number: 131225

Date: August 28, 1977

Title: Two Diesel Generators Fail to Start at Peach Bottom 2

The failure sequence was:

1. During loss of offsite power test diesel E1 failed to start and diesel E4 failed to run after starting.
2. The problem with E1 was traced to jacket temperature alarm which had tripped in high jacket temperature during previous actuation. The service water pump supplying the jacket had tripped on thermal overload. The problem had been detected prior to the test, however, due to human oversight, it was not corrected.
3. An investigation showed that diesel E-4 tripped on overspeed. The overspeed mechanism had been installed improperly after maintenance during which the camshaft was replaced. The necessary shims for the overspeed mechanism were not replaced. This resulted in improper operation of the overspeed mechanism.

Corrective action:

1. The operators were reminded through a letter about the requirement to reset the diesel trips and alarms, after investigating the alarm.
2. The shims were installed in the overspeed mechanism.

Design purpose of failed system or component:

1. Emergency Power provides power when offsite power is unobtainable.
2. The overspeed mechanisms trip the diesel when it overspeeds.
3. The jacket alarm prevents the diesel from overheating.

Unavailability of system per WASH 1400: *Emergency Power: 10^{-3}/D

Unavailability of component per WASH 1400: *Diesel Engine Failure to start: $3{:}10^{-2}$/D

Diesel Engine Failure to run: 3.10^{-4}/Hr

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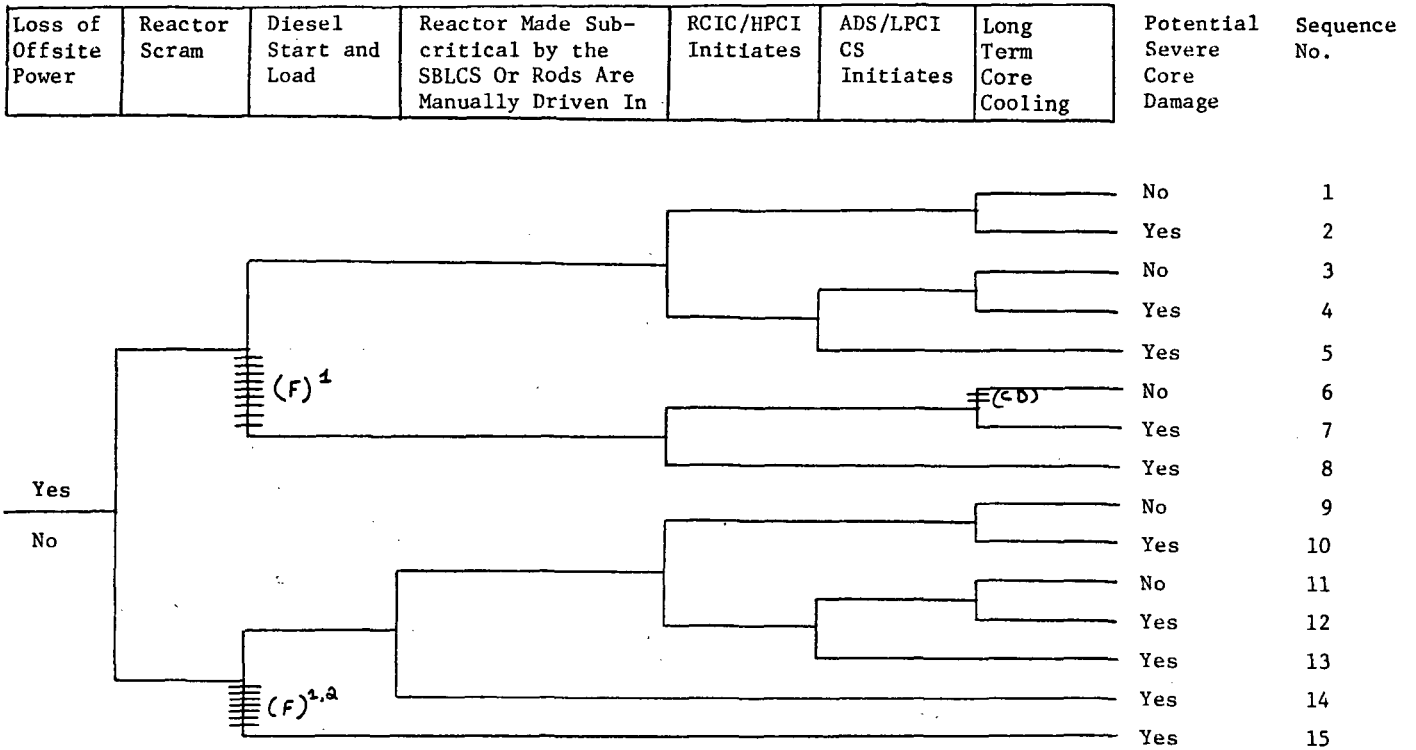
*Unavailabilities are in units of per demand D^{-1}. Failure rates are in units of per hour HR^{-1}.

A Loss Of Offsite Power Test Was Underway	Diesel E-1 Failed To Start Due To A Tripped Jacket Temperature Alarm	Diesel E-4 Tripped After Starting Due To A Failed Overspeed Trip	Potential Severe Core Damage
			No, reactor in cold shutdown
			No
			No
			No

NSIC 131225 — Actual Occurrence of Two Diesel Generators Fail at Peach Bottom 2



NSIC 131225 — Sequence of Interest for Two Diesel Generators Fail to Start at Peach Bottom 2

[1]Resetting the jacket temperature alarm would result in a success.

[2]Proper loading of the operating diesels would allow success of alternate shutdown procedures or systems.

CATEGORIZATION OF ACCIDENT SEQUENCE PRECURSORS

NSIC ACCESSION NUMBER: 131225

DATE OF LER: September 9, 1977

DATE OF EVENT: August 26, 1977

SYSTEM INVOLVED: Emergency Electric Power

COMPONENT INVOLVED: Diesel Generators

CAUSE: Human oversight, Improper Maintenance & Procedures.

SEQUENCE OF INTEREST: Loss of Offsite Power.

ACTUAL OCCURRENCE: Two Diesels Fail to Start

REACTOR NAME: Peach Bottom 2

DOCKET NUMBER: 50-277

REACTOR TYPE: BWR

DESIGN ELECTRICAL RATING: 1065 MWe

REACTOR AGE: 3.9 yr

VENDOR: General Electric

ARCHITECT-ENGINEERS: Bechtel

OPERATORS: Philadelphia Electric Company

LOCATION: 19 miles S of Lancaster

DURATION: 360(a) hours

PLANT OPERATING CONDITION: 0% power

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

DISCOVERY METHOD: Test

COMMENT: