

PRECURSOR DESCRIPTION AND DATA

NSIC Accession Number: 133004

Date: June 13, 1977

Title: Three Out of Four Diesels Inoperable at Peach Bottom Atomic Power Station

The failure sequence was:

1. Unit 2 was shutdown for maintenance and unit 3 was operating at 100% power.
2. Diesel generator E1 was taken out of service for annual maintenance.
3. About 3 hours later the operator noticed a diesel trouble light on both diesels E3 and E4 and dispatched an operator to investigate the problem.
4. After performing other tasks (no priority was given) the operator discovered that both air receivers on both E3 and E4 were empty and their associated compressors were tripped on thermal overload.
5. The thermal overload switches were reset and the air receivers were charged.
6. Later in the day another operator was dispatched to check the status of the compressors and the air receivers. The compressors were again found tripped on thermal overload; however, the air receivers were found to have sufficient air.

Corrective action:

(see attached sheet)

1. The sectionalizing valve was locked closed.
2. The leaking check valves were replaced.

Design purpose of failed system or component:

1. The diesel generators provide emergency power should all offsite sources be lost.
2. The air receivers and compressors provide compressed air to start the diesel engine.

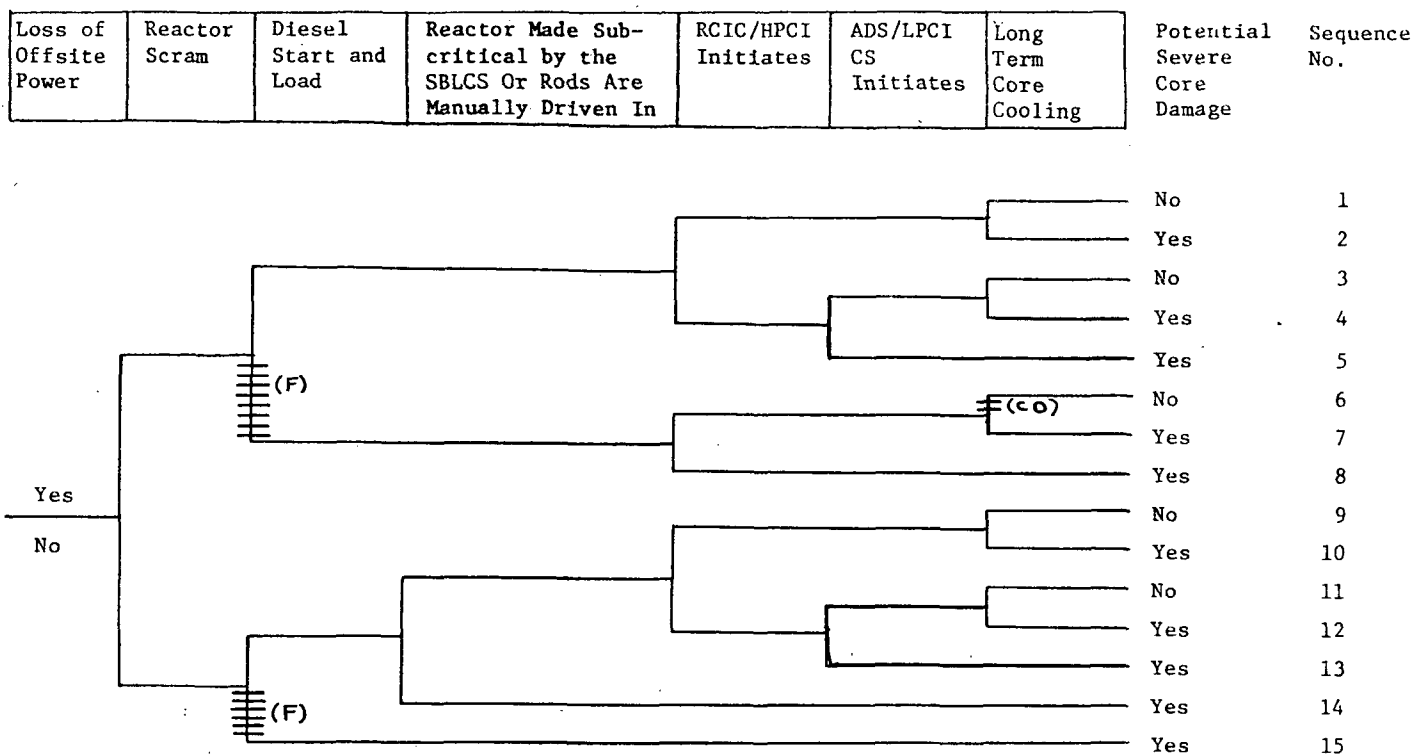
Unavailability of system per WASH 1400:* - Emergency Power: $1 \cdot 10^{-3}/D$

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

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

The failure sequence was: (continued)

7. The problem was traced to two causes: (1) A sectionalizing valve which allows the air starting system of the diesels to be interconnected, was left partially opened. (2) The air receiver check valves were found to be leaking. The compressors tripped on thermal overload as they tried to maintain air pressure in the air receiver tanks.



NSIC 133004 - Sequence of Interest for Three Out of Four Diesels Inoperable at Peach Bottom Atomic Power Station

CATEGORIZATION OF ACCIDENT SEQUENCE PRECURSORS

NSIC ACCESSION NUMBER: 133004

DATE OF LER: June 30, 1977

DATE OF EVENT: June 13, 1977

SYSTEM INVOLVED: electric power

COMPONENT INVOLVED: diesel generators

CAUSE: common mode failure of the diesels, (human error)

SEQUENCE OF INTEREST: loss of offsite power

ACTUAL OCCURRENCE: three out of four diesels inoperable at Peach Bottom

REACTOR NAME: Peach Bottom 3

DOCKET NUMBER: 50-278

REACTOR TYPE: BWR

DESIGN ELECTRICAL RATING: 1065 MWe

REACTOR AGE: 2.8 yr

VENDOR: General Electric

ARCHITECT-ENGINEERS: Bechtel

OPERATORS: Philadelphia Electric Company

LOCATION: 19 miles S of Lancaster

DURATION: 24 (a) hours

PLANT OPERATING CONDITION: 100% power

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

DISCOVERY METHOD: alarm

COMMENT: