

PRECURSOR DESCRIPTION AND DATA

NSIC Accession Number: 135932

Date: February 6, 1978

Title: All Offsite Transmission Lines Lost at Pilgrim 1

The failure sequence was:

The reactor was operating at 24% power when high winds and ice caused all the transmission lines to fail. This event caused the reactor to trip.

Corrective action:

The insulators were washed with fresh water and the reactor was returned to service. A plant design change was issued to resolve the flashover problem on standoff insulators.

Design purpose of failed system or component:

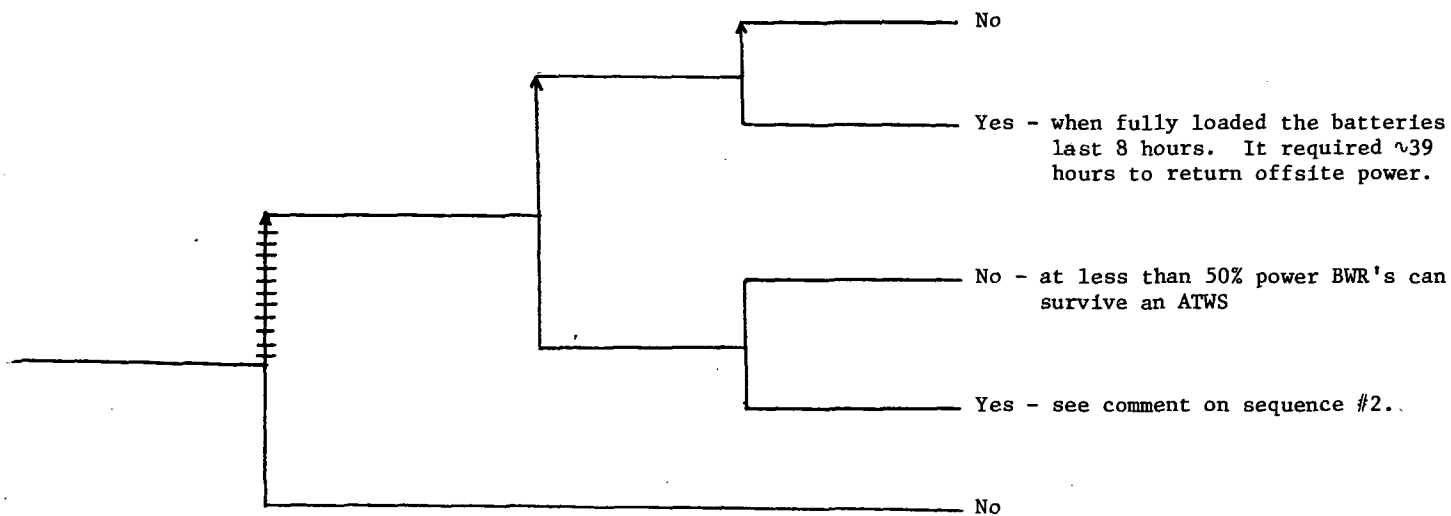
The transmission lines connect Pilgrim 1 with the New England Grid. These lines provide power to the reactor when the station isn't generating.

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

Unavailability of component per WASH 1400:*

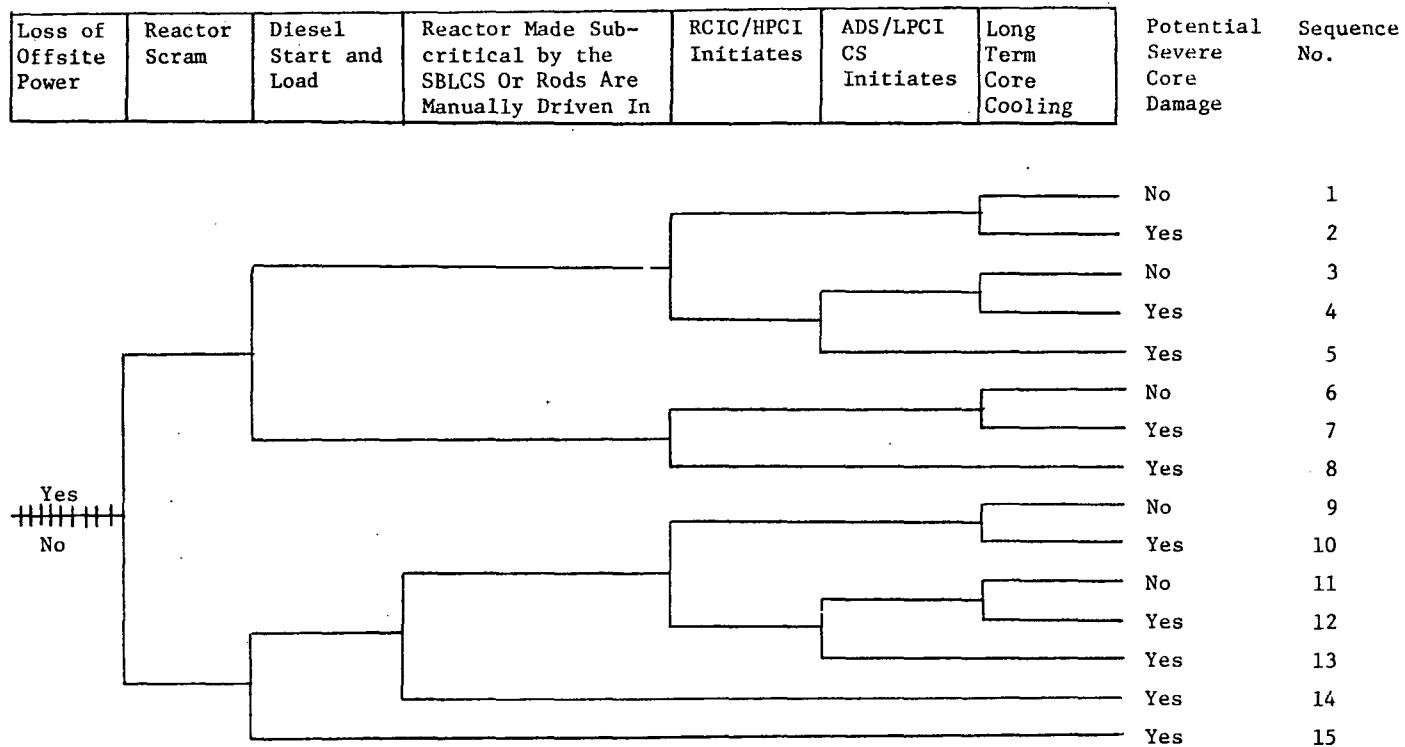
* Unavailabilities are in units of per demand D^{-1} . Failure rates are in units of per hour HR^{-1} .

Reactor operating at 24% power	All offsite transmission lines lost due to inclement weather	Reactor scram due to load rejection	Diesels start ¹ and load	Potential Severe Core Damage
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NSIC 135932 - Actual Occurrence of the Loss of All Transmission Lines at Pilgrim 1

¹
It is presumed the diesels started and loaded properly.



NSIC 135932 - Sequence of Interest of the Loss of All Transmission Lines at Pilgrim 1

CATEGORIZATION OF ACCIDENT SEQUENCE PRECURSORS

NSIC ACCESSION NUMBER: 135932

DATE OF LER: February 23, 1978

DATE OF EVENT: February 6, 1978

SYSTEM INVOLVED: electric power

COMPONENT INVOLVED: offsite transmission lines

CAUSE: insulator flashover due to inclement weather

SEQUENCE OF INTEREST: loss of offsite power

ACTUAL OCCURRENCE: loss of offsite power

REACTOR NAME: Pilgrim 1

DOCKET NUMBER: 50-293

REACTOR TYPE: BWR

DESIGN ELECTRICAL RATING: 655 MWe

REACTOR AGE: 5.7 yr

VENDOR: GE

ARCHITECT-ENGINEERS: Bechtel

OPERATORS: Boston Edison

LOCATION: Four miles SE of Plymouth, Mass.

DURATION: N/A

PLANT OPERATING CONDITION: 25% full power

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

DISCOVERY METHOD: operational event

COMMENT: -