PRECURSOR DESCRIPTION AND DATA

NSIC Accession Number: 90421

Date: April 17, 1974

Title: Auxiliary Feed Pump Suction Strainers Clogged at Point Beach 1

The failure sequence was:

1. With Unit 1 in a cooldown, the "A" motor-driven AFW pump did not provide adequate flow.
2. An in-line suction strainer, of which the operators were unaware, was found to be 95% plugged.
3. A similar strainer, similarly plugged, was found in the suction line of the "B" motor-driven AFW pump.
4. A partially plugged strainer was found in the suction lines of both units turbine-driven pumps.

Corrective action;

1. All the strainers were removed.
2. Other piping systems were examined to determine if other unidentified strainers existed.

Design purpose of failed system or component:

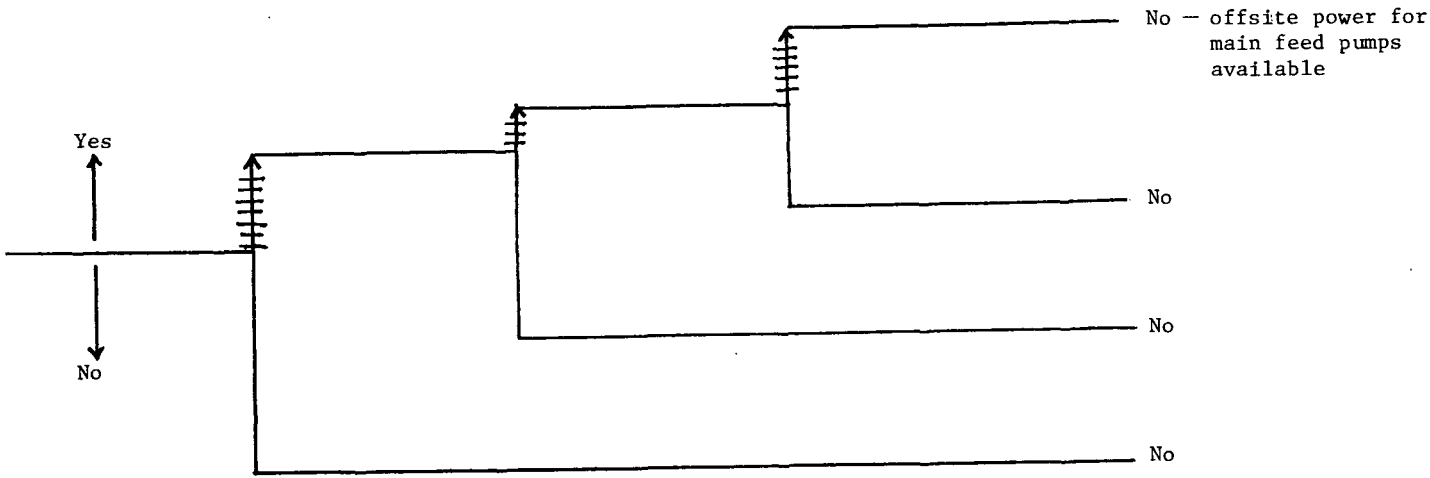
1. The auxiliary feedwater pumps provide water to the steam generators for reactor cooling in the event the main feedwater system is not operable.

Unavailability of system per WASH 1400:* auxiliary feedwater: 2.5×10^{-4} (start + 8 hours)

Unavailability of component per WASH 1400:* strainers, not included
pumps, failure to run: 3×10^{-5}/hr.

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

Unit 1 in cooldown Unit 2 status unknown	Motor-driven AFW pump A fails to deliver adequate flow to Unit 1 due to clogged suction strainer	Motor-driven AFW pump B suction strainer clogged	Turbine-driven AFW pump suction strainer partially clogged (applicable to both unit turbine-driven pumps)	Potential Severe Core Damage



NSIC 90421 — Actual Occurrence for Auxiliary Feed Pump Suction Strainers Clogged at Point Beach 1 & 2

Loss of Main Feedwater	Reactor Trip	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.
							No	1
							No	2
							Yes	3
							Yes	4
							No	5
		(F)					No	6
							Yes	7
				(*)			Yes	8
							No	9
							No	10
							Yes	11
		(F)					Yes	12
							Yes	13

NSIC 90421 — Sequence of Interest for Auxiliary Feed Pump Suction Strainers Clogged at Point Beach 1 & 2
*Use of HPI following AFW failure not included in mitigation procedures.

CATEGORIZATION OF ACCIDENT SEQUENCE PRECURSORS

NSIC ACCESSION NUMBER: 90421

DATE OF LER: April 17, 1974

DATE OF EVENT: April 7, 1974

SYSTEM INVOLVED: Auxiliary feedwater

COMPONENT INVOLVED: AFW pump strainers

CAUSE: Strainers plugged

SEQUENCE OF INTEREST: Loss of feedwater

ACTUAL OCCURRENCE: Inoperable AFW pumps during plant cooldown.

REACTOR NAME: Point Beach 1

DOCKET NUMBER: 50-266

REACTOR TYPE: PWR

DESIGN ELECTRICAL RATING: 497 MWe

REACTOR AGE: 3.5 yr

VENDOR: Westinghouse

ARCHITECT-ENGINEERS: Bechtel

OPERATORS: Wisconsin Electric Power Co.

LOCATION: 15 miles north of Manitowoc, Wisc.

DURATION: 360(a) hours

PLANT OPERATING CONDITION: Unit 1 in cooldown

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

DISCOVERY METHOD: during operation

COMMENT: The affected AFW pumps provide auxiliary feedwater for both units. Monthly tests failed to reveal strainers because test was run at shutoff head — the only flow was through a 1" ID bypass line & this low flow masked the plugged strainer.