

Plant Risk as a result of Actions Taken for AFW Issue

Following is a summary of the Core Damage Frequency changes as a result of corrective actions taken. Numbers are based on internal events only. There were additional risk reductions for external events (seismic/fire).

Plant CDF upon identification: $4E-4$

Plant CDF with temporary information cards and procedure changes: $9.0E-5$

Plant CDF with backup pneumatic supply for recirculation valves: $3.4E-5$

A/228

Following is a summary of Initiators that could result in a loss of instrument air and recovery options given the failure of Aux Feed Water. These are rough estimates based upon the PRA model that was in place at the time.

Dual Unit Loss of Off-Site Power (DLOOP)

Initiator Frequency: approximately $7E-3$ / yr

Recovery with loss of AFW: After recovery of instrument air feed and bleed would be available. Probability of failure is approximately $3E-2$ or 3%.

Loss of Instrument Air (LOIA)

Initiator Frequency: approximately $2E-4$ / yr

Recovery with loss of AFW: None. Note: PORV's not available for feed and bleed due to the unrecoverable loss of Instrument Air.

Loss of Service Water (LOSW)

Initiator Frequency: approximately $5E-5$ / yr

Recovery with loss of AFW: None. Note: PORV's not available for feed and bleed due to the loss of Instrument Air which is dependant upon Service Water. In addition, CCW cooling would not be available without Service Water.

Fire/Seismic/Flood

Initiator Frequency: Approximately $1E-4$ / yr

Recovery with loss of AFW: None. Note: Specific scenarios evaluated could cause a complete loss of Instrument Air. These are rough estimates – detailed evaluations were not performed.

	Initiator	Conditional Core Damage Probability	Core Damage Frequency
LOOP	$7E-3$ / yr	$3E-2$	$2.0E-4$ / yr
LOIA	$2E-4$ / yr	1.0	$2.0E-4$ / yr
LOSW	$5E-5$ / yr	1.0	$0.5E-4$ / yr
Fire/Flood/Seismic	$1E-4$ / yr	1.0	$1.0E-4$ / yr
		TOTAL	$5.5E-4$ / yr