

EMERGENCY CORE COOLING SYSTEMS

ECCS SUBSYSTEMS – $T_{avg} \geq 300^{\circ}\text{F}$

LIMITING CONDITION FOR OPERATION

- 3.5.2 Two independent ECCS subsystems shall be OPERABLE with each sub-system comprised of:
- One OPERABLE high-pressure safety injection (HPSI) train,
 - One OPERABLE low-pressure safety injection (LPSI) train, and
 - An independent OPERABLE flow path capable of taking suction from the refueling water tank on a Safety Injection Actuation Signal and automatically transferring suction to the containment sump on a Recirculation Actuation Signal.

APPLICABILITY: MODES 1, 2 and 3 with pressurizer pressure ≥ 1700 psia.

ACTION:

- With one ECCS subsystem inoperable due to an inoperable LPSI train, restore the inoperable train to OPERABLE status within 7 days or be in HOT STANDBY within the next 6 hours and reduce pressurizer pressure to < 1700 psia within the following 6 hours.
- With one or more ECCS subsystems inoperable due to conditions other than "a" above and 100% of ECCS flow equivalent to a single OPERABLE HPSI and LPSI train is available, restore the inoperable train(s) to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours and reduce pressurizer pressure to < 1700 psia within the following 6 hours.
- With less than 100% ECCS flow equivalent to either the HPSI or LPSI trains within both ECCS subsystems, restore at least one HPSI train and one LPSI train to OPERABLE status within one hour or be in at least HOT STANDBY within the next 6 hours and reduce pressurizer pressure to < 1700 psia within the following 6 hours.
- In the event the ECCS is actuated and injects water into the Reactor Coolant System, a Special Report shall be prepared and submitted to the Commission pursuant to Specification 6.9.2 within 90 days describing the circumstances of the actuation and the total accumulated actuation cycles to date.

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SURVEILLANCE REQUIREMENTS

4.5.2 Each ECCS subsystem shall be demonstrated OPERABLE:

- a. At least once per 12 hours by verifying that the following valves are in the indicated positions with power to the valve operators removed:

<u>Valve Number</u>	<u>Valve Function</u>	<u>Valve Position</u>
2CV-5101	HPSI Hot Leg Injection Isolation	Closed
2CV-5102	HPSI Hot Leg Injection Isolation	Closed
2BS26	RWT Return Line	Open

- b. At least once per 31 days by verifying that each valve (manual, power operated or automatic) in the flow path that is not locked, sealed, or otherwise secured in position, is in its correct position.
- c. By a visual inspection which verifies that no loose debris (rags, trash, clothing, etc.) is present in the containment which could be transported to the containment sump and cause restriction of the pump suction during LOCA conditions. This visual inspection shall be performed:
1. For all accessible areas of the containment prior to establishing CONTAINMENT INTEGRITY, and
 2. At least once daily of the areas affected within containment if containment has been entered that day, and during the final entry when CONTAINMENT INTEGRITY is established.
- d. At least once per 18 months by:
1. Verifying automatic isolation and interlock action of the shutdown cooling system from the Reactor Coolant System when the Reactor Coolant System pressure is above 300 psia.
 2. A visual inspection of the containment sump and verifying that the subsystem suction inlets are not restricted by debris and that the sump components (trash racks, screens, etc.) show no evidence of structural distress or corrosion.
- e. At least once per 18 months, during shutdown, by:
1. Verifying that each automatic valve in the flow path actuates to its correct position on SIAS and RAS test signals.
 2. Verifying that each of the following pumps start automatically upon receipt of a Safety Injection Actuation Test Signal:
 - a. High-Pressure Safety Injection pump.
 - b. Low-Pressure Safety Injection pump.