

NOTES FOR TABLE 3.1.1

1. There shall be two OPERABLE or tripped TRIP SYSTEMS for each function. If the minimum number of OPERABLE INSTRUMENT CHANNELS for a TRIP SYSTEM cannot be met, the affected TRIP SYSTEM shall be placed in the safe (tripped) condition, or the appropriate actions listed below shall be taken.
 - A. Initiate insertion of OPERABLE rods and complete insertion of all OPERABLE rods within four hours.
 - B. Reduce power to less than 30% of RATED POWER.
 - C. Reduce power level to IRM range and place Reactor Mode Selector Switch in the STARTUP position within eight hours and depressurize to less than 1000 psig.
 - D. Reduce turbine load and close Main Steam Isolation Valves within eight hours.
2. Permissible to bypass, with control rod block, for Reactor Protection System reset in REFUEL and SHUTDOWN positions of the Reactor Mode Selector Switch.
3. This note deleted.
4. Permissible to bypass when turbine first stage pressure is less than 30% of full load.
5. IRMs are bypassed when APRMs are onscale and the Reactor Mode Selector Switch is in the RUN position.
6. The design permits closure of any two lines without a full scram being initiated.
7. When the reactor is subcritical, fuel is in the vessel, and the reactor water temperature is less than 212°F, only the following trip functions need to be OPERABLE:
 - A. Reactor Mode Selector Switch in SHUTDOWN.
 - B. Manual scram.
 - C. IRM high flux at 120/125 indicated scale.
 - D. APRM (15%) high flux scram.
8. Not required to be OPERABLE when PRIMARY CONTAINMENT INTEGRITY is not required.
9. Not required to be OPERABLE while performing low power physics tests at atmospheric pressure during or after refueling at power levels not to exceed 5 MW(t).
10. Not required to be OPERABLE when the reactor pressure vessel head is not bolted to the vessel.

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LIMITING CONDITIONS FOR OPERATION

3.4 STANDBY LIQUID CONTROL SYSTEM

Applicability:

Applies to the operating status of the Standby Liquid Control (SLC) System.

Objective:

To assure the OPERABILITY of a system with the capability to SHUTDOWN the reactor and maintain the SHUT-DOWN condition without the use of control rods.

Specification:

A. Normal System Operation

1. During periods when fuel is in the reactor and prior to startup from a Cold Condition, the Standby Liquid Control System shall be operable, except as specified in 3.4.B below. This system need not be operable when the reactor is in the Cold Condition and all control rods are fully inserted and Specification 3.3.A is met.

SURVEILLANCE REQUIREMENTS

4.4 STANDBY LIQUID CONTROL SYSTEM

Applicability:

Applies to the surveillance requirements of the Standby Liquid Control (SLC) System.

Objective:

To verify the OPERABILITY of the SLC System.

Specification:

A. Normal System Operation

The OPERABILITY of the SLC System shall be shown by the performance of the following tests:

1. At least once each 3 months each subsystem shall be tested for OPERABILITY by recirculating demineralized water to the test tank and verifying each pump develops a flow rate ≥ 38.2 gpm at a discharge pressure ≥ 1300 psig.
2. At least once during each OPERATING CYCLE:
 - a. Check that the settings of the subsystem relief valves are $1450 < P < 1680$ psig and the valves will reset at $P \geq 1300$ psig.
 - b. Manually initiate the system, except explosive valves, and pump boron solution from the SLC Storage Tank through the recirculation path. Verify each pump develops a flow rate ≥ 38.2 gpm at a discharge pressure ≥ 1300 psig. After pumping boron solution the system will be flushed with demineralized water.

LIMITING CONDITIONS FOR OPERATION

3.4

C. Sodium Pentaborate Solution

At all times when the SLC System is required to be OPERABLE the following conditions shall be met:

1. The net volume versus concentration of the liquid control solution in the SLC Storage Tank shall be maintained as required in Figure 3.4.1.
2. The temperature of the liquid control solution shall be maintained above the curve shown in Figure 3.4.2.

D. If specification 3.4.A through C cannot be met, the reactor shall be placed in a Cold Shutdown Condition with all operable control rods fully inserted within 24 hours.

SURVEILLANCE REQUIREMENTS

4.4.C

C. Sodium Pentaborate Solution

The following tests shall be performed to verify the availability of the liquid control solution:

1. Volume: Check and record at least once per day.
2. Temperature: Check and record at least once per day.
3. Concentration: Check and record at least once per month. Also check concentration anytime water or boron is added to the solution or solution temperature is below the temperature required in Figure 3.4.2.