

**3.3 SFSC CRITICALITY CONTROL**

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**3.3.1 Boron Concentration**

- LCO 3.3.1 As required by CoC Appendix B, Table 2.1-2, the concentration of boron in the water in the MPC shall meet the following limits for the applicable MPC model and the most limiting fuel assembly array/class and classification to be stored in the MPC:
- a. MPC-24 with one or more fuel assemblies having an initial enrichment greater than the value in Table 2.1-2 for no soluble boron credit and  $\leq 5.0$  wt%  $^{235}\text{U}$ :  $\geq 400$  ppmb
  - b. MPC-24E or MPC-24EF (all INTACT FUEL ASSEMBLIES) with one or more fuel assemblies having an initial enrichment greater than the value in Table 2.1-2 for no soluble boron credit and  $\leq 5.0$  wt%  $^{235}\text{U}$ :  $\geq 300$  ppmb
  - c. Deleted.
  - d. Deleted.
  - e. MPC-24E or MPC-24EF (one or more DAMAGED FUEL ASSEMBLIES or FUEL DEBRIS) with one or more fuel assemblies having an initial enrichment  $> 4.0$  wt%  $^{235}\text{U}$  and  $\leq 5.0$  wt%  $^{235}\text{U}$ :  $\geq 600$  ppmb
  - f. MPC-32/32F: Minimum soluble boron concentration as required by the table below.

Array/Class	All INTACT FUEL ASSEMBLIES		One or more DAMAGED FUEL ASSEMBLIES or FUEL DEBRIS	
	Initial Enrichment $\leq 4.1$ wt% $^{235}\text{U}$ (ppmb)	Initial Enrichment $> 4.1$ wt% and $\leq 5.0$ wt% $^{235}\text{U}$ (ppmb)	Initial Enrichment $\leq 4.1$ wt% $^{235}\text{U}$ (ppmb)	Initial Enrichment $> 4.1$ wt% and $\leq 5.0$ wt% $^{235}\text{U}$ (ppmb)
14x14A/B/C/D/E	1,300	1,900	1,500	2,300
15x15A/B/C/G	1,800	2,500	1,900	2,700
15x15D/E/F/H	1,900	2,600	2,100	2,900
16x16A	1,300	1,900	1,500	2,300
17x17A/B/C	1,900	2,600	2,100	2,900

APPLICABILITY: During PWR fuel LOADING OPERATIONS with fuel and water in the MPC

AND

During PWR fuel UNLOADING OPERATIONS with fuel and water in the MPC.

ACTIONS

-----NOTE-----

Separate Condition entry is allowed for each MPC.

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Boron concentration not within limit.	A.1 Suspend LOADING OPERATIONS or UNLOADING OPERATIONS.	Immediately
	<u>AND</u>	
	A.2 Suspend positive reactivity additions.	Immediately
	<u>AND</u>	
	A.3 Initiate action to restore boron concentration to within limit.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
-----NOTE----- This surveillance is only required to be performed if the MPC is submerged in water or if water is to be added to, or recirculated through the MPC.	Once, within 4 hours prior to entering the Applicability of this LCO.
SR 3.3.1.1      Verify boron concentration is within the applicable limit using two independent measurements.	<u>AND</u> Once per 48 hours thereafter.