SURVEILLANCE REQUIREMENTS

	SURVEILLANCE	FREQUENCY
SR 3.1.2	Verify all OVERPACK inlets and outlets are free of blockage from solid debris or floodwater. OR For OVERPACKS with installed temperature monitoring equipment, verify that the difference between the average OVERPACK air outlet temperature and ISFSI ambient temperature is: • ≤ 137°F for OVERPACKS containing ~~PWR~~ MPC-37s, • ≤ 136°F for OVERPACKS containing BWR MPCs, • ≤ 130 °F for OVERPACKS containing MPC-32MLs, • ≤ 128 °F for OVERPACKS containing MPC-31Cs	24 hours 24 hours

3.3 SFSC CRITICALITY CONTROL

3.3.1 Boron Concentration

LCO 3.3.1 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 to be stored in the MPC:

MPC-37 or MPC-32ML: Minimum soluble boron concentration as required by the table below†.

MPC	Array/Class	All Undamaged Fuel Assemblies		One or more Damaged Fuel Assemblies or Fuel Debris	
		Maximum Initial Enrichment ≤ 4.0 wt% ^{235}U (ppmb)	Maximum Initial Enrichment 5.0 wt% ^{235}U (ppmb)	Maximum Initial Enrichment ≤ 4.0 wt% ^{235}U (ppmb)	Maximum Initial Enrichment 5.0 wt% ^{235}U (ppmb)
MPC-37	All 14x14 and 16x16A, B, C	1000	1600	1300	1800
	All 15x15 and 17x17	1500	2000	1800	2300
MPC-32ML	16x16D	1500	2000	1600	2100

† For maximum initial enrichments between 4.0 wt% and 5.0 wt% ^{235}U, the minimum soluble boron concentration may be determined by linear interpolation between the minimum soluble boron concentrations at 4.0 wt% and 5.0 wt%.

----------NOTE----------
This LCO does not apply if burnup credit as described in Section 2.4 of Appendix B is utilized in selecting assemblies prior to loading.
14x14 classes must use soluble boron as described in this LCO.

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.

Table 3-1
MPC Cavity Drying Limits

Fuel Burnup (MWD/MTU)	**MPC Type**	**MPC Heat Load (kW)**	**Method of Moisture Removal (Notes 1 and 2)**
All Assemblies ≤ 45,000	MPC-37	≤ 44.09 (Pattern A in Table 2.3-1A of Appendix B) ≤ 45.00 (Pattern B in Table 2.3-1A of Appendix B)	VDS (Notes 3 and 4) or FHD (Note 4)
	MPC-32ML	≤ 44.16 (Pattern A in Table 2.3-5 of Appendix B)	
	MPC-31C	≤ 32.98 (Pattern A in Table 2.3-6 of Appendix B) ≤ 43.4 (Note 5) (Pattern C in Table 2.3-6 of Appendix B)	
	MPC-89	≤ 46.36 (Table 2.3-2A of Appendix B)	
One or more assemblies > 45,000	MPC-37	≤ 29.6 (Table 2.3-3 of Appendix B)	VDS (Notes 3 and 4) or FHD (Note 4)
	MPC-32ML	≤ 28.70 (Pattern B in Table 2.3-5 of Appendix B)	
	MPC-31C	≤ 17.36 (Pattern B in Table 2.3-6 of Appendix B) ≤ 43.4 (Note 5) (Pattern C in Table 2.3-6 of Appendix B)	
	MPC-89	≤ 30.0 (Table 2.3-4 of Appendix B)	
One or more assemblies > 45,000	MPC-37	≤ 44.09 (Table 2.3-1A of Appendix B) ≤ 45.00 (Table 2.3-1B of Appendix B)	FHD (Note 4)
	MPC-32ML	≤ 44.16 (Pattern A in Table 2.3-5 of Appendix B)	

	MPC-31C	≤ 43.4 (Pattern C in Table 2.3-6 of Appendix B)	
	MPC-89	≤ 46.36 (Table 2.3-2A of Appendix B)	

Notes:

1. VDS means a vacuum drying system. The acceptance criterion when using a VDS is the MPC cavity pressure shall be ≤ 3 torr for ≥ 30 minutes while the MPC is isolated from the vacuum pump.

2. FHD means a forced helium dehydration system. The acceptance criterion when using an FHD system is the gas temperature exiting the demoisturizer shall be ≤ 21°F for ≥ 30 minutes or the gas dew point exiting the MPC shall be ≤ 22.9°F for ≥ 30 minutes.

3. Vacuum drying of the MPC must be performed with the annular gap between the MPC and the TRANSFER CASK filled with water.

4. Heat load limits are set for each cell; see Appendix B Section 2.3.

5. Vacuum drying of the MPC must be performed using cycles of the drying system, according to the guidance contained in ISG-11 Revision 3. The time limit for these cycles shall be determined based on site specific conditions.

Table 3-2
MPC Helium Backfill Limits[1]

MPC Model	Decay Heat Limits Applied (per Appendix B Section 2.3)	Pressure range (psig)
MPC-37	Table 2.3-1C	≥ 42.0 and ≤ 50.0
MPC-37	Table 2.3-1B	≥ 42.0 and ≤ 47.8
MPC-37	Table 2.3-1A, Pattern A	≥ 42.0 and ≤ 45.5
MPC-37	Table 2.3-1A, Pattern B	≥ 41.0 and ≤ 46.0
MPC-37	Table 2.3-3	≥ 42.0 and ≤ 50.0
MPC-89	Table 2.3-2B	≥ 42.0 and ≤ 50.0
MPC-89	Table 2.3-2A	≥ 42.5 and ≤ 47.5
MPC-89	Table 2.3-4	≥ 42.0 and ≤ 50.0
MPC-32ML	Table 2.3-5, All Patterns	≥ 41.5 and ≤ 45.5
MPC-31C	Table 2.3-6, All Patterns	≥ 41.5 and ≤ 45.5

1 Helium used for backfill of MPC shall have a purity of ≥ 99.995%. Pressure range is at a reference temperature of 70°F