

1.1 Definitions

<u>Term</u>	<u>Definition</u>
	assemblies, instrument tube tie rods (ITTRs), vibration suppressor inserts, and components of these devices such as individual rods.
OVERPACK	OVERPACKs are the casks which receive and contain the sealed MPCs for interim storage on the ISFSI. They provide gamma and neutron shielding, and provide for ventilated air flow to promote heat transfer from the MPC to the environs. The term OVERPACK does not include the TRANSFER CASK.
PLANAR-AVERAGE INITIAL ENRICHMENT	PLANAR AVERAGE INITIAL ENRICHMENT is the average of the distributed fuel rod initial enrichments within a given axial plane of the assembly lattice.
REPAIRED/RECONSTITUTED FUEL ASSEMBLY	Spent nuclear fuel assembly which contains dummy fuel rods that displaces an amount of water greater than or equal to the original fuel rods and/or which contains structural repairs so it can be handled by normal means. If irradiated dummy stainless steel rods are present in the fuel assembly, the dummy/replacement rods will be considered in the site specific dose calculations.
SPENT FUEL STORAGE CASKS (SFSCs)	SFSCs are containers approved for the storage of spent fuel assemblies at the ISFSI. The HI-STORM FW SFSC System consists of the OVERPACK and its integral MPC.
STORAGE OPERATIONS	STORAGE OPERATIONS include all licensed activities that are performed at the ISFSI while an SFSC containing spent fuel is situated within the ISFSI perimeter. STORAGE OPERATIONS does not include MPC TRANSFER.
TRANSFER CASK	TRANSFER CASKs are containers designed to contain the MPC during and after loading of spent fuel assemblies, and prior to and during unloading and to transfer the MPC to or from the OVERPACK.
TRANSPORT OPERATIONS	TRANSPORT OPERATIONS include all licensed activities performed on an OVERPACK or TRANSFER CASK loaded with one or more fuel assemblies when it is being moved after LOADING OPERATIONS or before UNLOADING OPERATIONS. TRANSPORT OPERATIONS begin when the OVERPACK or TRANSFER CASK is first suspended from or secured

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 $\leq 45,000$	MPC-37	≤ 44.09 (Pattern A in Table 2.3-1A of Appendix B)	VDS (Notes 3 and 4) or FHD (Note 4)
		≤ 45.00 (Pattern B in Table 2.3-1A of Appendix B)	
		≤ 37.4 (Figures 2.3-1 through 2.3-3 of Appendix B)	
		≤ 39.95 (Figures 2.3-4 through 2.3-6 of Appendix B)	
All Assemblies $\leq 45,000$	MPC-32ML	≤ 44.16 (Pattern A in Table 2.3-5 of Appendix B)	VDS (Notes 3 and 4) or FHD (Note 4)
		≤ 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)	
		≤ 46.36 (Table 2.3-2A of Appendix B)	
All Assemblies $\leq 45,000$	MPC-31C	≤ 46.2 (Figures 2.3-10 and 2.3-11 of Appendix B)	VDS (Notes 3 and 4) or FHD (Note 4)
		≤ 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)	
		≤ 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)
		≤ 28.70 (Pattern B in Table 2.3-5 of Appendix B)	
		≤ 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)	
One or more assemblies $> 45,000$	MPC-32ML	≤ 30.0 (Table 2.3-4 of Appendix B)	VDS (Notes 3 and 4) or FHD (Note 4)
		≤ 28.70 (Pattern B in Table 2.3-5 of Appendix B)	
		≤ 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)	
One or more assemblies $> 45,000$	MPC-31C	≤ 30.0 (Table 2.3-4 of Appendix B)	VDS (Notes 3 and 4) or FHD (Note 4)
		≤ 28.70 (Pattern B in Table 2.3-5 of Appendix B)	
		≤ 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)	
One or more assemblies $> 45,000$	MPC-89	≤ 30.0 (Table 2.3-4 of Appendix B)	VDS (Notes 3 and 4) or FHD (Note 4)
		≤ 28.70 (Pattern B in Table 2.3-5 of Appendix B)	
		≤ 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)	

Fuel Burnup (MWD/MTU)	MPC Type	MPC Heat Load (kW)	Method of Moisture Removal (Notes 1 and 2)
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) ≤ 37.4 (Figures 2.3-1 through 2.3-3 of Appendix B) ≤ 39.95 (Figures 2.3-4 through 2.3-6 of Appendix B) ≤ 44.85 (Figures 2.3-7 through 2.3-9 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) ≤ 46.2 (Figures 2.3-10 and 2.3-11 of Appendix B)	

Notes:

- 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.
- FHD means a forced helium dehydration system. The acceptance criterion when using an FHD system is the gas temperature exiting the demister shall be $\leq 21^{\circ}\text{F}$ for ≥ 30 minutes or the gas dew point exiting the MPC shall be $\leq 22.9^{\circ}\text{F}$ for ≥ 30 minutes.
- Vacuum drying of the MPC must be performed with the annular gap between the MPC and the TRANSFER CASK filled with water.
- Heat load limits are set for each cell; see Appendix B Section 2.3.
- 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 Limits¹

MPC Model	Decay Heat Limits Applied (per Appendix B Section 2.3)	Pressure range (psig)
MPC-37	Table 2.3-1C Table 2.3-3	≥ 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 Figure 2.3-1 Figure 2.3-2 Figure 2.3-3	≥ 45.52.0 and ≤ 4950.0
MPC-37	Figure 2.3-4 Figure 2.3-5 Figure 2.3-6	≥ 44.0 and ≤ 47.5
MPC-37	Figure 2.3-7 Figure 2.3-8 Figure 2.3-9	≥ 44.5 and ≤ 48.0
MPC-89	Table 2.3-2B Table 2.3-4	≥ 42.0 and ≤ 50.0
MPC-89	Table 2.3-2A	≥ 42.5 and ≤ 47.5
MPC-89	Table 2.3-4 Figure 2.3-10 Figure 2.3-11	≥ 42.0 and ≤ 4750.0
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