

SR 3.1.2	Verify all OVERPACK inlets and outlets are free of blockage from solid debris or floodwater.	Table 3-5
	<p><u>OR</u></p> <p>For OVERPACKS with installed temperature monitoring equipment, verify that the difference between the average OVERPACK air outlet temperature and ISFSI ambient temperature is $\leq 155^{\circ}\text{F}$ for OVERPACKS containing PWR MPCs, $\leq 137^{\circ}\text{F}$ for OVERPACKS containing BWR MPCs (except MPC-68M) and $\leq 164^{\circ}\text{F}$ for OVERPACKS containing MPC-68M.</p>	Table 3-5

Table 3-1
MPC Cavity Drying Limits for all MPC Types

Fuel Burnup (MWD/MTU)	MPC Heat Load (kW)	Method of Moisture Removal (Notes 1, 2, and 3)
All Assemblies \leq 45,000	\leq 26 (MPC-24/24E/24EF, MPC-32/32F, MPC-68/68F/68FF)	VDS ^{Note 5} or FHD ^{Note 6}
	\leq 36.9 (MPC-68M) ^{Note 6}	VDS or FHD
	\leq 42.8 (MPC-68M) ^{Note 7}	VDS or FHD
All Assemblies \leq 45,000	\leq 36.9 (MPC-24/24E/24EF, MPC-32/32F, MPC-68/68F/68FF) ^{Note 6}	VDS ^{Note 8} or FHD
One or more assemblies > 45,000	\leq 29 (MPC-68M)	VDS ^{Note 4}
One or more assemblies > 45,000	\leq 36.9 (MPC-24/24E/24EF/MPC-32/32F/MPC-68/68F/68FF) ^{Note 6}	VDS ^{Note 8} or FHD
	\leq 36.9 (MPC-68M) ^{Note 6}	VDS ^{Note 8} or FHD
	\leq 42.8 (MPC-68M) ^{Note 7}	VDS ^{Note 8} or FHD

Notes:

- VDS means a vacuum drying system. The acceptance criterion when using a VDS is MPC cavity pressure shall be \leq 3 torr for \geq 30 minutes.
- 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°F for \geq 30 minutes or the gas dew point exiting the MPC shall be \leq 22.9°F for \geq 30 minutes.
- Vacuum drying of the system must be performed with the annular gap between the MPC and the TRANSFER CASK filled with water.
- The maximum allowable decay heat per fuel storage location is 0.426 kW.
- Maximum allowable storage cell heat load is 1.083 kW (MPC-24/24E/24EF), 0.812 kW (MPC-32/32F) and 0.382 kW (MPC-68/68F/68FF).
- Maximum per assembly allowable heat loads under uniform or regionalized storage defined in Appendix B, Section 2.4.1 or 2.4.2.
- Maximum per assembly allowable heat loads defined in Appendix B Figure 2.4-1.

8. 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. Applies when any one assembly heat load is greater than 0.426 kW.

Table 3-2
MPC Helium Backfill Limits¹

MPC MODEL	LIMIT
MPC-24/24E/24EF	
i. Cask Heat Load ≤ 27.77 kW (MPC-24) or ≤ 28.17 kW (MPC-24E/EF) - uniformly distributed per Table 3-4 or regionalized loading per Table 3-3	0.1212 +/-10% g-moles/l <u>OR</u> ≥ 29.3 psig and ≤ 48.5 psig
ii. Cask Heat Load >27.77 kW (MPC-24) or > 28.17 kW (MPC-24E/EF) - uniformly distributed or greater than regionalized heat load limits per Table 3-3	≥ 45.5 psig and ≤ 48.5 psig
MPC-68/68F/68FF	
i. Cask Heat Load ≤ 28.19 kW - uniformly distributed per Table 3-4 or regionalized loading per Table 3-3	0.1218 +/-10% g-moles/l <u>OR</u> ≥ 29.3 psig and ≤ 48.5 psig
ii. Cask Heat Load > 28.19 kW - uniformly distributed or greater than regionalized heat load limits per Table 3-3	≥ 45.5 psig and ≤ 48.5 psig
MPC-32/32F	
i. Cask Heat Load ≤ 28.74 kW - uniformly distributed per Table 3-4 or regionalized loading per Table 3-3	≥ 29.3 psig and ≤ 48.5 psig
ii. Cask Heat Load >28.74 kW - uniformly distributed or greater than regionalized heat load limits per Table 3-3	≥ 45.5 psig and ≤ 48.5 psig

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

MPC-68M

- | | |
|---|---|
| i. Cask Heat Load \leq 28.19 kW -
uniformly distributed per Table 3-4
or
regionalized loading per Table 3-3 | 0.1218 +/-10% g-moles/l
<u>OR</u>
\geq 29.3 psig and \leq 48.5 psig |
| ii. Cask Heat Load $>$ 28.19 kW -
uniformly distributed
or
greater than regionalized heat load
limits per Table 3-3 | \geq 45.5 psig and \leq 48.5 psig |
| iii. Cask Heat Load \leq 42.8 kW
Regionalized Loading Pattern shown in
Appendix B, Figure 2.4-1 | \geq 43.5 psig and \leq 46.5 psig |

MPC Heat Load Limits
Table 3-3

Table 3-5: Completion Time for Actions to Restore SFSC Heat Removal System Operable

MPC Material	MPC Type	Decay Heat Limits per Storage Location	Condition B Completion Time	Condition C Completion Time	Surveillance Frequency
Alloy X Except Duplex ¹	MPC-24/24E/24EF	Appendix B, Section 2.4	8 hrs	24 hrs	24 hrs
	MPC-32/32F				
	MPC-68/68F/68FF/68M				
	MPC-68M	Appendix B, Figure 2.4-1			
Alloy X	MPC-24/24E/24EF	Appendix B, Section 2.4	8 hrs	16 hrs	16 hrs
	MPC-32/32F				
	MPC-68/68F/68FF/68M				
Alloy X	MPC-68M	Appendix B, Figure 2.4-1	4 hrs	12 hrs	12 hrs
Alloy X Except Duplex ¹	MPC-24	Appendix A, Table 3-3 (Regionalized)	8 hrs	64 hrs	24 hrs
	MPC-24E/EF	OR			
	MPC-32/32F	Appendix A, Table 3-4 (Uniform)			
	MPC-68/68F/68FF/68M				
Alloy X	MPC-24	Appendix A, Table 3-3 (Regionalized)	8 hrs	24 hrs	24 hrs
	MPC-24E/EF	OR			
	MPC-32/32F	Appendix A, Table 3-4 (Uniform)			
	MPC-68/68F/68FF/68M				
Alloy X	MPC-24/24E/24EF	0.791 kW	24 hrs	64 hrs	30 days
	MPC-32/32F	0.5 kW			
	MPC-68/68F/68FF/68M	0.279 kW			

Note

1) If any component of the MPC is made of duplex, these completion times are not applicable.