

Request for Additional Information  
Batch 5

Docket No. 72-1014  
Certificate of Compliance No. 1014  
Amendment No. 16 to the HI-STORM 100  
Multipurpose Canister Storage System

The staff identified additional information needed in connection with its review of the application of Amendment No. 16 to the Certificate of Compliance (CoC) No. 1014 for HI-STORM 100 Multipurpose Canister Storage (MPC) System as provided in the request for additional information (RAI) discussed below. Each question describes information needed by the staff to complete its review of the application and to determine whether the applicant has demonstrated compliance with regulatory requirements in Title 10 of the *Code of Federal Regulations* (10 CFR), Part 72.

**Thermal RAI**

**RAI 4-5** Clarify the meaning of, “A minor deviation from the prescribed loading pattern in an MPC’s permissible contents to allow one slightly thermally-discrepant fuel assembly per quadrant [...],” (e.g., the change in decay heat) and provide a bounding thermal analysis to show that the peak cladding temperature limits in interim staff guidance (ISG)-11 Rev. 3 and the important to safety (ITS) component temperature limits are met.

CoC No. 1014, appendix B, section 2.4.5, “Fuel Loading Decay Heat Limits for UNVENTILATED OVERPACK,” states, “Tables 2.4-6a and 2.4-6b provide the maximum allowable decay heat per fuel storage location for MPC-68M in an UNVENTILATED OVERPACK. A minor deviation from the prescribed loading pattern in an MPC’s permissible contents to allow one slightly thermally-discrepant fuel assembly per quadrant to be loaded as long as the peak cladding temperature for the MPC remains below the ISG-11 Rev 3 requirements is permitted for essential dry storage campaigns to support decommissioning.”

It is not clear to staff what the actual meanings of: 1) a minor deviation, or 2) one slightly thermally-discrepant fuel assembly, are or 3) how it has been demonstrated through a bounding thermal analysis that the peak cladding temperature limits and ITS component temperature limits are still met should thermally-discrepant fuel assemblies be loaded in the MPC as described.

This information is needed to determine compliance with 10 CFR 72.236(f).

**Confinement RAI**

**RAI 9-2** See Enclosure 2.  
**RAI 9-3** See Enclosure 2.  
**RAI 9-4** See Enclosure 2.  
**RAI 9-5** See Enclosure 2.