

**Holtec Clarification of
Response to Request for Additional Information 5-2**

**Docket No.72-1032
Holtec International
HI-STORM FW
Multipurpose Canister Storage System
Certificate of Compliance No. 1032
Amendment No. 7**

RAI 5-2 Clarification Question

Clarify how burnup, enrichment, and cooling time values are determined for fuel assemblies loaded in the patterns in Table 1.2.4a of the FSAR and provide an example of how this is done. For the other loading patterns, clarify how/ensure the 5 GWd/MTU adjustment is captured in the tech specs (CoC App B Section 2.5.1).

In supplemental information to RAI 5-2 response, the applicant addressed the higher uranium weight of 10x10J fuel assemblies by applying an adjustment to the burnup to achieve the dose rate goal. For the pattern in FSAR table 1.2.4a, an increase of 10,000 MWd/MTU was identified to achieve the dose rate goal. However, the patterns defined in FSAR table 1.2.4a have no loading curves defined so there are no curves where an adjustment can be applied to. The applicant stated that for these loading patterns, a set of acceptable burnup and cooling time combinations is directly defined that satisfies the requirements that dose rates are about the same as for the design basis conditions. It is not clear to the staff how the adjustment is going to be applied to all the fuels in this pattern. Since this is to be part of the process for determining allowed burnup, enrichment, and cooling time specs for assemblies loaded in the MPC and the process for defining the allowed specs is (and should be) in the tech specs, these aspects (including the adjustments for the 10x10J class assemblies) needs to be included in the tech spec description of the processes for all the loading patterns for the MPC.

This information is needed for the staff to confirm compliance with 10 CFR 72.236(b) and 10 CFR 72.236(d) for sufficient radiation shielding to meet 10 CFR 72.104 and 10 CFR 72.106.

Holtec Clarification:

The burnup and cooling time requirements for the 10x10J fuel array/class are included in Section 2.5.1 of the CoC Appendix B (as presented in previous letters to the NRC for HI-STORM FW Amendment 7). Specifically,

- For the alternative loading patterns with the loading curves in Table 2.5-2 of the CoC Appendix B, the requirement for a burnup adjustment for 10x10J fuel array/class is added as Note 2 under that Table 2.5-2.
- For the loading patterns in the FSAR Table 1.2.4a (Tables 2.3-2A, 2.3-2B and 2.3-4 of the CoC), a new Table 2.5-6 is added in the CoC Appendix B. This table includes the burnup and cooling time limits for the 10x10J fuel for each loading region in accordance with Table 1.2.4a. The fuel assembly with a fuel burnup lower than or equal to the limit

in Table 2.5-6 AND a cooling time higher than or equal to the limit in Table 2.5-6 is permitted for loading into a given loading region from a shielding perspective. No additional adjustment is required for these limits.

In either case, the stated requirements are only applicable to the 10x10J array/class, and not to any other assemblies that may be loaded in the same cask and pattern. Also note that meeting the respective burnup and cooling time is not a substitute for meeting the applicable decay heat limits, these need to be verified independently.

As part of this clarification, Section 2.1.6 of the FSAR is expanded to present and discuss these requirements in more detail than before.

Additionally, two examples are added in Subsection 13.2.11 of the FSAR to further clarify the compliance verification process for 10x10J fuel.