

September 11, 2007

MEMORANDUM TO: Mark Delligatti, Chief
Rulemaking Branch B
Division of Intergovernmental Liaison and Rulemaking, FSME

FROM: Robert Nelson, Chief */RA/*
Licensing Branch
Division of Spent Fuel Storage and Transportation, NMSS

SUBJECT: HOLTEC INTERNATIONAL HI-STORM 100 CASK SYSTEM,
AMENDMENT 5, RULEMAKING

We have completed our technical review of the proposed Certificate of Compliance (CoC) No. 1014, Amendment No. 5, the proposed Technical Specifications (TS), and the preliminary Safety Evaluation Report (SER) for the HI-STORM 100 Cask System. The proposed changes to the CoC, including the TS, are indicated by single vertical lines in the margin. We are forwarding these documents to you for inclusion in the proposed rulemaking package for this canister system. Please note that User Need Memorandum from R. Nelson to M. Delligatti, dated May 8, 2007, originally indicated this rulemaking as Amendment 4 to CoC 1014. Due to a protracted technical review for this licensing action another licensing action for CoC 1014 was completed in the interim and forwarded to you for rulemaking as Amendment 4. Therefore, this proposed rulemaking should be processed as Amendment 5 to CoC 1014 and not Amendment 4 as indicated earlier.

On December 30, 2004, Holtec International (Holtec) submitted an application to amend the HI-STORM 100 Cask System. The amendment principally included changes to increase the design basis maximum decay heat loads of the HI-STORM 100 Cask System and add a new underground storage configuration, designated the HI-STORM 100U, to the CoC. On November 29, 2006, Holtec withdrew the portion of the application to add the HI-STORM 100U to the CoC. The scope of the remaining changes includes: deletion of the requirement to perform thermal validation tests on thermal systems, an increase in the design basis maximum decay heat loads and a new decay heat regionalized scheme; an increase in the maximum fuel assembly weight for Boiling Water Reactor (BWR) fuel in the Multi-Purpose Canister (MPC) - 68; an increase in the maximum fuel assembly weight of up to 1,720 lbs for assemblies not requiring spacers, otherwise 1,680 lbs; changes to the assembly characteristics of 16x16 Pressurized Water Reactor (PWR) fuel assemblies to be qualified for storage in the HI-STORM 100 Cask System; a change in the fuel storage locations in the MPC-32 for fuel with axial power shaping rod assemblies (APSRs) and in the fuel storage locations in the MPC-24 and MPC-32 for fuel with Control Rod Assemblies (CRAs), Rod Cluster Control Assemblies (RCCAs), and Control Element Assemblies (CEAs); elimination of the restriction that fuel debris can only be loaded into the MPC-24EF, MPC-32F, MPC-68F, and MPC-68FF canisters; introduction of a requirement that all MPC confinement boundary components and

any MPC components exposed to spent fuel pool water or the ambient environment be made of stainless steel or, for MPC internals, neutron absorber or aluminum; the addition of a threshold heat load below which operation of the Supplemental Cooling System (SCS) would not be required and for MPC internals, neutron absorber or aluminum; the addition of a threshold heat load below modification of the design criteria to simplify the system; minor editorial changes to include clarification of the description of anchored casks, correction of typographical/editorial errors, clarification of the definitions of Loading Operations, Storage Operations, Transport Operations, Unloading Operations, Cask Loading Facility, and Transfer Cask in various locations throughout the CoC and Final Safety Analysis Report; and modification of the definition of non-fuel hardware to include the individual parts of the items defined as non-fuel hardware.

The proposed CoC and TS, and preliminary SER have been placed in ADAMS (see reference below) and are available for your use in the rulemaking package. The Division of Spent Fuel Storage and Transportation will designate these documents as Official Agency Records after the Executive Director for Operations has approved the package (ADAMS Package No. ML072540157).

Docket No. 72-1014

ADAMS References: 1. Proposed CoC No. 1014, Amendment 5 (ML072540284)
2. Proposed TS (ML072540353)
3. Preliminary SER (ML072540407)

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DATE	8/20/07		8/23/07		8/24/07		8/27/07		9/11/07

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