November 30, 2007

MEMORANDUM TO: Luis A. Reyes
Executive Director for Operations

FROM: Dennis K. Rathbun, Director
Division of Intergovernmental Liaison
and Rulemaking **/RA/**
Office of Federal and State Materials
and Environmental Management Programs

SUBJECT: DIRECT FINAL RULE TO AMEND 10 CFR 72.214 LIST OF APPROVED SPENT FUEL STORAGE CASKS (HI-STORM 100, AMENDMENT 5)

Enclosed, for your signature, is a direct final rule, along with the companion proposed rule (Enclosures 1 and 2), amending U.S. Nuclear Regulatory Commission (NRC) regulations, by revising the cask system listing for the Holtec International HI-STORM 100, Certificate of Compliance (CoC) No. 1014, cask system. This amendment will allow holders of power-reactor operating licenses to load spent fuel into a cask meeting the revised conditions. Amendment No. 5 to the HI-STORM 100 CoC would include 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 fuel in the Multi-Purpose Canister (MPC)-68; an increase in the maximum fuel assembly weight of up to 1,720 pounds for assemblies not requiring spacers, otherwise 1,680 pounds; changes to the assembly characteristics of 16x16 pressurized water reactor 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 and in the fuel storage locations in the MPC-24 and the MPC-32 for fuel with control rod assemblies, rod cluster control assemblies, and control element assemblies; 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 would not be required and 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 the 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.

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(301) 492-3315

This amendment is considered to be noncontroversial because it only amends the CoC for a previously approved cask system. In addition, the amended HI-STORM 100 cask design, when used under the conditions specified in the CoC, the Technical Specifications, and NRC regulations, will meet the requirements of Part 72; thus, adequate protection of public health and safety will continue to be ensured. Therefore, we are using the direct final rule approach to simplify the process and to shorten the time before the rule becomes effective.

Notices: Enclosure 3 ("EDO Daily Note") documents that the Executive Director for Operations (EDO) intends to sign the two *Federal Register* notices. Enclosure 4 ("Notice of Final Rule Signed by the EDO") and Enclosure 5 ("Weekly Report to the Commission") document that the EDO has signed the two *Federal Register* notices. The "Approved for Publication," the Environmental Assessment, and the Congressional Review Act forms can be found in, respectively, Enclosures 6 through 8 of this paper. The appropriate Congressional committees will be notified.

Resources: In FY 2008, 0.45 FTE (0.15 FSME, 0.1 NMSS, and 0.2 other) is currently budgeted and is sufficient to complete this rulemaking. No additional resources will be needed to implement the amendment to this rulemaking.

Coordination: The Offices of Administration and Nuclear Material Safety and Safeguards concur with this amendment. The Office of the General Counsel has no legal objection.

Enclosures:
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2. FRN for Proposed Rule
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