



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555-0001

May 25, 2018

MEMORANDUM TO: Kimyata Morgan-Butler, Chief  
Materials Rulemaking and Project Management Branch  
Division of Rulemaking  
Office of Nuclear Material Safety  
and Safeguards

FROM: John McKirgan, Chief /RA/  
Spent Fuel Licensing Branch  
Division of Spent Fuel Management  
Office of Nuclear Material Safety  
and Safeguards

SUBJECT: USER NEED FOR RULEMAKING FOR THE HOLTEC HI-STORM 100  
CASK SYSTEM, AMENDMENT NO. 12

The purpose of this communication is to request support for rulemaking activities in the Division of Spent Fuel Management (DSFM) for the following DSFM's 10 CFR Part 72 licensing action:

1. Changes to 10 CFR 72.214 rule text (changes appear in bold):

Certificate Number: 1014

Initial Certificate Effective Date: May 31, 2000

**Amendment Number 12 Effective Date: [insert 75 days from date of *Federal Register* publication]**

Safety Analysis Report (SAR) Submitted by: Holtec International

SAR Title: Final Safety Analysis Report for the HI-STORM 100 Cask System

Docket Number: 72-1014

Certificate Expiration Date: May 31, 2020

Model Number: HI-STORM 100

2. On June 14, 2016, as supplemented on July 22, 2016, November 4, 2016, August 25, 2017, November 10, 2017, and December 22, 2017, Holtec International (Holtec) submitted an amendment request to the U.S. Nuclear Regulatory Commission (NRC) for the HI-STORM 100 Certificate of Compliance (CoC) No. 1014. The proposed changes include the following:

- 1) Add a new regionalized quarter-symmetric heat load (QSHL) pattern for MPC-68M and allow fuel that has been cooled for at least 2 years to be stored in the multipurpose canister (MPC)-68M.

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- 2) Allow the storage of damaged fuel and fuel debris in damaged fuel container under the new regionalized QSHL pattern.
  - 3) Add a new duplex stainless steel as an allowed material for the MPC confinement boundary in the HI-STORM 100 system.
  - 4) Add the cyclic vacuum drying for all MPCs.
  - 5) Update coefficients for burnup calculation equation for fuel assembly with cooling time of 2 through 40 years.
3. The proposed CoC and technical specifications (TS), and preliminary safety evaluation report (SER) have been placed in ADAMS (see references below) and are available for your use in the rulemaking package. DSFM will designate these documents as Official Agency Records after the Executive Director for Operations has approved the package (ADAMS Package No. (ML18087A055)).

The Office of the General Counsel has reviewed this memorandum with its referenced documents and has no legal objection to its contents.

CAC No. 001028

Docket No. 72-1014

EPID: L-2017-LLA-0028

ADAMS References:

1. Proposed CoC 1014 Amendment 12 CoC (ML18087A057)
2. Proposed CoC 1014 Amendment 12 Appendix A (ML18087A058)
3. Proposed CoC 1014 Amendment 12 Appendix B (ML18087A059)
4. Proposed CoC 1014 Amendment 12 Appendix A-100U (ML18087A060)
5. Proposed CoC 1014 Amendment 12 Appendix B-100U (ML18087A061)
6. Preliminary CoC 1014 Amendment 12 SER (ML18087A062)

SUBJECT: USER NEED FOR RULEMAKING FOR THE HOLTEC HI-STORM 100 CASK SYSTEM, AMENDMENT NO. 12, DOCUMENT DATE: May 25, 2018

ADAMS Accession No.: ML18087A056 (Memo); Package: ML18087A055

<b>OFC</b>	DSFM	DSFM	OGC	DSFM
<b>NAME</b>	YChen	WWheatley	PJehle (email)	JMcKirgan
<b>DATE</b>	3/28/2018	5/3/2018	4/20/2018	5/25/2018

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