

February 10, 2012

Ms. Tammy Morin  
Licensing Manager  
Holtec International  
555 Lincoln Drive West  
Marlton, NJ 08053

SUBJECT: DRAFT PROPOSED CERTIFICATE OF COMPLIANCE AND PRELIMINARY  
SAFETY EVALUATION REPORT FOR AMENDMENT NO. 9 TO CERTIFICATE  
OF COMPLIANCE NO. 1014 FOR THE HI-STORM 100 CASK SYSTEM  
(TAC NO. L24476)

Dear Ms. Morin:

By letter dated September 10, 2010, as supplemented October 1, 2010, August 11, and November 14, 2011, Holtec International (Holtec or applicant) submitted amendment request No. 9 to the U.S. Nuclear Regulatory Commission (NRC) for the HI-STORM 100 Certificate of Compliance (CoC) No. 1014 (1014-9). The proposed changes include the following:

- I. Broaden the subgrade requirements for the HI-STORM 100U (underground) part of the HI-STORM 100 Cask Storage System, and
- II. Update the thermal model and methodology for the HI-TRAC transfer cask from a two dimensional thermal-hydraulic model to a more accurate three dimensional model.

Changes associated with Proposed Change I are as follows:

- A. Removal of the restriction which requires the Independent Spent Fuel Storage Installation (ISFSI) support foundation pad to rest on a subgrade material with a shear wave velocity of 3500 ft/s or bedrock.
- B. Removal of the restriction which requires any excavation, near an operating 100U type ISFSI, to be a distance of ten times the depth of the excavation away from the ISFSI.
- C. Removal of the requirement to account for amplification in the seismic analysis.

The above results in modifications to the CoC and Technical Specifications (TS), specifically the following:

- 1. CoC; Condition #12 is deleted and the subsequent Conditions are renumbered.
- 2. TS Appendix B-100U; Section 3.4 is revised.

Changes associated with Proposed Change II are as follows:

- D. Re-analysis of short-term operations involving the HI-TRAC transfer cask. These include vacuum drying of the multipurpose canister (MPC), on-site transport of the dry MPC, and time-to-boil calculations. Results of this change in methodology are (1) there is no longer a need for a supplemental cooling system to maintain peak cladding temperatures below the Interim Staff Guidance -11, Rev. 3, guidance limits; (2) decay heat thresholds for vacuum drying increased for both unlimited and time restricted vacuum drying; and (3) time-to-boil limits for various decay heat loads and initial spent fuel pool temperatures have been added.
- E. Re-analysis of the accident scenarios involving the HI-TRAC transfer cask, i.e. fire and loss of water in the water jacket.

The above results in modifications to the CoC and TS, specifically the following:

- 3. CoC; Condition #10, step g. is deleted and the subsequent steps are renumbered.
- 4. CoC; Condition #11 is deleted and the subsequent Conditions are renumbered.
- 5. TS Appendix A; LCO 3.1.4 is deleted and LCO 3.1.1 and Table 3-1 are modified.
- 6. TS Appendix A-100U; LCO 3.1.4 is deleted and LCO 3.1.1 and Table 3-1 are modified.
- 7. TS Appendix B; Section 3.7 is deleted.
- 8. TS Appendix B-100U; Section 3.7 is deleted.

This amended certificate, when codified through rulemaking, will be denoted as Amendment No. 9 to the CoC.

As a result of our review of the application, and its supplements, the staff has prepared a proposed CoC and preliminary Safety Evaluation Report (SER) pursuant to the requirements of 10 CFR Part 72. Enclosed is a copy of the proposed CoC including appendices and the staff's preliminary SER for Holtec's review and identification of inaccuracies and omissions. Changes made to the enclosed draft amended CoC and Appendices A, B, A-100U, and B-100U are indicated by vertical lines in the right margin.

Holtec is requested to respond with any comments by close of business on February 22, 2012. Please continue to reference Docket No. 72-1014 and TAC No. L24476 in future correspondence related to this request.

If you have any comments or questions concerning this request, please contact me at 301-492-3325.

Sincerely,

**/RA/**

John M. Goshen, P.E., Project Manager  
Licensing Branch  
Division of Spent Fuel Storage and Transportation  
Office of Nuclear Material Safety  
and Safeguards

Docket No.: 72-1014

TAC No.: L24476

Enclosures:

1. Proposed CoC No. 1014,  
Amendment No. 9
2. Preliminary SER

If you have any comments or questions concerning this request, please contact me at 301-492-3325.

Sincerely,

**/RA/**

John M. Goshen, P.E., Project Manager  
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1. Proposed CoC No. 1014,  
Amendment No. 9
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Distribution: w/o encls\*\*

Docket

NMSS r/f

ADAMS Package : ML120440086

Transmittal : ML120440098

Proposed CoC No. 1014 A9: ML120440118

Proposed Appendix A: ML120440200

Proposed Appendix B: ML120440246

Proposed Appendix A-100U: ML120440234

Proposed Appendix B-100U: ML120440250

Preliminary SER : ML120440256

File Directory: G:\SFST\HI-STORM 100\Amendment 9\Rulemaking\HS 100 A9 Draft

transmittal.doc

\CoC 1014 A9 Proposed CoC. Doc

\Proposed App A A9.doc

\Proposed App B A9.doc

\Proposed App A - 100U A9.doc

\Proposed App B - 100U A9.doc

\CoC 1014 A9 Preliminary SER.docx

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