



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

June 28, 2021

MEMORANDUM TO: Tania Martinez-Navedo, Acting Chief  
Materials Rulemaking  
and Project Management Branch  
Division of Rulemaking, Environmental, and Financial Support  
Office of Nuclear Material Safety  
and Safeguards

FROM: John B. McKirgan, Chief  
Storage and Transportation Licensing Branch  
Division of Fuel Management  
Office of Nuclear Material Safety  
and Safeguards

SUBJECT: USER NEED FOR RULEMAKING FOR RENEWAL OF THE  
CERTIFICATE OF COMPLIANCE NO. 1008, INITIAL ISSUE  
(AMENDMENT NUMBER 0), AMENDMENT NUMBERS 1, 2, AND 3 TO  
HI-STAR 100 CASK SYSTEM

On December 7, 2018, as supplemented on June 28, 2019, October 10, 2019, December 12, 2019, June 1, 2020, June 11, 2020, November 13, 2020, and November 24, 2020, Holtec International applied for renewal of Certificate of Compliance (CoC) No. 1008 for the HI-STAR 100 Cask System, for an additional 40 years beyond the initial certificate term [Agencywide Documents Access and Management System (ADAMS) Accession Nos. ML18345A178, ML19184A232, ML19288A089, ML19350A576, ML20153A768, ML20163A713, ML20318A321, and ML20329A321].

The following information is being provided to request rulemaking support for the following Division of Fuel Management (DFM) licensing action under Title 10 of the *Code of Federal Regulations* (10 CFR) Part 72:

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

Certificate Number: 1008.

Initial Certificate Effective Date: October 4, 1999, **superseded by Renewed Initial Certificate, on [insert 75 days from date of FR publication].**

CONTACT: Kristina L. Banovac, NMSS/DFM  
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Amendment Number 1 Effective Date: December 26, 2000, **superseded by Renewed Amendment Number 1, on [insert 75 days from date of FR publication].**

Amendment Number 2 Effective Date: May 29, 2001, **superseded by Renewed Amendment Number 2, on [insert 75 days from date of FR publication].**

Amendment Number 3 Effective Date: November 5, 2019, **superseded by Renewed Amendment Number 3, on [insert 75 days from date of FR publication].**

SAR Submitted by: Holtec International.

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

Docket Number: 72-1008.

**Renewed** Certificate Expiration Date: October 4, **2059**.

Model Number: HI-STAR 100 (MPC–24, MPC–32, MPC–68, MPC–68F).

## **Certificate of Compliance Conditions and Technical Specifications: Proposed Changes**

### **CHANGES TO CERTIFICATE OF COMPLIANCE**

1. Added the following condition to the initial CoC (Amendment 0) and Amendments 1, 2, and 3:

#### *FSAR [FINAL SAFETY ANALYSIS REPORT] UPDATE FOR RENEWED CoC*

*The CoC holder shall submit an updated FSAR(s) to the Commission, in accordance with 10 CFR 72.4, within 90 days after the effective date of the renewal. The updated FSAR(s) shall reflect the changes resulting from the review and approval of the CoC renewal, including the HI-STAR 100 FSAR supplement that is documented in Appendix D of the HI-STAR 100 CoC renewal application, Revision 1.D, dated November 24, 2020 (ADAMS Accession No. ML20329A323). The CoC holder shall continue to update the FSAR pursuant to the requirements of 10 CFR 72.248.*

The applicant indicated that it will make changes to the FSAR to address aging management activities resulting from the renewal of the CoC. The applicant submitted the proposed FSAR supplement in Revision 1.D of the renewal application, Appendix D, which reflects the final proposed FSAR supplement to address the aging management activities described in the renewal application. This condition ensures that the FSAR changes are made in a timely fashion to enable general licensees using the storage system during the period of extended operation to develop and implement necessary procedures related to renewal and aging management activities.

2. Added the following condition to the initial CoC (Amendment 0) and Amendments 1, 2, and 3:

#### *10 CFR 72.212 EVALUATIONS FOR RENEWED CoC USE*

*Any general licensee that initiates spent fuel dry storage operations with the HI-STAR 100 Cask System after the effective date of the CoC renewal and any*

*general licensee operating a HI-STAR 100 Cask System as of the effective date of the CoC renewal, including those that put additional storage systems into service after that date, shall:*

- a. As part of the evaluations required by 10 CFR 72.212(b)(5), include evaluations related to the terms, conditions, and specifications of this CoC amendment as modified (i.e., changed or added) as a result of the CoC renewal.*
- b. As part of the document review required by 10 CFR 72.212(b)(6), include a review of the FSAR changes resulting from the CoC renewal and the NRC Safety Evaluation Report related to the CoC renewal.*
- c. Ensure that the evaluations required by 10 CFR 72.212(b)(7) and (8) capture the evaluations and review described in (a.) and (b.) of this CoC condition.*
- d. Complete this condition prior to entering the period of extended operation or no later than one year after the effective date of the CoC renewal, whichever is later.*

The staff considers it important to ensure that a general licensee's report prepared in response to 10 CFR 72.212, "Conditions of general license issued under § 72.210," evaluates the appropriate considerations for the period of extended operation. These considerations arise from the analyses and assumptions in the renewal application about operations during the period of extended operation. This includes potential use by general licensees that may use a new HI-STAR 100 Cask System after the CoC has been renewed, whether at a new or existing general-licensed independent spent fuel storage installation. The renewal of the CoC is based on assumptions and analyses regarding the dry storage system and the sites where it is used. Licensees considering the use of the HI-STAR 100 Cask System must evaluate it for use at their respective sites. This condition also makes it clear that in order to meet the requirements in 10 CFR 72.212(b)(11), general licensees that currently use a HI-STAR 100 Cask System will need to update their 10 CFR 72.212 reports, even if they do not put additional dry storage systems into service after the renewal's effective date. The staff notes that the applicant proposed the above condition, which the staff modified to include an implementation timeframe and a reference to the NRC safety evaluation report related to the CoC renewal.

3. Added the following condition to the initial CoC (Amendment 0) and Amendments 1, 2, and 3:

*AMENDMENTS AND REVISIONS FOR RENEWED CoC*

*All future amendments and revisions to this CoC shall include evaluations of the impacts to aging management activities (i.e. time-limited aging analyses and aging management programs) to assure they remain adequate for any changes to structures, systems, and components within the scope of renewal.*

The CoC may continue to be amended after it has been renewed. This condition ensures that future amendments to the CoC address the renewed design bases for the

CoC, including aging management impacts that may arise from the changes to the system in proposed future amendments.

4. Revised initial CoC (Amendment 0) and Amendments 1, 2, and 3 to address the language change in 10 CFR 72.210 and other updates to the regulations.

This revision was made for consistency with the language currently in 10 CFR 72.210 and other cited regulations and is not pertinent to the safety review conducted for the renewal application. Changes to the text are in bold, which only involves adding new text.

#### 11. AUTHORIZATION

*The HI-STAR 100 Cask System, which is authorized by this certificate, is hereby approved for general use by holders of 10 CFR Part 50 **and 10 CFR Part 52** licenses for nuclear reactors at reactor sites under the general license issued pursuant to 10 CFR 72.210, subject to the conditions specified by 10 CFR 72.212, and the attached Appendix A and Appendix B.*

The NRC modified any CoC and technical specification language that discusses 10 CFR Part 50 licensees to also include 10 CFR Part 52 licensees. In addition, the NRC updated the regulation citations referenced in the applicable CoC and technical specifications to reflect citations currently in the regulations.

#### **CHANGES TO TECHNICAL SPECIFICATIONS**

1. Added new Technical Specification 3.5, "Aging Management Program Procedures," associated with the initial CoC (Amendment 0) and Amendments 1, 2, and 3:

##### *3.5 Aging Management Program (AMP) Procedures*

*Each general licensee shall have a program to establish, implement, and maintain written procedures for each AMP described in the FSAR. The program shall include provisions for changing AMP elements, as necessary, and within the limitations of the approved design bases to address new information on aging effects based on inspection findings and/or industry operating experience. Each procedure shall contain a reference to the specific aspect of the AMP element implemented by that procedure, and that reference shall be maintained even if the procedure is modified.*

*The general licensee shall establish and implement these written procedures prior to entering the period of extended operation or no later than one year after the effective date of the CoC renewal, whichever is later. The general licensee shall maintain these written procedures for as long as the general licensee continues to operate HI-STAR 100 Cask Systems in service for longer than 20 years.*

*Each general licensee shall perform tollgate assessments as described in Chapter 9 of the FSAR.*

The above technical specification addition is similar in nature to the currently existing CoC conditions and technical specifications with regard to operating procedures for loading and operating dry storage systems under this CoC and extends the requirement for operating procedures to address AMP activities. This technical specification ensures that procedures address AMP activities required in the period of extended operation. The timeframe (1 year) in the condition is to ensure operating procedures are developed in a timely manner, and the timeframe is consistent with NUREG-1927. The tollgate assessments in the AMPs assure that the results of those assessments will inform AMP procedures. The staff notes that the applicant proposed the above technical specification, which the staff modified to state that procedures shall include AMP references and procedures should be maintained as long as the general licensee operates the HI-STAR 100 Cask System.

The proposed renewed CoC amendments and technical specifications, and preliminary safety evaluation report have been placed in ADAMS (see references below) and are available for your use in the rulemaking package. DFM will designate these documents as Official Agency Records after the Executive Director for Operations has approved the package (ADAMS Package No. ML21168A351).

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

Docket No.: 72-1008  
CAC No.: 001208  
EPID: L-2018-RNW-0030

**ADAMS References:**

1. Memo to REFS requesting rulemaking (ML21168A352)
2. Proposed CoC No. 1008, Renewed Amendment No. 0 (ML21168A353)
3. Proposed Technical Specifications (Appendix A) for CoC No. 1008, Renewed Amendment No. 0 (ML21168A354)
4. Proposed Technical Specifications (Appendix B) for CoC No. 1008, Renewed Amendment No. 0 (ML21168A355)
5. Proposed CoC No. 1008, Renewed Amendment No. 1 (ML21168A356)
6. Proposed Technical Specifications (Appendix A) for CoC No. 1008, Renewed Amendment No. 1 (ML21168A357)
7. Proposed Technical Specifications (Appendix B) for CoC No. 1008, Renewed Amendment No. 1 (ML21168A358)
8. Proposed CoC No. 1008, Renewed Amendment No. 2 (ML21168A359)
9. Proposed Technical Specifications (Appendix A) for CoC No. 1008, Renewed Amendment No. 2 (ML21168A360)
10. Proposed Technical Specifications (Appendix B) for CoC No. 1008, Renewed Amendment No. 2 (ML21168A361)
11. Proposed CoC No. 1008, Renewed Amendment No. 3 (ML21168A362)
12. Proposed Technical Specifications (Appendix A) for CoC No. 1008, Renewed Amendment No. 3 (ML21168A363)

13. Proposed Technical Specifications (Appendix B) for CoC No. 1008, Renewed Amendment No. 3 (ML21168A364)
14. Preliminary Safety Evaluation Report for Renewed CoC No. 1008, Amendment Nos. 0, 1, 2, and 3 (ML21168A365)

SUBJECT: USER NEED FOR RULEMAKING FOR RENEWAL OF THE CERTIFICATE OF COMPLIANCE NO. 1008, INITIAL ISSUE (AMENDMENT NUMBER 0), AMENDMENT NUMBERS 1, 2, AND 3 TO HI-STAR 100 CASK SYSTEM

DOCUMENT DATE: June 28, 2021

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**ADAMS Accession Nos.: ML21168A351 (Pkg) ML21168A352 (Memo) ML21168A353 – ML21168A365 (Encls) \* concurrence via email**

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