# NUCLEAR REGULATORY COMMISSION 10 CFR Part 72 [NRC-2019-0030] RIN 3150-AK28 List of Approved Spent Fuel Storage Casks: Holtec International HI-STORM 100

## Cask System, Certificate of Compliance No. 1014, Amendment No. 13

AGENCY: Nuclear Regulatory Commission.

**ACTION:** Direct final rule.

**SUMMARY:** The U.S. Nuclear Regulatory Commission (NRC) is amending its spent fuel storage regulations by revising the Holtec International HI-STORM 100 Cask System listing within the "List of approved spent fuel storage casks" to include Amendment No. 13 to Certificate of Compliance No. 1014. Amendment No. 13 revises Appendix B of the technical specifications to update the initial uranium weight for the 16x16B and 16x16C assembly classes to match the value for 16x16A.

**DATES:** This direct final rule is effective May 13, 2019, unless significant adverse comments are received by March 28, 2019. If this direct final rule is withdrawn as a result of such comments, timely notice of the withdrawal will be published in the *Federal Register*. Comments received after this date will be considered if it is practical to do so, but the NRC is able to ensure consideration only for comments received on or before this

date. Comments received on this direct final rule will also be considered to be comments on a companion proposed rule published in the Proposed Rules section of this issue of the *Federal Register*.

**ADDRESSES:** You may submit comments by any of the following methods:

• Federal Rulemaking Web Site: Go to <a href="http://www.regulations.gov">http://www.regulations.gov</a> and search for Docket ID NRC-2019-0030. Address questions about NRC dockets to Carol Gallagher; telephone: 301-415-3463; e-mail: <a href="https://carol.Gallagher@nrc.gov">Carol.Gallagher@nrc.gov</a>. For technical questions contact the individuals listed in the FOR FURTHER INFORMATION CONTACT section of this document.

• E-mail comments to: <u>Rulemaking.Comments@nrc.gov</u>. If you do not receive an automatic e-mail reply confirming receipt, then contact us at 301-415-1677.

• **Fax comments to:** Secretary, U.S. Nuclear Regulatory Commission at 301-415-1101.

• Mail comments to: Secretary, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, ATTN: Rulemakings and Adjudications Staff.

• Hand deliver comments to: 11555 Rockville Pike, Rockville, Maryland 20852, between 7:30 a.m. and 4:15 p.m. (Eastern Time) Federal workdays; telephone: 301-415-1677.

For additional direction on obtaining information and submitting comments, see "Obtaining Information and Submitting Comments" in the SUPPLEMENTARY INFORMATION section of this document.

**FOR FURTHER INFORMATION CONTACT:** Christian Jacobs, Office of Nuclear Material Safety and Safeguards; telephone: 301-415-6825; e-mail:

Christian.Jacobs@nrc.gov or Gregory R. Trussell, Office of Nuclear Material Safety and

Safeguards; telephone: 301-415-6244; e-mail: <u>Gregory.Trussell@nrc.gov</u>. Both are

staff of the U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001.

## SUPPLEMENTARY INFORMATION:

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## I. Obtaining Information and Submitting Comments

A. Obtaining Information

Please refer to Docket ID NRC-2019-0030 when contacting the NRC about the

availability of information for this action. You may obtain publicly-available information

related to this action by any of the following methods:

• Federal Rulemaking Web Site: Go to <u>http://www.regulations.gov</u> and

search for Docket ID NRC-2019-0030.

• NRC's Agencywide Documents Access and Management System

(ADAMS): You may obtain publicly-available documents online in the ADAMS Public Documents collection at <a href="http://www.nrc.gov/reading-rm/adams.html">http://www.nrc.gov/reading-rm/adams.html</a>. To begin the search, select "Begin Web-based ADAMS Search." For problems with ADAMS, please contact the NRC's Public Document Room (PDR) reference staff at 1-800-397-4209, 301-415-4737, or by e-mail to <a href="http://www.nrc.gov">pdr.resource@nrc.gov</a>. For the convenience of the reader, instructions about obtaining materials referenced in this document are provided in the "Availability of Documents" section.

• NRC's PDR: You may examine and purchase copies of public documents at the NRC's PDR, Room O1-F21, One White Flint North, 11555 Rockville Pike, Rockville, Maryland 20852.

B. Submitting Comments

Please include Docket ID NRC-2019-0030 in your comment submission.

The NRC cautions you not to include identifying or contact information that you do not want to be publicly disclosed in your comment submission. The NRC will post all comment submissions at <u>http://www.regulations.gov</u> as well as enter the comment submissions into ADAMS. The NRC does not routinely edit comment submissions to remove identifying or contact information.

If you are requesting or aggregating comments from other persons for submission to the NRC, then you should inform those persons not to include identifying or contact information that they do not want to be publicly disclosed in their comment submission. Your request should state that the NRC does not routinely edit comment submissions to remove such information before making the comment submissions available to the public or entering the comment into ADAMS.

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#### II. Rulemaking Procedure

This direct final rule is limited to the changes contained in Amendment No. 13 to Certificate of Compliance No. 1014 and does not include other aspects of the HI-STORM 100 Cask System design. The NRC is using the "direct final rule procedure" to issue this amendment because it represents a limited and routine change to an existing certificate of compliance that is expected to be noncontroversial. Adequate protection of public health and safety continues to be ensured. The amendment to the rule will become effective on May 13, 2019. However, if the NRC receives significant adverse comments on this direct final rule by March 28, 2019, then the NRC will publish a document that withdraws this action and will subsequently address the comments received in a final rule as a response to the companion proposed rule published in the Proposed Rules section of this issue of the *Federal Register*. Absent significant modifications to the proposed revisions requiring republication, the NRC will not initiate a second comment period on this action.

A significant adverse comment is a comment where the commenter explains why the rule would be inappropriate, including challenges to the rule's underlying premise or approach, or would be ineffective or unacceptable without a change. A comment is adverse and significant if:

1) The comment opposes the rule and provides a reason sufficient to require a substantive response in a notice-and-comment process. For example, a substantive response is required when:

a) The comment causes the NRC staff to reevaluate (or reconsider) its position or conduct additional analysis;

b) The comment raises an issue serious enough to warrant a substantive

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response to clarify or complete the record; or

c) The comment raises a relevant issue that was not previously addressed or considered by the NRC staff.

2) The comment proposes a change or an addition to the rule, and it is apparent that the rule would be ineffective or unacceptable without incorporation of the change or addition.

 The comment causes the NRC staff to make a change (other than editorial) to the rule, Certificate of Compliance, or technical specifications.

For detailed instructions on filing comments, please see the companion proposed rule published in the Proposed Rules section of this issue of the *Federal Register*.

#### III. Background

Section 218(a) of the Nuclear Waste Policy Act of 1982, as amended, requires that "[t]he Secretary [of the Department of Energy] shall establish a demonstration program, in cooperation with the private sector, for the dry storage of spent nuclear fuel at civilian nuclear power reactor sites, with the objective of establishing one or more technologies that the [Nuclear Regulatory] Commission may, by rule, approve for use at the sites of civilian nuclear power reactors without, to the maximum extent practicable, the need for additional site-specific approvals by the Commission." Section 133 of the Nuclear Waste Policy Act states, in part, that "[the Commission] shall, by rule, establish procedures for the licensing of any technology approved by the Commission under Section 219(a) [sic: 218(a)] for use at the site of any civilian nuclear power reactor."

To implement this mandate, the Commission approved dry storage of spent nuclear fuel in NRC-approved casks under a general license by publishing a final rule which added a new subpart K in part 72 of title 10 of the *Code of Federal Regulations* (10 CFR) entitled "General License for Storage of Spent Fuel at Power Reactor Sites" (55 FR 29181; July 18, 1990). This rule also established a new subpart L in 10 CFR part 72 entitled "Approval of Spent Fuel Storage Casks," which contains procedures and criteria for obtaining NRC approval of spent fuel storage cask designs. The NRC subsequently issued a final rule on May 1, 2000 (65 FR 25241), that approved the HI-STORM 100 Cask System design and added it to the list of NRC-approved cask designs in 10 CFR 72.214 as Certificate of Compliance No. 1014.

#### IV. Discussion of Changes

On November 19, 2018, Holtec International submitted a request to the NRC to amend Certificate of Compliance No. 1014 by adding Amendment No. 13. Amendment 13 revises Table 2.1-2: Pressurized Water Reactor (PWR) Fuel Assembly Characteristics of Appendix B of the technical specifications to update the initial uranium weight for the 16x16B and 16x16C assembly classes to match the value for 16x16A.

As documented in the preliminary safety evaluation report, the NRC performed a safety review of the proposed Certificate of Compliance amendment request. Based on its review, the staff determined that there is reasonable assurance that: (1) the activities authorized by the amended certificate can be conducted without endangering the health and safety of the public, and (2) these activities will be conducted in compliance with the applicable regulations of 10 CFR part 72. There are no significant changes to cask design requirements in the proposed amendment. Considering the specific design requirements for each accident condition, the design of the cask would prevent loss of containment, shielding, and criticality control in the event of an accident. The

amendment does not reflect a significant change in design or fabrication of the cask. In addition, any resulting occupational exposure or offsite dose rates from the implementation of Amendment No. 13 would remain well within the 10 CFR part 20 limits. There will be no significant change in the types or amounts of any effluent released, no significant increase in the individual or cumulative radiation exposure, and no significant increase in the potential for, or consequences from, radiological accidents.

This direct final rule revises the Holtec International HI-STORM 100 Cask System listing in 10 CFR 72.214 by adding Amendment No. 13 to Certificate of Compliance No. 1014. This amendment consists of the changes previously described, as set forth in the revised certificate of compliance and technical specifications. The revised technical specifications are identified in the preliminary safety evaluation report.

The amended Holtec International HI-STORM 100 Cask System design, when used under the conditions specified in the Certificate of Compliance, technical specifications, and the NRC's regulations, will meet the requirements of 10 CFR part 72; therefore, adequate protection of public health and safety will continue to be ensured. When this direct final rule becomes effective, persons who hold a general license under 10 CFR 72.210 may load spent nuclear fuel into HI-STORM 100 Cask System casks that meet the criteria of Amendment No. 13 to Certificate of Compliance No. 1014 under 10 CFR 72.212.

#### V. Voluntary Consensus Standards

The National Technology Transfer and Advancement Act of 1995 (Pub. L. 104-113) requires that Federal agencies use technical standards that are developed or adopted by voluntary consensus standards bodies unless the use of such a standard is inconsistent with applicable law or otherwise impractical. In this direct final rule, the

NRC will revise the Holtec International HI-STORM 100 Cask System design listed in 10 CFR 72.214, "List of approved spent fuel storage casks." This action does not constitute the establishment of a standard that contains generally applicable requirements.

#### VI. Agreement State Compatibility

Under the "Policy Statement on Adequacy and Compatibility of Agreement State Programs" approved by the Commission on June 30, 1997, and published in the *Federal Register* on September 3, 1997 (62 FR 46517), this rule is classified as Compatibility Category "NRC." Compatibility is not required for Category "NRC" regulations. The NRC program elements in this category are those that relate directly to areas of regulation reserved to the NRC by the Atomic Energy Act of 1954, as amended, or the provisions of 10 CFR. Although an Agreement State may not adopt program elements reserved to the NRC, and the Category "NRC" does not confer regulatory authority on the State, the State may wish to inform its licensees of certain requirements by means consistent with the particular State's administrative procedure laws.

#### VII. Plain Writing

The Plain Writing Act of 2010 (Pub. L. 111-274) requires Federal agencies to write documents in a clear, concise, and well-organized manner. The NRC has written this document to be consistent with the Plain Writing Act as well as the Presidential Memorandum, "Plain Language in Government Writing," published June 10, 1998 (63 FR 31885).

#### VIII. Environmental Assessment and Finding of No Significant Impact

### A. The Action

The action is to amend 10 CFR 72.214 to revise the Holtec International HI-STORM 100 Cask System listing within the "List of approved spent fuel storage casks" to include Amendment No. 13 to Certificate of Compliance No. 1014. Amendment No. 13 revises Table 2.1-2: PWR Fuel Assembly Characteristics of Appendix B of the technical specifications to update the initial uranium weight for the 16x16B and 16x16C assembly classes to match the value for 16x16A.

#### B. The Need for the Action

This direct final rule adds an amended Certificate of Compliance for the Holtec International HI-STORM 100 Cask System design to the list of approved spent fuel storage casks that power reactor licensees can use to store spent fuel at reactor sites under a general license. Specifically, Amendment No. 13 revises Table 2.1-2: PWR Fuel Assembly Characteristics of Appendix B of the technical specifications to update the initial uranium weight for the 16x16B and 16x16C assembly classes to match the value for 16x16A.

#### C. Environmental Impacts of the Action

On July 18, 1990 (55 FR 29181), the NRC issued an amendment to 10 CFR part 72 to provide for the storage of spent fuel under a general license in cask designs approved by the NRC. The potential environmental impact of using NRC-approved storage casks was initially analyzed in the environmental assessment for the 1990 final rule. The environmental assessment for Amendment No. 13 tiers off of the environmental assessment for the July 18, 1990 final rule. Tiering on past environmental assessments is a standard process under the National Environmental Policy Act of 1969, as amended.

The Holtec International HI-STORM 100 Cask System is designed to mitigate the effects of design basis accidents that could occur during storage. Design basis accidents account for human-induced events and the most severe natural phenomena reported for the site and surrounding area. Postulated accidents analyzed for an independent spent fuel storage installation, the type of facility at which a holder of a power reactor operating license would store spent fuel in casks in accordance with 10 CFR part 72, include tornado winds and tornado-generated missiles, a design basis earthquake, a design basis flood, an accidental cask drop, lightning effects, fire, explosions, and other incidents.

Considering the specific design requirements for each accident condition, the design of the cask would prevent loss of confinement, shielding, and criticality control in the event of an accident. If there is no loss of confinement, shielding, or criticality control, the environmental impacts resulting from an accident would be insignificant. This amendment does not reflect a significant change in design or fabrication of the cask.

Because there are no significant design or process changes, any resulting occupational exposure or offsite dose rates from the implementation of Amendment No. 13 would remain well within the 10 CFR part 20 limits. Therefore, the proposed changes will not result in any radiological or non-radiological environmental impacts that significantly differ from the environmental impacts evaluated in the environmental assessment supporting the July 18, 1990 final rule. There will be no significant change in the types or significant revisions in the amounts of any effluent released, no significant

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increase in the individual or cumulative radiation exposure, and no significant increase in the potential for or consequences from radiological accidents. The staff documented its safety findings in the preliminary safety evaluation report.

#### D. Alternative to the Action

The alternative to this action is to deny approval of Amendment No. 13 and end the direct final rule. Consequently, any 10 CFR part 72 general licensee that seeks to load spent nuclear fuel into the Holtec International HI-STORM 100 Cask System and utilize the technical specifications in accordance with the changes described in proposed Amendment No. 13, would have to request an exemption from the requirements of 10 CFR 72.212 and 72.214. Under this alternative, interested licensees would have to prepare, and the NRC would have to review, a separate exemption request, thereby increasing the administrative burden upon the NRC and the costs to each licensee. Therefore, the environmental impacts would be the same, or more likely greater than, the proposed action.

#### E. Alternative Use of Resources

Approval of Amendment No. 13 to Certificate of Compliance No. 1014 would result in no irreversible commitment of resources.

#### F. Agencies and Persons Contacted

No agencies or persons outside the NRC were contacted in connection with the preparation of this environmental assessment.

#### G. Finding of No Significant Impact

The environmental impacts of the action have been reviewed under the requirements in the National Environmental Policy Act of 1969, as amended, and the NRC's regulations in subpart A of 10 CFR part 51, "Environmental Protection Regulations for Domestic Licensing and Related Regulatory Functions." Based on the foregoing environmental assessment, the NRC concludes that this direct final rule entitled "List of Approved Spent Fuel Storage Casks: Holtec International HI-STORM 100 Cask System, Certificate of Compliance No. 1014, Amendment No. 13," will not have a significant effect on the human environment. Therefore, the NRC has determined that an environmental impact statement is not necessary for this direct final rule.

#### IX. Paperwork Reduction Act Statement

This direct final rule does not contain any new or amended collections of information subject to the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 et seq.). Existing collections of information were approved by the Office of Management and Budget, approval number 3150-0132.

#### **Public Protection Notification**

The NRC may not conduct or sponsor, and a person is not required to respond to, a request for information or an information collection requirement unless the requesting document displays a currently valid Office of Management and Budget control number.

#### X. Regulatory Flexibility Certification

Under the Regulatory Flexibility Act of 1980 (5 U.S.C. 605(b)), the NRC certifies that this direct final rule will not, if issued, have a significant economic impact on a substantial number of small entities. This direct final rule affects only nuclear power plant licensees and Holtec International. These entities do not fall within the scope of the definition of small entities set forth in the Regulatory Flexibility Act or the size standards established by the NRC (10 CFR 2.810).

#### XI. Regulatory Analysis

On July 18, 1990 (55 FR 29181), the NRC issued an amendment to 10 CFR part 72 to provide for the storage of spent nuclear fuel under a general license in cask designs approved by the NRC. Any nuclear power reactor licensee can use NRC-approved cask designs to store spent nuclear fuel if it notifies the NRC in advance, the spent fuel is stored under the conditions specified in the cask's Certificate of Compliance, and the conditions of the general license are met. A list of NRC-approved cask designs is contained in 10 CFR 72.214. On May 1, 2000 (65 FR 25241), the NRC issued an amendment to 10 CFR part 72 that approved the HI-STORM 100 Cask System design by adding it to the list of NRC-approved cask designs in 10 CFR 72.214.

On November 19, 2018, Holtec International submitted a request to the NRC to amend Certificate of Compliance No. 1014 by adding Amendment No. 13. Holtec International submitted this application to amend the Holtec International HI-STORM 100 Cask System as described in Section IV, "Discussion of Changes," of this document.

The alternative to this action is to withhold approval of Amendment No. 13 and to

require any 10 CFR part 72 general licensee seeking to load spent nuclear fuel into the Holtec International HI-STORM 100 Cask System under the changes described in Amendment No. 13 to request an exemption from the requirements of 10 CFR 72.212 and 72.214. Under this alternative, each interested 10 CFR part 72 licensee would have to prepare, and the NRC would have to review, a separate exemption request, thereby increasing the administrative burden upon the NRC and the costs to each licensee.

Approval of this direct final rule is consistent with previous NRC actions. Further, as documented in the preliminary safety evaluation report and environmental assessment, this direct final rule will have no adverse effect on public health and safety or the environment. This direct final rule has no significant identifiable impact or benefit on other Government agencies. Based on this regulatory analysis, the NRC concludes that the requirements of this direct final rule are commensurate with the NRC's responsibilities for public health and safety and the common defense and security. No other available alternative is believed to be as satisfactory, and therefore, this action is recommended.

#### XII. Backfitting and Issue Finality

The NRC has determined that the backfit rule (10 CFR 72.62) does not apply to this direct final rule. Therefore, a backfit analysis is not required. This direct final rule revises Certificate of Compliance No. 1014 for the Holtec International HI-STORM 100 Cask System, as currently listed in 10 CFR 72.214, "List of approved spent fuel storage casks." The revision requests changes to Table 2.1-2: PWR Fuel Assembly Characteristics of Appendix B of the technical specifications to update the initial uranium weight for the 16x16B and 16x16C assembly classes to match the value for 16x16A.

Amendment No. 13 to Certificate of Compliance No. 1014 for the Holtec International HI-STORM 100 Cask System was initiated by Holtec International and was not submitted in response to new NRC requirements, or an NRC request for amendment. Amendment No. 13 applies only to new casks fabricated and used under Amendment No. 13. These changes do not affect existing users of the Holtec International HI-STORM 100 Cask System, and the current Amendment No. 12 continues to be effective for existing users. While current users of this storage system may comply with the new requirements in Amendment No. 13, this would be a voluntary decision on the part of current users.

For these reasons, Amendment No. 13 to Certificate of Compliance No. 1014 does not constitute backfitting under 10 CFR 72.62 or 10 CFR 50.109(a)(1), or otherwise represent an inconsistency with the issue finality provisions applicable to combined licenses in 10 CFR part 52. Accordingly, the NRC staff has not prepared a backfit analysis for this rulemaking.

#### XIII. Congressional Review Act

This direct final rule is not a rule as defined in the Congressional Review Act.

#### XIV. Availability of Documents

The documents identified in the following table are available to interested persons through one or more of the following methods, as indicated.

DOCUMENT	ADAMS ACCESSION NO. / WEB LINK / <i>FEDERAL REGISTER</i> CITATION
Letter from Holtec International dated November 19, 2018, Submitting Request for Amendment No. 13 to Certificate of Compliance No. 1014	ML18325A154
Proposed Certificate of Compliance No. 1014 Amendment No. 13, Certificate of Compliance for Spent Fuel Storage Casks	ML18351A173
Proposed Certificate of Compliance No. 1014 Amendment No. 13, Technical Specifications, Appendix A	ML18351A174
Proposed Certificate of Compliance No. 1014 Amendment No. 13, Technical Specifications, Appendix B	ML18351A175
Proposed Certificate of Compliance No. 1014 Amendment No. 13, Technical Specifications, Appendix A-100U	ML18351A176
Proposed Certificate of Compliance No. 1014 Amendment No. 13, Technical Specifications, Appendix B-100U	ML18351A177
Certificate of Compliance No. 1014 Amendment No. 13, Preliminary Safety Evaluation Report	ML18351A178

The NRC may post materials related to this document, including public comments, on the Federal Rulemaking web site at <a href="http://www.regulations.gov">http://www.regulations.gov</a> under Docket ID NRC-2019-0030. The Federal Rulemaking web site allows you to receive alerts when changes or additions occur in a docket folder. To subscribe: (1) navigate to the docket folder (NRC-2019-0030); (2) click the "Sign up for E-mail Alerts" link; and (3) enter your e-mail address and select how frequently you would like to receive e-mails (daily, weekly, or monthly).

## List of Subjects in 10 CFR Part 72

Administrative practice and procedure, Hazardous waste, Indians,

Intergovernmental relations, Nuclear energy, Penalties, Radiation protection, Reporting and recordkeeping requirements, Security measures, Whistleblowing.

For the reasons set out in the preamble and under the authority of the Atomic Energy Act of 1954, as amended; the Energy Reorganization Act of 1974, as amended; the Nuclear Waste Policy Act of 1982, as amended; and 5 U.S.C. 552 and 553; the NRC is adopting the following amendments to 10 CFR part 72:

## PART 72 - LICENSING REQUIREMENTS FOR THE INDEPENDENT STORAGE OF SPENT NUCLEAR FUEL, HIGH-LEVEL RADIOACTIVE WASTE, AND REACTOR-RELATED GREATER THAN CLASS C WASTE

#### 1. The authority citation for part 72 continues to read as follows:

**Authority:** Atomic Energy Act of 1954, secs. 51, 53, 57, 62, 63, 65, 69, 81, 161, 182, 183, 184, 186, 187, 189, 223, 234, 274 (42 U.S.C. 2071, 2073, 2077, 2092, 2093, 2095, 2099, 2111, 2201, 2210e, 2232, 2233, 2234, 2236, 2237, 2238, 2273, 2282, 2021); Energy Reorganization Act of 1974, secs. 201, 202, 206, 211 (42 U.S.C. 5841, 5842, 5846, 5851); National Environmental Policy Act of 1969 (42 U.S.C. 4332); Nuclear Waste Policy Act of 1982, secs. 117(a), 132, 133, 134, 135, 137, 141, 145(g), 148, 218(a) (42 U.S.C. 10137(a), 10152, 10153, 10154, 10155, 10157, 10161, 10165(g), 10168, 10198(a)); 44 U.S.C. 3504 note.

2. In § 72.214, Certificate of Compliance 1014 is revised to read as follows:

#### § 72.214 List of approved spent fuel storage casks.

\* \* \* \* \*

Certificate Number: 1014.

Initial Certificate Effective Date: May 31, 2000.

Amendment Number 1 Effective Date: July 15, 2002.

Amendment Number 2 Effective Date: June 7, 2005.

Amendment Number 3 Effective Date: May 29, 2007.

Amendment Number 4 Effective Date: January 8, 2008.

Amendment Number 5 Effective Date: July 14, 2008.

Amendment Number 6 Effective Date: August 17, 2009.

Amendment Number 7 Effective Date: December 28, 2009.

Amendment Number 8 Effective Date: May 2, 2012, as corrected on November 16, 2012

(ADAMS Accession No. ML12213A170); superseded by Amendment 8, Revision 1

Effective Date: February 16, 2016.

Amendment Number 8, Revision 1 Effective Date: February 16, 2016.

Amendment Number 9 Effective Date: March 11, 2014, superseded by Amendment

Number 9, Revision 1, on March 21, 2016.

Amendment Number 9, Revision 1, Effective Date: March 21, 2016, as corrected

(ADAMS Accession No. ML17236A451).

Amendment Number 10 Effective Date: May 31, 2016, as corrected (ADAMS Accession No. ML17236A452).

Amendment Number 11 Effective Date: February 25, 2019.

Amendment Number 12 Effective Date: February 25, 2019.

Amendment Number 13 Effective Date: May 13, 2019.

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.

\* \* \* \* \*

Dated at Rockville, Maryland, this 14th day of February, 2019.

For the Nuclear Regulatory Commission.

## /RA/

Margaret M. Doane, Executive Director for Operations.