

# Rules and Regulations

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## NUCLEAR REGULATORY COMMISSION

### 10 CFR Part 72

[NRC-2011-0007]

RIN 3150-A190

### List of Approved Spent Fuel Storage Casks: HI-STORM Flood/Wind Addition

**AGENCY:** Nuclear Regulatory Commission.

**ACTION:** Direct final rule.

**SUMMARY:** The U. S. Nuclear Regulatory Commission (NRC or the Commission) is amending its regulations to add the HI-STORM Flood/Wind cask system to the "List of Approved Spent Fuel Storage Casks." This direct final rule allows the holders of power reactor operating licenses to store spent fuel in this approved cask system under a general license.

**DATES:** The final rule is effective June 13, 2011, unless significant adverse comments are received by April 27, 2011. 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. If the rule is withdrawn, timely notice will be published in the **Federal Register**.

**ADDRESSES:** You can access publicly available documents related to this document using the following methods:

*Federal e-Rulemaking Portal:* Go to <http://www.regulations.gov> and search for documents filed under Docket ID [NRC-2011-0007]. Address questions about NRC dockets to Carol Gallagher 301-492-3668; e-mail [Carol.Gallagher@nrc.gov](mailto:Carol.Gallagher@nrc.gov).

*NRC's Public Document Room (PDR):* The public may examine and have copied for a fee publicly available

documents at the NRC's PDR, Room O-1F21, One White Flint North, 11555 Rockville Pike, Rockville, Maryland.

*NRC's Agencywide Documents Access and Management System (ADAMS):* Publicly available documents created or received at the NRC are available electronically at the NRC's Electronic Reading Room at <http://www.nrc.gov/reading-rm/adams.html>. From this page, the public can gain entry into ADAMS, which provides text and image files of NRC's public documents. If you do not have access to ADAMS or if there are problems in accessing the documents located in ADAMS, contact the NRC's PDR Reference staff at 1-800-397-4209, 301-415-4737, or by e-mail to [pdr.resource@nrc.gov](mailto:pdr.resource@nrc.gov). An electronic copy of the proposed Certificate of Compliance (CoC), Technical Specifications (TS), and preliminary safety evaluation report (SER) can be found under ADAMS Package Accession Number ML103020135. The ADAMS Accession Number for the Holtec international, Inc. (Holtec) application, dated September 18, 2009, is ML092650747.

CoC No. 1032, the TS, the preliminary SER, and the environmental assessment are available for inspection at the NRC's PDR, Room O-1F21, One White Flint North, 11555 Rockville Pike, Rockville, Maryland. Single copies of these documents may be obtained from Gregory Trussell, Office of Federal and State Materials and Environmental Management Programs, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, telephone 301-415-6445, e-mail [Gregory.Trussell@nrc.gov](mailto:Gregory.Trussell@nrc.gov).

**FOR FURTHER INFORMATION CONTACT:** Gregory Trussell, Office of Federal and State Materials and Environmental Management Programs, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, telephone 301-415-6445, e-mail [Gregory.Trussell@nrc.gov](mailto:Gregory.Trussell@nrc.gov).

### SUPPLEMENTARY INFORMATION:

#### Background

Section 218(a) of the Nuclear Waste Policy Act (NWPA) of 1982, as amended, requires that "the Secretary [of the U.S. Department of Energy (DOE)] 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 NWPA states, in part, that "the Commission shall, by rule, establish procedures for the licensing of any technology approved by the Commission under Section 218(a) for use at the site of any civilian nuclear power reactor."

To implement this mandate, the NRC approved dry storage of spent nuclear fuel in NRC-approved casks under a general license by publishing a final rule in Title 10 of the Code of Federal Regulations (10 CFR) part 72, which added a new Subpart K within 10 CFR part 72, 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 within 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.

### Discussion

This rule will add the Holtec HI-STORM Flood/Wind (FW) cask system to the list of approved spent fuel storage casks in 10 CFR 72.214. Following the procedures specified in 10 CFR 72.230 of Subpart L, Holtec submitted an application for NRC approval, together with the Safety Analysis Report (SAR) entitled "Safety Analysis Report on the HI-STORM FW System." The NRC evaluated the Holtec submittal and issued a preliminary SER and a proposed CoC for the HI-STORM FW System.

The HI-STORM FW System provides the following: (1) The ability to store and transport Boiling Water Reactor (BWR) fuel with high initial enrichment (up to 4.8 weight percent uranium-235 planar average) without reliance on burnup or gadolinium credit; (2) the ability to load and store spent nuclear fuel from the longest to the shortest currently, and expected to be produced, in the United States without requiring site crane upgrades; (3) a reduction in the 10 CFR part 71 burnup credit requirement for the Pressurized Water Reactor (PWR) basket allowing transportation of 5 weight percent uranium-235 fuel with moderate

burnup; (4) enlarged storage cell opening sizes in both PWR and BWR multipurpose canisters (MPC) to ensure distorted irradiated fuel will fit without difficulty and to permit canisterized fuel to be stored in certain designated locations; (5) greater heat rejection capacity with lower peak fuel cladding temperature than the HI-STORM 100 cask system, CoC No. 1014; and (6) a variable weight (HI-TRAC VW) transfer cask that will allow use of the full capacity of a facility's cask crane. The HI-STORM FW System consists of the following major components: HI-STORM FW Overpack, PWR MPC-37, BWR MPC-89, and HI-TRAC VW Transfer Cask.

The NRC finds that the HI-STORM FW System, as designed and when fabricated and used under the conditions specified in its CoC, meets the requirements of 10 CFR part 72. Thus, use of the HI-STORM FW System, as approved by the NRC, will provide adequate protection of public health and safety. With this final rule, the NRC is approving the use of the HI-STORM FW System under the general license in 10 CFR part 72, subpart K, by holders of power reactor operating licenses under 10 CFR part 50. Simultaneously, the NRC is issuing a final SER and CoC that will be effective on June 13, 2011. Single copies of the CoC and SER are available for public inspection and/or copying for a fee at the NRC's Public Document Room, Room O-1F21, One White Flint North, 11555 Rockville Pike, Rockville, Maryland.

This direct final rule amends 10 CFR 72.214 by adding CoC No. 1032 to the list of approved spent fuel storage casks.

The HI-STORM FW System, when used under the conditions specified in CoC No. 1032, the TS, and NRC regulations, will meet the requirements of part 72; thus, adequate protection of public health and safety will continue to be ensured.

#### Discussion of Amendments by Section

##### *§ 72.214 List of Approved Spent Fuel Storage Casks*

CoC No. 1032 is added to the list of approved spent fuel storage casks.

#### Procedural Background

The NRC is using the "direct final rule procedure" to add CoC No. 1032 to the list of approved storage casks because the Holtec HI-STORM FW cask system is considered to be similar to other previously approved storage casks and, therefore, 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 June 13, 2011. However, if the NRC receives significant adverse comments on this direct final rule by April 27, 2011, 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 elsewhere in 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 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.

(3) The comment causes the NRC staff to make a change (other than editorial) to the rule, CoC, or TS.

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

#### 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 is adding the HI-STORM FW System to the list of NRC-approved cask systems for spent fuel storage in 10 CFR 72.214. This action does not constitute the establishment of a standard that contains generally applicable requirements.

#### 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 Title 10 of the Code of Federal Regulations. Although an Agreement State may not adopt program elements reserved to NRC, it may wish to inform its licensees of certain requirements via a mechanism that is consistent with the particular State's administrative procedure laws but does not confer regulatory authority on the State.

#### Plain Language

The Presidential Memorandum, "Plain Language in Government Writing," published June 10, 1998 (63 FR 31883), directed that the Government's documents be in clear and accessible language. The NRC requests comments on this direct final rule specifically with respect to the clarity and effectiveness of the language used. Comments should be sent to the address listed under the heading **ADDRESSES**, above.

#### Finding of No Significant Environmental Impact: Availability

Under the National Environmental Policy Act of 1969, as amended, and the NRC regulations in Subpart A of 10 CFR part 51, the NRC has determined that this rule, if adopted, would not be a major Federal action significantly affecting the quality of the human environment and, therefore, an environmental impact statement is not required. The NRC has prepared an environmental assessment and, on the basis of this environmental assessment, has made a finding of no significant impact. The rule will add the CoC for the HI-STORM FW System, CoC No. 1032, 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. The HI-STORM FW System provides the following: (1) The ability to store and transport BWR fuel with high initial enrichment (up to 4.8 weight percent uranium-235 planar average) without reliance on burnup or gadolinium credit; (2) the ability to load and store spent nuclear fuel from the longest to

the shortest currently, and expected to be produced, in the United States without requiring site crane upgrades; (3) a reduction in the 10 CFR part 71 burnup credit requirement for the PWR basket allowing transportation of 5 weight percent uranium-235 fuel with moderate burnup; (4) enlarged storage cell opening sizes in both PWR and BWR MPCs to ensure distorted irradiated fuel will fit without difficulty and to permit canisterized fuel to be stored in certain designated locations; (5) greater heat rejection capacity with lower peak fuel cladding temperature than the HI-STORM 100 cask system, CoC No. 1014; and (6) a variable weight (HI-TRAC VW) transfer cask that will allow use of the full capacity of a facility's cask crane. The HI-STORM FW System consists of the following major components: HI-STORM FW Overpack, PWR MPC-37, BWR MPC-89, and HI-TRAC VW Transfer Cask.

The environmental assessment and finding of no significant impact on which this determination is based are available for inspection at the NRC Public Document Room, Room O-1F21, One White Flint North, 11555 Rockville Pike, Rockville, Maryland. Single copies of the environmental assessment and finding of no significant impact are available from Gregory Trussell, Office of Federal and State Materials and Environmental Management Programs, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, telephone: 301-415-6445, e-mail: [Gregory.Trussell@nrc.gov](mailto:Gregory.Trussell@nrc.gov).

#### **Paperwork Reduction Act Statement**

This rule does not contain any information collection requirements and, therefore, is not subject to the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 *et seq.*). Existing requirements were approved by the Office of Management and Budget (OMB), 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 OMB control number.

#### **Regulatory Analysis**

On July 18, 1990 (55 FR 29181), the Commission issued an amendment to 10 CFR part 72. The amendment provided for the storage of spent nuclear fuel in cask systems with designs approved by the NRC under a general license. Any nuclear power reactor licensee can use cask systems with designs approved by

the NRC 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 CoC, and the conditions of the general license are met. In that rule, four spent fuel storage casks were approved for use at reactor sites and were listed in 10 CFR 72.214. That rule envisioned that storage casks certified in the future could be routinely added to the listing in 10 CFR 72.214 through the rulemaking process. Procedures and criteria for obtaining NRC approval of new spent fuel storage cask designs were provided in 10 CFR part 72, subpart L.

The alternative to this action is to withhold approval of this new design and issue a site-specific license to each utility that proposes to use the casks. This alternative would cost both the NRC and utilities more time and money for each site-specific license. Conducting site-specific reviews would ignore the procedures and criteria currently in place for the addition of new cask designs that can be used under a general license, and would be in conflict with NWPA direction to the Commission to approve technologies for the use of spent fuel storage at the sites of civilian nuclear power reactors without, to the maximum extent practicable, the need for additional site reviews. This alternative also would tend to exclude new vendors from the business market without cause and would arbitrarily limit the choice of cask designs available to power reactor licensees. This final rule will eliminate the above problems and is consistent with previous Commission actions. Further, the rule will have no adverse effect on public health and safety.

The benefit of this rule to nuclear power reactor licensees is to make available a greater choice of spent fuel storage cask designs that can be used under a 10 CFR part 50 general license. The new cask vendors with casks to be listed in 10 CFR 72.214 benefit by having to obtain NRC certificates only once for a design that can then be used by more than one power reactor licensee. The NRC also benefits because it will need to certify a cask design only once for use by multiple licensees. Casks approved through rulemaking are to be suitable for use under a range of environmental conditions sufficiently broad to encompass multiple nuclear power plants in the United States without the need for further site-specific approval by NRC. Vendors with cask designs already listed may be adversely impacted because power reactor licensees may choose a newly listed design over an existing one. However, the NRC is required by its regulations

and NWPA direction to certify and list approved casks. This rule has no significant identifiable impact or benefit on other Government agencies.

Based on the above discussion of the benefits and impacts of the alternatives, the NRC concludes that the requirements of the final rule are commensurate with the Commission's responsibilities for public health and safety and the common defense and security. No other available alternative is believed to be as satisfactory, and thus, this action is recommended.

#### **Regulatory Flexibility Certification**

Under the Regulatory Flexibility Act of 1980 (5 U.S.C. 605(b)), the NRC certifies that this 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. 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).

#### **Backfit Analysis**

The NRC has determined that the backfit rule (10 CFR 72.62) does not apply to this direct final rule because this amendment does not involve any provisions that would impose backfits as defined in 10 CFR Chapter 1. Therefore, a backfit analysis is not required.

#### **Congressional Review Act**

Under the Congressional Review Act of 1996, the NRC has determined that this action is not a major rule and has verified this determination with the Office of Information and Regulatory Affairs, Office of Management and Budget.

#### **List of Subjects in 10 CFR Part 72**

Administrative practice and procedure, Hazardous waste, Nuclear materials, Occupational safety and health, Radiation protection, Reporting and recordkeeping requirements, Security measures, Spent fuel, Whistle blowing.

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:** Secs. 51, 53, 57, 62, 63, 65, 69, 81, 161, 182, 183, 184, 186, 187, 189, 68 Stat. 929, 930, 932, 933, 934, 935, 948, 953, 954, 955, as amended, sec. 234, 83 Stat. 444, as amended (42 U.S.C. 2071, 2073, 2077, 2092, 2093, 2095, 2099, 2111, 2201, 2232, 2233, 2234, 2236, 2237, 2238, 2282); sec. 274, Pub. L. 86–373, 73 Stat. 688, as amended (42 U.S.C. 2021); sec. 201, as amended, 202, 206, 88 Stat. 1242, as amended, 1244, 1246 (42 U.S.C. 5841, 5842, 5846); Pub. L. 95–601, sec. 10, 92 Stat. 2951 as amended by Pub. L. 102–486, sec. 7902, 106 Stat. 3123 (42 U.S.C. 5851); sec. 102, Pub. L. 91–190, 83 Stat. 853 (42 U.S.C. 4332); secs. 131, 132, 133, 135, 137, 141, Pub. L. 97–425, 96 Stat. 2229, 2230, 2232, 2241, sec. 148, Pub. L. 100–203, 101 Stat. 1330–235 (42 U.S.C. 10151, 10152, 10153, 10155, 10157, 10161, 10168); sec. 1704, 112 Stat. 2750 (44 U.S.C. 3504 note); sec. 651(e), Pub. L. 109–58, 119 Stat. 806–10 (42 U.S.C. 2014, 2021, 2021b, 2111).

Section 72.44(g) also issued under secs. 142(b) and 148(c), (d), Pub. L. 100–203, 101 Stat. 1330–232, 1330–236 (42 U.S.C. 10162(b), 10168(c),(d)). Section 72.46 also issued under sec. 189, 68 Stat. 955 (42 U.S.C. 2239); sec. 134, Pub. L. 97–425, 96 Stat. 2230 (42 U.S.C. 10154). Section 72.96(d) also issued under sec. 145(g), Pub. L. 100–203, 101 Stat. 1330–235 (42 U.S.C. 10165(g)). Subpart J also issued under secs. 2(2), 2(15), 2(19), 117(a), 141(h), Pub. L. 97–425, 96 Stat. 2202, 2203, 2204, 2222, 2244 (42 U.S.C. 10101, 10137(a), 10161(h)). Subparts K and L are also issued under sec. 133, 98 Stat. 2230 (42 U.S.C. 10153) and sec. 218(a), 96 Stat. 2252 (42 U.S.C. 10198).

■ 2. In § 72.214, Certificate of Compliance 1032 is added to read as follows:

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

\* \* \* \* \*

Certificate Number: 1032.

Initial Certificate Effective Date: June 13, 2011.

SAR Submitted by: Holtec International, Inc.

SAR Title: Safety Analysis Report on the HI–STORM FW System.

Docket Number: 72–1032.

Certificate Expiration Date: June 13, 2031.

Model Numbers: MPC–37, MPC–89.

Dated at Rockville, Maryland, this 8th day of February 2011.

For the Nuclear Regulatory Commission.  
**R.W. Borchardt,**  
*Executive Director for Operations.*  
[FR Doc. 2011–7102 Filed 3–25–11; 8:45 am]  
**BILLING CODE 7590–01–P**

**DEPARTMENT OF TRANSPORTATION**

**Federal Aviation Administration**

**14 CFR Part 25**

**[Docket No. NM438 Special Conditions No. 25–423–SC]**

**Special Conditions: Gulfstream Model GVI Airplane; High Incidence Protection**

**AGENCY:** Federal Aviation Administration (FAA), DOT.

**ACTION:** Final special conditions.

**SUMMARY:** These special conditions are issued for the Gulfstream GVI airplane. This airplane will have novel or unusual design features when compared to the state of technology envisioned in the airworthiness standards for transport category airplanes associated with the use of high incidence protection. The applicable airworthiness regulations do not contain adequate or appropriate safety standards for these design features. These special conditions contain the additional safety standards that the Administrator considers necessary to establish a level of safety equivalent to that established by the existing airworthiness standards.

**DATES:** *Effective Date:* April 27, 2011.

**FOR FURTHER INFORMATION CONTACT:** Joe Jacobsen, FAA, Airplane and Flight Crew Interface Branch, ANM–111, Transport Standards Staff, Transport Airplane Directorate, Aircraft Certification Service, 1601 Lind Avenue, SW., Renton, Washington 98057–3356; telephone (425) 227–2011; facsimile (425) 227–1320.

**SUPPLEMENTARY INFORMATION:**

**Background**

On March 29, 2005, Gulfstream Aerospace Corporation (hereafter referred to as “Gulfstream”) applied for an FAA type certificate for its new Gulfstream Model GVI passenger airplane. Gulfstream later applied for, and was granted, an extension of time for the type certificate, which changed the effective application date to September 28, 2006. The Gulfstream Model GVI airplane will be an all-new, two-engine jet transport airplane with an executive cabin interior. The maximum takeoff weight will be 99,600 pounds, with a maximum passenger count of 19 passengers.

**Type Certification Basis**

Under provisions of Title 14 Code of Federal Regulations (14 CFR) 21.17, Gulfstream must show that the Gulfstream Model GVI airplane (hereafter referred to as “the GVI”) meets the applicable provisions of 14 CFR part 25, as amended by Amendments 25–1 through 25–119, 25–122 and 25–124. If the Administrator finds that the applicable airworthiness regulations (*i.e.*, 14 CFR part 25) do not contain adequate or appropriate safety standards for the GVI because of a novel or unusual design feature, special conditions are prescribed under the provisions of § 21.16.

Special conditions are initially applicable to the model for which they are issued. Should the type certificate for that model be amended later to include any other model that incorporates the same novel or unusual design features, the special conditions would also apply to the other model under the provisions of § 21.101.

In addition to complying with the applicable airworthiness regulations and special conditions, the GVI must comply with the fuel vent and exhaust emission requirements of 14 CFR part 34 and the noise certification requirements of 14 CFR part 36. The FAA must also issue a finding of regulatory adequacy pursuant to section 611 of Public Law 92–574, the “Noise Control Act of 1972.”

The FAA issues special conditions, as defined in 14 CFR 11.19, in accordance with § 11.38, and they become part of the type certification basis under § 21.17(a)(2).

**Novel or Unusual Design Features**

The GVI is equipped with a novel or unusual design feature: A high incidence protection system that replaces the stall warning system during normal operating conditions, prohibits the airplane from stalling, limits the angle of attack at which the airplane can be flown during normal low speed operation, and cannot be overridden by the flight crew. The system’s application of this angle of attack limit impacts the stall speed determination, the stall characteristics, the stall warning demonstration, and the longitudinal airplane handling characteristics. The current regulations, including §§ 25.103, 25.145, 25.201, 25.203, 25.207 and 25.1323, do not address this type of protection feature.

**Discussion**

These special conditions, which include airplane performance requirements, will establish a level of