



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

PRELIMINARY SAFETY EVALUATION REPORT

**DOCKET NO. 72-1032
HOLTEC INTERNATIONAL
CERTIFICATE OF COMPLIANCE NO. 1032
HI-STORM FLOOD AND WIND SYSTEM
AMENDMENT NO. 8**

SUMMARY

This safety evaluation report (SER) documents the U.S. Nuclear Regulatory Commission (NRC) staff's review and evaluation of the amendment request to amend Certificate of Compliance (CoC) No. 1032 for the HI-STORM FW System. By letter dated July 30, 2021 (Holtec, 2021), Holtec International (hereinafter referred to as the "applicant") requested that the NRC amend the CoC to update the system description in the CoC to clarify that only the portions of MPC components that come into contact with the pool water need to be made of stainless steel or aluminum. The previous description stated that MPC components that may come into contact with pool water are made entirely of stainless steel or aluminum. The applicant is also proposing a minor editorial change. The amended CoC, when codified through rulemaking, will be denoted as Amendment No. 8 to CoC No. 1032.

The staff's evaluation is based on a review of the applicant's amendment application and whether it meets the applicable requirements of 10 CFR Part 72 for dry storage of spent nuclear fuel. The staff's evaluation focused only on modifications requested in the amendment as supported by the submitted revised Final Safety Analysis Report (FSAR) (see Agencywide Document Access and Management System [ADAMS] Accession No. ML21211A612) and did not reassess previous revisions of the FSAR nor previous amendments to the CoC. In its review, the staff followed the guidance in NUREG-2215, "Standard Review Plan for Spent Fuel Dry Storage Systems and Facilities" (NRC, 2020).

1.0 GENERAL DESCRIPTION

The objective of this chapter is to review the changes requested to CoC No. 1032 for the HI-STORM FW System to ensure that the applicant provided an adequate description of the pertinent features of the storage system and the changes requested in the application. The applicant proposed to update the HI-STORM FW description system in SAR section 1.2.1.1, as well as the CoC, to clearly indicate that only the portions of the components that come into contact with the pool water need to be made of stainless steel or aluminum. Staff reviewed the changes and determined that the changes to both the SAR and CoC are editorial in nature. Staff also provided a more detailed evaluation evaluation of the change in section 8.0 of this safety evaluation report. Based on a review of the application information, staff finds the change acceptable.

2.0 PRINCIPAL DESIGN CRITERIA

The applicant did not propose any changes that affected the staff's previous evaluation of the principal design criteria that was provided in previous safety evaluations for CoC No. 1032, Amendments No. 1 through 5. Therefore, the staff determined that a new evaluation was not required.

3.0 STRUCTURAL EVALUATION

The applicant did not propose any changes that affected the staff's previous structural evaluation that was provided in previous safety evaluations for CoC No. 1032, Amendments No. 1 through 5. Therefore, the staff determined that a new evaluation was not required.

4.0 THERMAL EVALUATION

The applicant did not propose any changes that affect the staff's thermal evaluation provided in previous safety evaluations for CoC No. 1032, Amendments No. 1 through 5. Therefore, the staff determined that a new evaluation was not required.

5.0 CONFINEMENT EVALUATION

The applicant did not propose any changes that affect the staff's confinement evaluation provided in previous safety evaluations for CoC No. 1032, Amendments No. 1 through 5. Therefore, the staff determined that a new evaluation was not required.

6.0 SHIELDING EVALUATION

The applicant did not propose any changes that affect the staff's shielding evaluation provided in previous safety evaluations for CoC No. 1032, Amendments No. 1 through 5. Therefore, the staff determined that a new evaluation was not required.

7.0 CRITICALITY EVALUATION

The applicant did not propose any changes that affect the staff's criticality evaluation provided in previous safety evaluations for CoC No. 1032, Amendments No. 1 through 5. Therefore, the staff determined that a new evaluation was not required.

8.0 MATERIALS EVALUATION

The objective of the staff's review is to evaluate whether the proposed revision to the FSAR storage system description (i.e., update SAR section 1.2.1.1, as well as the CoC, to clearly indicate that only the portions of the components that come into contact with the pool water need to be made of stainless steel or aluminum) represents a change to the system design and, if it represents a change to the system design, evaluate the effects of the change on the ability of the storage system to meet the requirements of 10 CFR Part 72.

The staff reviewed the CoC and FSAR, including the associated drawings, and determined that the proposed changes have no effect on the system design. The staff noted that the proposed system description update is consistent with the drawings and parts lists in FSAR Section 1.5 which currently states that the MPC lid may be either a one-piece design made entirely of

stainless steel, or a two-piece design with the top part being entirely stainless steel and the bottom part being either stainless steel or carbon steel (SA 36 or SA 516) with all exposed surfaces covered with stainless steel. Staff previously evaluated the MPC Lid two-piece design during the initial review of the system (NRC, 2011). SER Sections 3.1.1.1, 5.1, and 5.8 provided the staff's evaluation of the carbon steel portion of the bottom part of the MPC Lid two-piece design.

Based on the staff's review of the drawings, FSAR text, and CoC, the staff finds that the proposed change to the system description is consistent with the storage system design previously reviewed and approved by the staff. The applicant is proposing an editorial change to the CoC and FSAR that is consistent with the storage system materials of construction. The revision neither revised the system design, nor introduced new technical considerations that were not already considered in the staff's prior review of the HI-STORM FW system. Therefore, the staff finds the revision to the CoC and FSAR to be acceptable.

9.0 OPERATING PROCEDURES EVALUATION

The applicant did not propose any changes that affect the staff's operating procedures evaluation provided in previous safety evaluations for CoC No. 1032, Amendments No. 1 through 5. Therefore, the staff determined that a new evaluation was not required.

10.0 ACCEPTANCE TESTS AND MAINTENANCE PROGRAM EVALUATION

The applicant did not propose any changes that affect the staff's acceptance tests and maintenance program evaluation provided in previous safety evaluations for CoC No. 1032, Amendments No. 1 through 5. Therefore, the staff determined that a new evaluation was not required.

11.0 RADIATION PROTECTION EVALUATION

The applicant did not propose any changes that affect the staff's radiation protection evaluation provided in previous safety evaluations for CoC No. 1032, Amendments No. 1 through 5. Therefore, the staff determined that a new evaluation was not required.

12.0 ACCIDENT ANALYSIS EVALUATION

The applicant requested no changes to the principal design criteria related to the SSCs important to safety. For this reason, the staff finds the applicant complied with the relevant general criteria established in 10 CFR Part 72, and does not require an accident analysis evaluation of the principal design criteria.

13.0 TECHNICAL SPECIFICATIONS

The applicant did not propose any changes to the HI-STORM FW System TS. Therefore, the staff determined that a new evaluation was not required.

14.0 QUALITY ASSURANCE EVALUATION

The applicant did not propose any changes that affect the staff's quality assurance program evaluation provided in previous safety evaluations for CoC No. 1032, Amendments No. 1 through 5. Therefore, the staff determined that a new evaluation was not required.

15.0 CONCLUSIONS

The staff has performed a comprehensive review of the amendment application, during which the following requested changes to the HI-STORM FW System were considered:

Update the system description in the CoC to clearly indicate that only the portions of MPC components that come into contact with the pool water need to be made of stainless steel or aluminum.

Based on the statements and representations provided by the applicant in its amendment application, as supplemented, the staff concludes that the changes described above to the HI-STORM FW System do not affect the ability of the cask system to meet the requirements of 10 CFR Part 72. Amendment No. 6 for the HI-STORM FW System should be approved.

Issued with Certificate of Compliance No. 1032, Amendment No. 8
On _____.

References

Holtec, 2021. HI-STORM FW Amendment 8 Request, Holtec International, July 2021. ADAMS Accession No. ML21211A608.

NRC, 2011. "Certificate of Compliance No. 1032 for the HI-Storm Flood/Wind System," July 2011. ADAMS Accession No. ML111950103.

NRC, 2020. "Standard Review Plan for Spent Fuel Dry Storage Systems and Facilities," NUREG-2215, Final Report, U.S. NRC, April 2020. ADAMS Accession No. ML20121A190.