



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

August 13, 2024

Denise Elisio, Licensing Engineer  
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**SUBJECT: ISSUANCE OF CERTIFICATE OF COMPLIANCE NO. 1032, AMENDMENT NO. 7 FOR THE HI-STORM FLOOD/WIND MULTI-PURPOSE CANISTER STORAGE SYSTEM (CAC/EPID NOS. 001028/L-2021-LLA-0053)**

Dear Denise Elisio:

By a letter dated May 6, 2021 (Agencywide Documents Access and Management System [ADAMS] Accession Nos. ML21126A266), as supplemented on October 15, 2021 (ML21288A521), February 17, 2022 (ML22048C221), July 11, 2022 (ML22192A215), July 13, 2022 (ML22194A953), July 29, 2022 (ML22210A145), September 15, 2022 (ML22258A250), October 3, 2022 (ML22276A281), December 1, 2022 (ML22336A132), January 6, 2023 (ML23006A263), May 8, 2023 (ML23128A302), June 30, 2023 (ML23181A192), July 11, 2023 (ML23192A031), August 15, 2023 (ML23227A248), November 17, 2023 (ML23321A245), February 16, 2024 (ML24047A323), and April 8, 2024 (ML24100A027), Holtec International submitted an amendment request to the HI-STORM Flood/Wind (FW) Multi-purpose Canister (MPC) Storage System, Certificate of Compliance (CoC) No. 1032. On February 17, 2022 (ML22048C221), Holtec International requested to separate the CoC reorganization, also known as graded approach, from this amendment. Therefore, this certificate does not include any evaluation on the graded approach.

Amendment No. 7 to HI-STORM FW MPC Storage System includes the following changes:

Change 1 – Add a new unventilated high density (UVH) overpack, HI-STORM FW UVH, which includes high density concrete for shielding. The UVH is to be used with MPC-37, MPC-89, and the new MPC-44.

Change 2 – Modify vent and drain penetrations to include the option of a second port cover plate.

Change 3 – Allow automated equipment to perform leak test of the MPC materials and welds in the fabrication shop.

Change 4 – Change the hydrostatic pressure test of the MPC acceptance criteria to be an examination for leakage only. Remove post hydrostatic test liquid penetrant and magnetic particle examination.

Change 5 – Include the ability to use computational fluid dynamics analysis to evaluate site-specific fire accident scenario.

Change 6 – Use updated methodology for tornado missile stability calculations for freestanding HI-STORMs and HI-TRACs. Clarify the weights to be used for varying heights of HI-TRACs.

Change 7 – Add a new MPC, MPC-44, with continuous basket shim and to hold 44 pressurized-water reactor fuel assemblies of certain 14x14 fuel class. It is to be used with Version E and UVH overpacks.

Change 8 – Add a new MPC, MPC-37P, with continuous basket shim and to hold 37 PWR fuel assemblies of certain 15x15 fuel class. It is to be used with version E overpack.

Change 9 – Add HI-DRIP ancillary system which is an optional ancillary system designed to prevent water within the MPC from boiling during loading and unloading operations while loaded MPC is in the HI-TRAC.

Change 10 – Include the ability to use computational fluid dynamics analysis to evaluate site-specific burial-under-debris accident scenario.

Change 11 – Include the ability to use water without glycol in the HI-TRAC water jacket during transfer operations below 32°F based on the site-specific MPC total heat loads.

Change 12 – Add new 10x10J fuel type to approved contents in the HI-STORM FW system.

Change 13 – Update bounding fuel variables for 8x8F and 11x11A boiling water reactor fuel types in CoC appendix B.

Change 14 – Some editorial changes.


Change 15 – Adopt a stress-based structural design criterion.

Change 16 – Establish specific criteria on allowable interference due to differential thermal expansion.

As stated in the *Federal Register* (89 FR 57064, July 12, 2024), the effective date of this CoC amendment is September 25, 2024. The U.S. Nuclear Regulatory Commission safety evaluation report for this amended CoC (including the CoC and appendices) is enclosed. If you have any

questions regarding this amended certificate, please contact Yen-Ju Chen of my staff at (301) 415-1018 or [Yen-Ju.Chen@nrc.gov](mailto:Yen-Ju.Chen@nrc.gov).

Sincerely,



Signed by Diaz-Sanabria, Yaira  
on 08/13/24

Yaira Diaz-Sanabria, Chief  
Storage and Transportation Licensing Branch  
Division of Fuel Management  
Office of Nuclear Material Safety  
and Safeguards

Docket No.: 72-1032  
CAC/EPID Nos. 001028/L-2021-LLA-0053

Enclosures:

1. CoC 1032, A7, CoC
2. CoC 1032, A7, Appendix A
3. CoC 1032, A7, Appendix B
4. CoC 1032, A7, Final SER

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FOR THE HI-STORM FLOOD/WIND MULTI-PURPOSE CANISTER STORAGE  
SYSTEM (CAC/EPID NOS. 001028/L-2021-LLA-0053)

DATED: August 13, 2024

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**ADAMS Accession Nos.: ML24199A236(Pkg), ML24199A237(Ltr),  
ML24199A238(Encl 1 CoC), ML24199A239(Encl 2 Appx A), ML24199A240(Encl 3 Appx B),  
ML24199A241(Encl 4 FSER)**

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