



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

March 19, 2024

Ali Elzahri, Licensing Project Engineer
Holtec International
Krishna P. Singh Technology Campus
1 Holtec Blvd.
Camden, NJ 08104

SUBJECT: APPLICATION FOR HOLTEC MODEL NO. HI-STORM UMAX, AMENDMENT 5
- SUPPLEMENTAL INFORMATION NEEDED - ENTERPRISE PROJECT
IDENTIFICATION NUMBER L-2023-LLA-0176

Dear Ali Elzahri:

By letter dated December 14, 2023 (Agencywide Documents Access and Management System (ADAMS) Accession Number ML23348A302), you submitted an application for amendment of HI-STORM UMAX Certificate of Compliance (CoC) No. 1040. You requested changes to the CoC to add new versions of the UMAX with lid features that will provide protection for colder canisters.

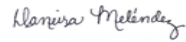
The U.S. Nuclear Regulatory Commission (NRC) staff performed an acceptance review of your application to determine if the application contains sufficient technical information in scope and depth to allow the staff to complete the detailed technical review. This letter is to advise you that, based on our acceptance review, the application does not contain sufficient technical information. The information needed to continue our review is described in the enclosure to this letter. In order to schedule our technical review, this information should be provided 30 days from the date of this letter. If the information described is not received by this date, the application will not be accepted for review. Please note that addressing this request for supplemental information (RSI) does not preclude the staff from issuing further requests for additional information during the course of the detailed technical review of this application.

The staff also included observations to allow you to start earlier on items that may be asked at a later date. Observations are not the result of a detailed technical review and may be resolved once staff begins a detailed review. Responses to observations are not required for staff to begin its technical review.

In accordance with Title 10 of the *Code of Federal Regulations*, Part 2 of the NRC's "Agency Rules of Practice and Procedure," a copy of this letter and its enclosure will be available electronically for public inspection in the NRC Public Document Room (PDR) or from the Publicly Available Records component of the NRC's ADAMS. ADAMS is accessible from the NRC website at <http://www.nrc.gov/reading-rm/adams.html>. The PDR is open by appointment. To make an appointment to visit the PDR, please send an email to PDR.Resource@nrc.gov or call 1-800-397-4209 or 301-415-4737, between 8 a.m. and 4 p.m. eastern time (ET), Monday through Friday, except Federal holidays.

If you have any questions regarding this communication, please contact me at (301) 415-7295, or via email to Daneira.Melendez-Colon@nrc.gov.

Sincerely,



Signed by Melendez-Colon, Daneira
on 03/19/24

Daneira Meléndez Colón, Project Manager
Storage and Transportation Licensing Branch
Division of Fuel Management
Office of Nuclear Material Safety
and Safeguards

Docket No.: 72-1040
EPID No.: L-2023-LLA-0176

Enclosure:
RSI with Observations

SUBJECT: APPLICATION FOR HOLTEC MODEL NO. HI-STORM UMAX, AMENDMENT 5 -
SUPPLEMENTAL INFORMATION NEEDED - ENTERPRISE PROJECT
IDENTIFICATION NUMBER L-2023-LLA-0176 DATED March 19, 2024

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ADAMS Accession No.: ML24060A095

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DATE	3/4/2024	3/4/2024	3/4/2024	3/5/2024	

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Request for Supplemental Information with Observations
Docket No. 72-1040
Certificate of Compliance No. 1040
Amendment No. 5
Model No. HI-STAR UMAX

This request for supplemental information (RSI) identifies information needed by the staff in connection with its acceptance review of the application for amendment of HI-STORM UMAX Certificate of Compliance (CoC) No. 1040, dated December 14, 2023 (Agencywide Documents Access and Management System (ADAMS) Accession Number ML23348A302). The U.S. Nuclear Regulatory Commission (NRC) staff reviewed the application using the guidance in NUREG-2215, "Standard Review Plan for Spent Fuel Dry Storage Systems and Facilities."

The requested information is listed by technical discipline of review.

I. REQUESTS FOR SUPPLEMENTAL INFORMATION

A. Operating Procedures and Acceptance Criteria and Maintenance Program

RSI-1 Provide revised final safety analysis report (FSAR) pages from the operating procedures and acceptance criteria and maintenance program chapters that incorporate necessary revisions due to the differences in Version B1 and B2 to Version B of the HI-STORM UMAX. The applicant should revise the SAR to ensure that all the changes related to this amendment are reflected.

The proposed amendment requests to modify the design of the air inlet vents with cover plates used to block and reduce the size of the vents, which result in Version B1 and B2 of the HI-STORM UMAX. However, the operating procedures and acceptance criteria and maintenance program chapters were not updated consistent with the proposed changes to ensure compliance could be maintained. Examples include, but are not limited to, the following:

- a. Section 9.2.2 provides a general checklist for performing the pre-staging inspection of the vertical ventilated module (VVM) cavities. Number 4 of that checklist states "[v]ent openings shall be free from obstructions." However, compliance could not be maintained with cover plates.
- b. The last paragraph of Section 9.3 describes routine maintenance and includes the removal of vent blockages. However, cover plates that block the vent should not be removed so clarification should be provided.
- c. For the thermal acceptance function in Table 10.1.1, under the maintenance and operations column, item b) states "[p]eriodic surveillance shall be performed by either (1) or (2) below, at the licensee's option." Items (1) or (2) are the surveillance requirements in technical specification (TS) 3.1.2, which are proposed as not applicable for

HI-STORM UMAX Version B2. Therefore, compliance with these periodic surveillance requirements in Table 10.1.1 could not be maintained for the proposed HI-STORM UMAX Version B2.

- d. The last paragraph of Section 10.3.iii states that “[t]he technical specifications require periodic surveillance of the system air inlet and outlet vents...” However, as stated in example c above, these TS are not applicable to HI-STORM UMAX Version B2 and compliance could not be maintained.

This information is needed to meet the regulatory requirements in 10 CFR 72.230(a) and 72.236(b).

B. Technical Specification Bases

- RSI-2** Provide revised FSAR pages related to the technical specification bases for the HI-STORM UMAX canister storage system in appendix 13.A that incorporate revisions based on the proposed revision of TS 3.1.2 and 5.3.3.c.

The proposed amendment includes an addition of a note regarding HI-STORM UMAX Version B2 in TS 3.1.2 and an added parenthetical phrase in TS 5.3.3.c. However, the corresponding TS bases in appendix 13.A were not updated to explain the basis of the added note or parenthetical phrase.

This information is needed to determine compliance with 10 CFR 72.230(a) and 72.236(b).

- RSI-3** As proposed in TS 5.3.3.c, provide documentation to support why the total (neutron plus gamma) dose rate limit established at the outlet vents on the VVM is only applicable to the VENTILATED VVM, or remove the proposed applicability statement. Also, the staff needs the definitions of the term “VENTILATED VVM,” if the term is proposed to be retained in the TS. Currently, VVM is defined in the TS, but VENTILATED VVM is not.

For the proposed HI-STORM UMAX Version B1 and B2, the staff notes that there is no proposed change to the air outlet vent of the VVM that would appear to necessitate a change in the radiation protection program requirements related to that component. In addition, no applicable revisions of the shielding evaluation of the HI-STORM UMAX system chapter or technical specification bases for the Holtec HI-STORM UMAX canister storage system in appendix 13.A were provided as part of the application to provide a basis for the change for the staff to review.

This information is needed to determine compliance with 10 CFR 72.230 and 72.236(d).

- RSI-4** Provide specific operability requirements for HI-STORM UMAX Version B1 in TS limiting conditions for operation (LCO) 3.1.2, as applicable.

In the proposed TS LCO 3.1.2, no specific operability requirements are described for HI-STORM UMAX Version B1. Therefore, the proposed operability requirements applicable to Version B1 is either the air inlet vents blocked less than 50% or compliance with the air temperature monitoring requirements in surveillance requirement (SR) 3.1.2. Since the cover plates installed in Version B1 block the air inlet vents by greater than 50%, only the air temperature monitoring requirements could satisfy operability.

The air temperature monitoring system is an active system and is subject to periodic failure of equipment. This could potentially cause unnecessary entries into TS LCO 3.1.2 when the spent fuel continues to be adequately cooled.

This information is needed to determine compliance with 10 CFR 72.236(l).

II. OBSERVATIONS

A. Administrative

OBS-1 Clarify (provide) the description of the HI-STORM UMAX VVM in the Certificate of Compliance to include the unique air circulation characteristics of the proposed HI-STORM UMAX Version B2.

In the proposed CoC description of the HI-STORM UMAX VVM, it states “[a]ir inlets and an air outlet allow air to circulate naturally through the cavity to cool the MPC inside.” However, this statement is not entirely accurate for the proposed HI-STORM UMAX Version B2 as the air inlets are completely blocked by cover plates.

This information is needed to determine compliance with 10 CFR 72.236(f).