



Holtec Center, 555 Lincoln Drive West, Marlton, NJ 08053

Telephone (856) 797-0900

Fax (856) 797-0909

Mr. John Goshen
c/o Document Control Desk
U. S. Nuclear Regulatory Commission
Washington, DC 20555-0001

February 20, 2012

Subject: Comments on Draft Proposed Certificate of Compliance and Preliminary Safety Evaluation Report for Amendment 9 to Certificate of Compliance No. 1014 for the HI-STORM 100 Cask System; (TAC No. L24476)

Reference: [1] NRC Letter (Goshen) to Holtec (Morin), dated February 10, 2012

Dear Mr. Goshen:

Thank you for providing Holtec the opportunity to review the Preliminary Safety Evaluation Report (SER), Certificate of Compliance (CoC), and associated Technical Specifications (TS) for Amendment 9 to the HI-STORM 100 CoC.

In Attachment 1 (total 4 pages) please find Holtec's comments on the subject documents. Holtec would appreciate another review of the documents before they become final.

Thank you for your continued effort toward timely approval of this amendment. Feel free to contact me if you have any questions.

Kindest regards,

Tammy Morin
Licensing Manager
Holtec International

cc (letter only): Mr. Michael D. Waters, USNRC
Mr. Doug Weaver, USNRC
Holtec Group 1

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Attachment 1 to Holtec Letter 5014735
Comments on Preliminary Safety Evaluation Report (SER), Certificate
of Compliance (CoC) and Technical Specifications (TS)
for Amendment #9 to 72-1014

SER Comments

- 1) General comment – please define all acronyms on first use in SER; e.g. SSI, SFP, VVM, etc...
- 2) Page 1 item “A” and page 3 item “A” – change “a shear wave velocity of 3500 ft/s or bedrock.” → “a shear wave velocity greater than or equal to 3500 ft/s or on bedrock.”
- 3) Pages 2, 11, and 18; Add to the list of changes the change made to CoC Condition #9 which is related to removal of the requirement for a supplemental cooling system.
- 4) Section 3.1.3 and 3.3.3, in two places; Please clarify that during excavation soil can be removed down to the “bottom surface of the SFP”.
- 5) Section 4.2, last paragraph on page 11; This statement is inaccurate. The 3-D HI-TRAC model proposed in this License Amendment Request (LAR) was not “previously approved by the staff” in Amendment No. 5.
- 6) Section 4.2.1, last paragraph; Please clarify that forced water circulation in the MPC is only necessary if the time to boil limit is exceeded.
- 7) Section 4.2.2.1, Assumption #2; Please add that the vacuum drying time starts after MPC blowdown.
- 8) Section 4.2.2.3; change “Kw” → “kW”.
- 9) Section 4.2.3; This LAR did not request a change to the cask cool down or re-flood analysis. This review should be limited only to the proposed changes, as stated in Section 1.0 of the SER. Holtec suggests deleting this section and renumbering.
- 10) Section 4.2.5; Recommend this section clarifies that on-site transport no longer requires a supplemental cooling system.
- 11) Section 4.3; This LAR requests changes to the analysis involving the HI-TRAC only. It does not request any changes to the design or limits for storage in the HI-STORM 100. This review should be limited only to the proposed changes, as stated in Section 1.0 of the SER. Holtec suggests deleting sections referring to HI-STORM off-normal or accident events, specifically 4.3.1.1, 4.3.1.2, 4.3.1.3, 4.3.2.1(a), 4.3.2.3, 4.3.2.4, and 4.3.2.5, and renumbering.
- 12) Section 4.3.2.1(b), second sentence; Change “The temperature rise was calculated to be 737°F.” to “The peak temperature was calculated to be 737°F.”
- 13) Section 4.3.2.2; After the first sentence Holtec suggests clarifying that heat dissipation by natural convection and radiation in the water jacket air space is included in the model.
- 14) Section 4.4; “NUREG-156” → “NUREG-1536”
- 15) Section 14.0; “AR-1014-9” → “LAR 1014-9”

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CoC Comments

- 1) Section 1.b; a rev bar exists for a change not requested in this LAR.

TS Appendix A Comments

- 1) Table 3-1 – see page 3 of this Attachment for mark-up

TS Appendix A-100U Comments

- 1) SR 3.1.1.3 – see page 4 of this Attachment for mark-up
- 2) Table 3-1; “< 30” → “≤ 30”

TS Appendix B Comments

- 1) Table 2.1-3 Note 15 – “8x8E” should say “8x8F”

TS Appendix B-100U Comments

- 1) Item 3.4.6.b. The “depth averaged densities” for the subgrades are not listed in Table 3-4 of this Appendix. These are located in FSAR Table 2.I.2. Suggest pointing to FSAR table or removing that part of the statement.
- 2) Table 3-4 – It appears that the Compressive Strength for the concrete has a typographical error. It should read “4500” not “500”

Table 3-1
 MPC Cavity Drying Limits

Fuel Burnup (MWD/MTU)	MPC Heat Load (kW)	Method of Moisture Removal (Notes 1 and 2)
All Assemblies \leq 45,000	\leq 30 (MPC-24/24E/24EF, MPC-32/32F, MPC-68/68F/68FF) \leq 36.9 (MPC-68M)	VDS (Note 3) or FHD
All Assemblies \leq 45,000	$>$ 30 (MPC-24/24E/24EF, MPC-32/32F, MPC-68/68F/68FF)	FHD
One or more assemblies $>$ 45,000	\leq 29 (MPC-68M)	VDS (Note 3 and 4) or FHD
One or more assemblies $>$ 45,000	\leq 36.9 (All MPCs)	FHD

Notes:

1. VDS means a vacuum drying system. The acceptance criterion when using a VDS is MPC cavity pressure shall be \leq 3 torr for \geq 30 minutes.
2. FHD means a forced helium dehydration system. The acceptance criterion when using an FHD system is the gas temperature exiting the demoisurizer shall be \leq 21°F for \geq 30 minutes or the gas dew point exiting the MPC shall be \leq 22.9°F for \geq 30 minutes.
3. Vacuum drying of the MPC must be performed with the annular gap between the MPC and the HI-TRAC filled with water.
4. The maximum allowable decay heat per fuel storage location is 0.426 kW

CONDITION	REQUIRED ACTION	COMPLETION TIME
E. Required Actions and associated Completion Times not met.	E.1 Remove all fuel assemblies from the SFSC.	30 days

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.1.1.1	Verify that the MPC cavity has been dried in accordance with the applicable limits in Table 3-1, within the specified vacuum drying time limits as applicable.	Once, prior to TRANSPORT OPERATIONS
SR 3.1.1.2	Verify MPC helium backfill quantity is within the limit specified in Table 3-2 for the applicable MPC model. Re-performance of this surveillance is not required upon successful completion of Action C.2.2.	Once, prior to TRANSPORT OPERATIONS
SR 3.1.1.3	Verify that the helium leak rate through the MPC vent and drain port confinement welds meets the leaktight criteria of ANSI N14.5-1997.	Once, prior to TRANSPORT OPERATIONS

Cover plates (confinement welds and the base metal)