

July 31, 2007

MEMORANDUM TO: Robert Lewis, Acting Deputy Director  
Licensing and Inspection Directorate  
Division of Spent Fuel Storage and Transportation, NMSS

FROM: Kimberly Hardin, Project Manager **/RA/**  
Licensing Branch  
Division of Spent Fuel Storage and Transportation, NMSS

SUBJECT: SUMMARY OF JULY 18, 2007, MEETING WITH HOLTEC  
INTERNATIONAL TO DISCUSS THE MODEL NO. HI-STAR HB  
TRANSPORTATION PACKAGE

### Background

A meeting was held on July 18, 2007, in Rockville, Maryland, to discuss the design of the Model No. HI-STAR 100 Version HB (HI-STAR HB) transportation package. By application dated October 5, 2006, a revision to Certificate of Compliance (CoC) No. 9261 was requested for the Model No. HI-STAR 100 system to authorize the addition of the Humboldt Bay Multi-Purpose Canister (MPC-HB) and its HI-STAR HB packaging containing Humboldt Bay fuel. In connection with staff's review of this application, additional information (RAIs) was requested by letter dated June 15, 2007. This meeting was held to discuss these questions and Holtec's proposed responses.

The meeting was noticed on June 26, 2007 (ML071770631). The meeting attendance list is provided as Enclosure No. 1.

### Discussion

The agenda (Enclosure No. 2) was not very detailed, but was generally followed. The primary reason for the meeting was to discuss the RAIs associated with the application for revision of CoC No. 9261 for the Model No. HI-STAR 100 system. Holtec plans to submit a response to the RAIs by August 3, 2007; however, this date will still need to be discussed in a follow-up telephone call.

Holtec presented proposed responses for RAIs for which clarification was needed as the following discussion delineates.

Some discussion was held regarding the definition of damaged fuel. Holtec proposed, in its application, some wording changes to the definition that needed clarification. Specifically, staff questioned the word "expected" in the proposed definition, including the type of evaluation and criteria that would be applied by the cask user. A decision was made to add a damaged fuel test to Chapter 7, "Package Operations," of the SAR; however, due to staff unavailability, a follow-up telephone call is planned to discuss this issue further.

Extensive discussion was held regarding the structural analyses. Holtec stated that the majority of the structural RAIs focus on the benchmarking of the LS-DYNA analysis model and plans to address the issues via a single benchmark package for this application and two other applications. This benchmark package will consist of two reports covering three stages of evaluation. These reports are expected to be submitted as part of the structural RAI responses.

The materials discussion involved the fabrication and qualification of the neutron absorbing materials. Further discussion of crack formation at the edges of the neutron absorbing plates will take place in a follow-up telephone call.

The question regarding the aging effects on the thermal properties of Holtite-A from thermal or radiation degradation was discussed. Holtec proposed to provide two reports in which this material was qualified to withstand the effects of the elevated temperatures and high radiation exposures. Staff expressed concern that the effects on the thermal properties over time need to be provided. The staff clarified that the issue stemmed from Holtec's proposal to remove the thermal testing requirements from the Acceptance Testing. The staff also noted the proposed change applies to all heat loads, not just the heat load for the Humboldt Bay canisters. Holtec stated that they will provide the information requested.

Other minor clarifications of RAIs were discussed, and Holtec agreed to provide the source term input files to help clarify a potential discrepancy in source terms for damaged BWR fuel. Scheduling issues will be discussed in the follow-up telephone call. Holtec expressed concern that if it didn't meet the requested response date of July 31, 2007, that the delays may be long for the CoC to be issued. A copy of the presentation slides is provided as Enclosure No. 3.

Docket No. 71-9261

TAC No. L24029

Enclosures:

1. Meeting Attendees
2. Agenda
3. Presentation Slides

The materials discussion involved the fabrication and qualification of the neutron absorbing materials. Further discussion of crack formation at the edges of the neutron absorbing plates will take place in a follow-up telephone call.

The question regarding the aging effects on the thermal properties of Holtite-A from thermal or radiation degradation was discussed. Holtec proposed to provide two reports in which this material was qualified to withstand the effects of the elevated temperatures and high radiation exposures. Staff expressed concern that the effects on the thermal properties over time need to be provided. The staff clarified that the issue stemmed from Holtec's proposal to remove the thermal testing requirements from the Acceptance Testing. The staff also noted the proposed change applies to all heat loads, not just the heat load for the Humboldt Bay canisters. Holtec stated that they will provide the information requested.

Other minor clarifications of RAIs were discussed, and Holtec agreed to provide the source term input files to help clarify a potential discrepancy in source terms for damaged BWR fuel. Scheduling issues will be discussed in the follow-up telephone call. Holtec expressed concern that if it didn't meet the requested response date of July 31, 2007, that the delays may be long for the CoC to be issued. A copy of the presentation slides is provided as Enclosure No. 3.

Docket No. 71-9261

TAC No. L24029

Enclosures:

1. Meeting Attendees
2. Agenda
3. Presentation Slides

Distribution:

NRC Attendees BWhite MCall CWithee LCampbell GBjorkman CRegan  
G:\SFPO\Hardin\Holtec\Holtec Meeting Summary 7-18-07.wpd

OFC	SFST	E	SFST		SFST		SFST		SFST	
NAME	KHardin		MDeBose		MWaters		DTang		RNelson	
DATE	7/27/07		7/27/07		7/27/07		7/31/07		7/31/07	

"C" = Copy without attachment/enclosure "E" = Copy with attachment/enclosure "N" = No copy

OFFICIAL RECORD COPY

**March 27, 2007, Meeting  
between  
Holtec International  
and  
the Nuclear Regulatory Commission**

**MEETING ATTENDANCE LIST**

Kim Hardin	NRC/SFST
Robert Nelson	NRC/SFST
Larry Campbell	NRC/SFST
Michael Waters	NRC/SFST
David Tang	NRC/SFST
Charles Interrante	NRC/SFST
Jason Piotter	NRC/SFST
Ron Parkhill	NRC/SFST
Stefan Anton	Holtec International
Luis Hinojosa	Holtec International
Alan Soler	Holtec International
Tammy Morin	Holtec International
Steve Agace	Holtec International
Wayne Hodges	H322 Consulting
Paul Manhardt	Transnuclear

**Agenda for the  
NRC/Holtec Meeting  
HI-STAR 100 HB Package Design**

1. Introductions
2. Discussion of each RAI dated June 15, 2007
3. Summary/Questions