December 13, 2006

MEMORANDUM TO: William H. Ruland, Deputy Director
Licensing and Inspection Directorate
Division of Spent Fuel Storage and Transportation, NMSS

FROM: Christopher M. Regan, Senior Project Manager
Licensing Branch
Licensing and Inspection Directorate
Division of Spent Fuel Storage and Transportation, NMSS

SUBJECT: SUMMARY OF DECEMBER 11, 2006, MEETING WITH HOLTEC INTERNATIONAL REGARDING STRUCTURAL ISSUES ASSOCIATED WITH PROPOSED AMENDMENT TO THE HI-STORM 100 CERTIFICATE OF COMPLIANCE 1014 (TAC NO. L23850)

On December 11, 2006, the Nuclear Regulatory Commission (NRC) staff from the Division of Spent Fuel Storage and Transportation met with representatives of Holtec International (Holtec) at NRC Headquarters in Rockville, Maryland. The purpose of the meeting was to provide Holtec with the opportunity to request clarification of the issues identified by the staff regarding structural analyses for the HI-STORM 100U design concept described in information provided in support of License Amendment Request (LAR) 1014-3 to the HI-STORM Certificate of Compliance (CoC). The desired outcome of the meeting was to have a mutual understanding of the outstanding structural issues and an expectation of what should be provided to the NRC should Holtec decide to resubmit the HI-STORM 100U design concept for license approval in the future. Enclosure 1 is a list of attendees; Enclosure 2 contains the Holtec presentation slides.

The staff began by presenting the historical background of the technical review of the HI-STORM 100U design concept and associated LAR. The staff then summarized the technical concerns with the seismic analyses and methodologies associated with the HI-STORM 100U design concept identified during review of Holtec's LAR. The staff's concerns focused on Holtec's proposed method of analyzing a single Vertically Ventilated Module (VVM) on a concrete slab (basemat) placed on bedrock. Specifically, that this may not accurately reflect the variety of soil conditions and site specific characteristics affecting the design response during a seismic event.

In response to the staff's concerns during their presentation, Holtec provided an alternative seismic methodology described in Enclosure 2. The methodology would be applied by a utility wishing to construct the HI-STORM 100U at a site and which would be used to identify any need for design changes to be implemented under the purview of 10 CFR 72.48. The staff questioned Holtec regarding the purpose of the analyses. Was the analysis to determine if the design was suitable for a particular site or to determine what changes would be necessary? Holtec indicated that the only item subject to change would be the basemat thickness and that the VVM design remained fixed. The staff stated a concern regarding the potential that a utility may choose the pad thickness to construct based on the analysis performed. The staff noted

that there would then be a question as to the design (pad thickness) the NRC would be approving for use. Holtec agreed to reconsider the approach to demonstrating regulatory compliance. The staff also raised a concern regarding the methods of fabrication/construction. The analyses proposed by Holtec may not accurately reflect, or bound, those array configurations present during fabrication by a utility. Specifically, how would a utility construct a pad/basemat and VVM array, backfill around them, load the VVMs with loaded Multi-Purpose Canisters (MPCs), and then return at a later date and remove the backfill to construct additional VVMs without affecting the shielding and structural characteristics of the already loaded VVMs? Additionally, it was not clear how partial construction of a HI-STORM 100U array would be considered in the analyses proposed by Holtec. Holtec noted the concerns raised by the staff.

The staff asked Holtec when the revised LAR 1014-3 application would be provided to the NRC, when the application for the HI-STORM 100U would be resubmitted for review, and what was Holtec's expectation regarding NRC review of information already submitted in support of LAR 1014-3. Holtec stated they plan on submitting revised LAR 1014-3, to remove reference to the HI-STORM 100U design, within 2 weeks. Holtec stated they plan on resubmitting an application for approval of the HI-STORM 100U in February 2007. Holtec requested a Safety Evaluation Report (SER) of the HI-STORM 100U application materials, currently with the NRC for review, as soon as possible so that it may be referenced in the February submittal. The staff indicated that it was in the process of developing the SER for the HI-STORM 100U but could not commit to a date until the revised LAR 1014-3 was submitted to the NRC. Both parties agreed that a preapplication meeting prior to submittal of the HI-STORM 100U design application would be beneficial.

No regulatory decisions were made by the NRC during the meeting on the material presented. There were no questions of note from the members of the public.

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Enclosures:
1. Attendance List
2. Presentation Slides

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OFC	SFST		SFST		SFST	
NAME	CRegan		EZiegler		RNelson	
DATE	12/12/06		12/12/06		12/13/06	

Official Record Copy

Enclosure 1

Attendee List

Meeting with Holtec International
HI-STORM 100U Amendment Application Structural Issues
December 11, 2006

ATTENDANCE LIST

Name	Affiliation
William Brach	NRC/NMSS/SFST
Ed Hackett	NRC/NMSS/SFST
Bill Ruland	NRC/NMSS/SFST
Christopher Regan	NRC/NMSS/SFST
Michael Waters	NRC/NMSS/SFST
Nancy Osgood	NRC/NMSS/SFST
Bob Tripathi	NRC/NMSS/SFST
Bob Shewmaker	NRC/NMSS/SFST
David Tang	NRC/NMSS/SFST
Gordon Bjorkman	NRC/NMSS/SFST
Michel Call	NRC/NMSS/SFST
Jerry Chuang	NRC/NMSS/SFST
Stephan Anton	Holtec International
Pierre Oneid	Holtec International
Alan Soler	Holtec International
Wen S. Tseng	Holtec International (ICEC Consultant)
Thecla Fabian	Fuel Cycle Week
Maureen Conley	Platts/McGraw-Hill
Carlyn Greene	Washington Nuclear Corp.
Wayne Hodges	H322 Consulting
Everett Redmond	NEI
J.R. Caughman	South Carolina Electric and Gas - VC Summer (Conf. Line)

Enclosure 1

Enclosure 2

Presentation Slides