April 26, 2005

MEMORANDUM TO: Brian E. Thomas, Acting Deputy Director
Licensing and Inspection Directorate
Spent Fuel Project Office, NMSS

FROM: Christopher M. Regan, Senior Project Manager
Licensing Section /RA/
Licensing and Inspection Directorate
Spent Fuel Project Office, NMSS

SUBJECT: SUMMARY OF APRIL 21, 2005, MEETING WITH HOLTEC INTERNATIONAL REGARDING REVIEW OF AMENDMENT 3 TO THE HI-STORM 100 CERTIFICATE OF COMPLIANCE (TAC NO. L23837)

On April 21, 2005, the Nuclear Regulatory Commission (NRC) staff from the Spent Fuel Project Office and the Office of Nuclear Regulatory Research met with representatives of Holtec International (Holtec) at NRC Headquarters in Rockville, Maryland. The purpose of the meeting was to provide Holtec the opportunity to present an overview of proposed revisions to Amendment 3 to the 10 CFR Part 72 Certificate of Compliance (CoC) for the HI-STORM 100 dry cask storage system described as the HI-STORM 100U. The meeting was noticed on April 5, 2005. Attachment 1 is a list of attendees, Attachment 2 contains the public/non-proprietary presentation slides, and Attachment 3 contains the non-public/proprietary presentation slides. The meeting was split into two sessions. A morning session open to public observation and an afternoon session that was closed to the public at the request of Holtec to allow for presentation of proprietary material.

Holtec began the meeting by presenting an overview of the revised HI-STORM 100U design, “License Amendment Request (LAR) 1014-3 HI-STORM 100U.” Holtec indicated that the majority of the material being presented was in response to staff concerns raised during the staff’s technical acceptance review. The formal presentation summarized the overall design concept of the HI-STORM 100U focusing on the design enhancements to the underground concept and the proposed Amendment 3 submittal. This presentation was followed by four additional presentations, “Characterizing the Flow Regime in Ventilated Dry Storage Casks,” “Investigation of the Adequacy of the porous Media Model for Simulating the Effects of Flow Through Channeled Boiling Water Reactor (BWR) Fuel,” “Corrosion Mitigation Measures for the HI-STORM 100U Vertical Ventilated Module (VVM),” and “Shielding Analysis for LAR 1014-3.” Following the presentations there was a brief discussion of the current staff review schedule and milestone activities associated with the application review. The staff noted that when the revised Amendment 3 application is received it will be subject to an acceptance review and that an official schedule will be issued pending a positive result of this review. Holtec stated they plan to submit the revised Amendment 3 application on May 16, 2005. The staff indicated that a technical acceptance review of the type performed on the original Amendment 3 application may not be necessary. The NRC asked Holtec if there were any pending user needs for the HI-STORM 100U design that might affect prioritization of the staff review resources against other licensing activities. Holtec indicated there are interested parties in the HI-STORM 100U design but did not indicate an imminent user need. Following this discussion the public was afforded the opportunity to ask the NRC staff any questions regarding review of the Holtec application. There were no questions from the public. The meeting adjourned for a lunch break.

Following the lunch break Holtec presented, in the closed afternoon session, three presentations, “Mechanical Design of the HI-STORM 100U,” “Thermal-Hydraulic Evaluations of the HI-STORM 100 and 100U Design,” and “VVM Structural Integrity Evaluation.” The public was provided with non-proprietary copies of the presentation slides before conclusion of the morning session.

In summary, the staff thanked Holtec for the material that was presented. The staff questioned Holtec in several areas and Holtec stated they would consider the staff comments and revise the application materials as necessary. Of particular note not specifically identified in the presentation slides were the following; 1) additional discussion will be added to the Final Safety Analysis Report (FSAR) to reflect the new thermal analyses, 2) clarification of the “active” water management system proposed for one alternative to the corrosion mitigation program will be added, and 3) the staff indicated that the CoC may need to indicate any code requirements for corrosion mitigation measures and testing.

No regulatory decisions were made by the NRC during the meeting on the material presented.

Docket No. 72-1014
TAC NO. L23837

Attachments: 1. Attendance List
2. Open Session Presentation Slides:
LAR 1014-3 HI-STORM 100U
Characterizing the Flow Regime in Ventilated Dry Storage Casks
Investigation of the Adequacy of the porous Media Model for Simulating the Effects of Flow Through Channeled BWR Fuel
Corrosion Mitigation Measures for the HI-STORM 100U VVM
Shielding Analysis for LAR 1014-3
Mechanical Design of the HI-STORM 100U (non-proprietary version)
Thermal-Hydraulic Evaluations of the HI-STORM 100 and 100U Design (non-proprietary version)
VVM Structural Integrity Evaluation (non-proprietary version)
3. Closed Session Presentation Slides:
Mechanical Design of the HI-STORM 100U (proprietary version)
Thermal-Hydraulic Evaluations of the HI-STORM 100 and 100U Design (proprietary version)
VVM Structural Integrity Evaluation (proprietary version)

design but did not indicate an imminent user need. Following this discussion the public was afforded the opportunity to ask the NRC staff any questions regarding review of the Holtec application. There were no questions from the public. The meeting adjourned for a lunch break.

Following the lunch break Holtec presented, in the closed afternoon session, three presentations, "Mechanical Design of the HI-STORM 100U," "Thermal-Hydraulic Evaluations of the HI-STORM 100 and 100U Design," and "VVM Structural Integrity Evaluation." The public was provided with non-proprietary copies of the presentation slides before conclusion of the morning session.

In summary, the staff thanked Holtec for the material that was presented. The staff questioned Holtec in several areas and Holtec stated they would consider the staff comments and revise the application materials as necessary. Of particular note not specifically identified in the presentation slides were the following; 1) additional discussion will be added to the Final Safety Analysis Report (FSAR) to reflect the new thermal analyses, 2) clarification of the "active" water management system proposed for one alternative to the corrosion mitigation program will be added, and 3) the staff indicated that the CoC may need to indicate any code requirements for corrosion mitigation measures and testing.

No regulatory decisions were made by the NRC during the meeting on the material presented.

Docket No. 72-1014
TAC NO. L23837

Attachments: 1. Attendance List
2. Open Session Presentation Slides:
   - LAR 1014-3 HI-STORM 100U
   - Characterizing the Flow Regime in Ventilated Dry Storage Casks
   - Investigation of the Adequacy of the porous Media Model for Simulating the Effects of Flow Through Channeled BWR Fuel
   - Corrosion Mitigation Measures for the HI-STORM 100U VVM
   - Shielding Analysis for LAR 1014-3
   - Mechanical Design of the HI-STORM 100U (non-proprietary version)
   - Thermal-Hydraulic Evaluations of the HI-STORM 100 and 100U Design (non-proprietary version)
   - VVM Structural Integrity Evaluation (non-proprietary version)
3. Closed Session Presentation Slides:
   - Mechanical Design of the HI-STORM 100U (proprietary version)
   - Thermal-Hydraulic Evaluations of the HI-STORM 100 and 100U Design (proprietary version)
   - VVM Structural Integrity Evaluation (proprietary version)

DISTRIBUTION:
NMSS r/f SFPO r/f SGagner, OPA
SBaggett NJensen, OGC NRC attendees/without attachments

ML051160296

OFC	SFPO		SFPO		SFPO	
NAME	CRegan		EZiegler		RLewis	
DATE	04/ 25 /05		04/ 26 /05		04/ 26 /05	

Official Record Copy

Attachment 1

Attendee List

Meeting with Holtec International
HI-STORM 100U Revised Amendment 3 Overview
April 21, 2005

ATTENDANCE LIST

Name	Affiliation
Bill Brach	NRC/NMSS/SFPO
Brian Thomas	NRC/NMSS/SFPO
Wayne Hodges	NRC/NMSS/SFPO
Rob Lewis	NRC/NMSS/SFPO
Gordon Bjorkman	NRC/NMSS/SFPO
Christopher Regan	NRC/NMSS/SFPO
Michel Call	NRC/NMSS/SFPO
Jorge Solis	NRC/NMSS/SFPO
Ghani Zigh	NRC/RES
Bob Tripathi	NRC/NMSS/SFPO
Geoff Hornseth	NRC/NMSS/SFPO
Jerry Chuang	NRC/NMSS/SFPO
Carl Withee	NRC/NMSS/SFPO
Bob Shewmaker	NRC/NMSS/SFPO
Larry Campbell	NRC/NMSS/SFPO
Banad Jaqannath	NRC/NMSS/HLWRS
Kris Singh	Holtec International
Alan Soler	Holtec International
D. Mitra-Majumdar	Holtec International
Stephan Anton	Holtec International
Luis E. Hinojosa	Holtec International
Everett Redmond	Holtec International (via video conference)
Evan Rosenbaum	Holtec International (via video conference)
Indresh Rampall	Holtec International (via video conference)
Chris Blessing	Holtec International (via video conference)
John Griffiths	Holtec International (via video conference)
Charles Bullard	Holtec International (via video conference)
John Zhai	Holtec International (via video conference)
Venkat Prabhala	Holtec International (via video conference)
Maureen Conley	Platts/McGraw-Hill
Carlyn Greene	WNC/Spent Fuel (via telephone)
Andrea Jennetta	FCW

Attachment 2

Open Session Presentation Slides
(Non-Proprietary)

ML051170450

Attachment 3

Closed Session Presentation Slides
(Proprietary)

ML051170456