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

December 14, 2016

MEMORANDUM TO: Anthony Hsia, Deputy Director
Division of Spent Fuel Management
Office of Nuclear Material Safety
and Safeguards

FROM: Jose R. Cuadrado, Project Manager **/RA/**
Spent Fuel Licensing Branch
Division of Spent Fuel Management
Office of Nuclear Material Safety
and Safeguards

SUBJECT: SUMMARY OF NOVEMBER 14, 2016, PUBLIC MEETING WITH HOLTEC, INTERNATIONAL TO DISCUSS TECHNICAL DETAILS AND PROPOSED PLANS TO PERFORM PEENING OF MULTIPURPOSE CANISTER WELDS FOR HOLTEC'S DRY CASK STORAGE SYSTEMS

On November 14, 2016, staff from the Division of Spent Fuel Management held a public meeting with representatives from Holtec, International (Holtec), at the U.S. Nuclear Regulatory Commission (NRC) Headquarters in Rockville, MD. The purpose of the meeting was to discuss Holtec's technical details and proposed plans to perform peening of multipurpose canister (MPC) welds for Holtec's dry cask storage systems. No regulatory decisions were made nor requested at this meeting.

During its presentation, Holtec's discussed the details of its ongoing demonstration program for weld peening. Holtec discussed how peening is used as a post-welding treatment for reducing the surface stress of canister welds, which improves the welds' resistance to stress corrosion cracking. As shown in the enclosed presentation slides, Holtec provided schematic descriptions of their proposed laser peening process, and how it intends to perform peening on canister welds as an option to potential clients for their dry cask storage systems. In its presentation, Holtec explained that it only intends to peen the outer surfaces of the MPC shell and bottom lid welds, since these are the only surfaces that could potentially be exposed to adverse environmental conditions. Holtec also discussed the results of its testing program, which followed the guidance of ASTM G63. The test assessed the behavior of peened and un-peened weld surfaces when exposed to a highly corrosive chloride solution. Based on the results, Holtec concluded that peening can significantly increase the corrosion resistance of outer canister welds. Holtec also stated that it has determined that their proposed peening process is not inconsistent with their existing safety analyses for their NRC-certified dry cask designs and discussed that it intends to introduce peening into the cask's safety analyses by using the provisions of 10 CFR 72.48.

Following Holtec's presentation, NRC staff asked questions related to the technical details of the proposed peening demonstration program and its application. NRC staff discussed relevant

guidance and regulatory requirements for Holtec to consider in its implementation of the peening process. NRC staff questions for Holtec focused on the assumptions and parameters used for the corrosion testing program, including the number of samples and the manufacturing parameters used for these. NRC staff also asked several clarifying questions and observations about Holtec's proposed implementation of the peening process in their NRC-certified cask systems. NRC staff encouraged Holtec to continue to engage NRC staff in its implementation of the demonstration program.

After the business portion of the meeting, several members of the public, in attendance and participating by phone, asked questions and provided comments to NRC staff. NRC staff provided responses or clarifications to the questions provided, and, where appropriate, acknowledged their comments or sought additional clarification to understand their concern.

The attendance list (Enclosure 1) and slides for the meeting (Enclosure 2) are enclosed.

Docket Nos.: 72-1014, 72-1032, 72-1040

Enclosures:
1. Attendance List
2. Meeting Slides

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DISTRIBUTION:
NRC attendees
Summary: G:/SFST/Cuadrado/Holtec/Meeting Summary 11-14-16.docx
Slides: G:/SFST/Cuadrado/Holtec/Holtec Slides 11-14-2016.pdf

ADAMS Package No. ML16350A010 Memo: ML16350A011 Slides: ML16350A012

OFC:	DSFM		DSFM		DSFM	
NAME:	JCuadrado		WWheatley via E-mail		JMcKirgan	
DATE:	12/14/16		12/14/16		12/14/16	

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November 14, 2016
ATTENDANCE LIST

Name	Affiliation
Jose Cuadrado	NRC/DSFM
Meraj Rahimi	NRC/DSFM
John McKirgan	NRC/DSFM
John Wise	NRC/DSFM
Antonio Rigato	NRC/DSFM
Marlone Davis	NRC/DSFM
Darrell Dunn	NRC/DSFM
Yoira Diaz-Sanabria	NRC/DSFM
Stefan Anton	Holtec
Gareth Thomas	Holtec
Ravi Kota	Holtec
Hundal (Andy) Jung	TN Americas, LLC
Steve Frantz	Morgan Lewis

(Participating by phone)

Donna Gilmore	Self
Carlyn Greene	UX Consulting
Marvin Lewis	Self
Ace Hoffman	Self
Patricia Borchmann	Self
Wren Fowler	NAC International
Jay Wellwood	NAC International
Dennis Kierpa	NAC International
Randall Granaas	SONGS
Keith Waldrop	EPRI
Shannon Chu	EPRI
Jim Axline	Structural Integrity Associates, Inc.
Yi-Ming Pan	CNWRA

ENCLOSURE 2: Holtec Presentation Slides

"Holtec International – Peening of MPC welds to increase resistance to Chloride Induced Stress Corrosion Cracking"

November 14, 2016