

**PROPRIETARY INFORMATION**



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

August 4, 2017

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 JULY 5, 2017, PARTIALLY CLOSED MEETING WITH  
HOLTEC INTERNATIONAL TO DISCUSS UPDATES AND PROGRESS  
ON DEMONSTRATION PROGRAM FOR LASER PEENING OF MULTI-  
PURPOSE CANISTER WELDS

On July 5, 2017, staff from the Division of Spent Fuel Management held a partially closed 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 the updates and the outcomes of Holtec's ongoing demonstration program for laser peening of multipurpose canister (MPC) welds for Holtec's dry cask storage systems. The majority of the meeting was closed to discuss proprietary information. No regulatory decisions were made nor requested at this meeting.

During the open portion of the meeting, Holtec summarized the details of its ongoing demonstration program for laser weld peening. In its presentation, Holtec provided an overview of its 8-month laser peening demonstration program, which began on October 2016, and which Holtec discussed during a public meeting with NRC staff on November 14, 2016. Holtec discussed that it intends to use laser peening as a post-welding treatment for reducing surface tensile stresses in outer canister welds, which improves its resistance to stress corrosion cracking. Holtec stated that it evaluated several peening options besides the proposed laser peening process, and determined that the laser peening process provided the most consistent depth of compressive stress on peened weld surfaces. Holtec discussed that the demonstration program helped it to determine the key laser peening parameters important for producing the required compressive stress depths. These parameters include laser energy density, duration of laser exposure, number of laser passes, and whether the weld was covered with ablative tape during the laser peening process. After the business portion of the meeting, members of the public 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 concerns.

CONTACT: Jose R. Cuadrado, NMSS/DSFM  
(301) 415-0606

Upon removal of Enclosure 3, this document is uncontrolled

**PROPRIETARY INFORMATION**

**PROPRIETARY INFORMATION**

A. Hsia

-2-

During the closed portion of the meeting, Holtec provided a proprietary technical discussion of their laser peening demonstration program to NRC staff. NRC staff asked questions related to the technical details of the program and laser peening process and, where necessary, discussed relevant guidance and clarified questions from Holtec related to the program's implementation. NRC staff encouraged Holtec to continue to engage NRC staff in its implementation of the peening program.

The attendance list (Enclosure 1) and slides for the meeting (Enclosure 2 and 3) are enclosed.

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

Enclosures:

1. Attendance List
2. Meeting Slides (Public)
3. Meeting Slides (Proprietary)

**PROPRIETARY INFORMATION**

**PROPRIETARY INFORMATION**

A. Hsia

-3-

SUMMARY OF JULY 5, 2017, PARTIALLY CLOSED MEETING WITH HOLTEC INTERNATIONAL TO DISCUSS UPDATES AND PROGRESS ON DEMONSTRATION PROGRAM FOR LASER PEENING OF MULTI-PURPOSE CANISTER WELDS, DOCUMENT DATE: AUGUST 4, 2017

DISTRIBUTION:

NRC attendees

Summary: G:/SFST/Cuadrado/Holtec/Meeting Summary 7-5-17.docx

Slides: G:/SFST/Cuadrado/Holtec/Holtec Slides 7-5-17, Public Session.pdf

G:/SFST/Cuadrado/Holtec/Holtec Slides 7-5-17, Proprietary Session.pdf

**ADAMS Package No. ML17219A094 Memo: ML17219A095**

**Encl 2: Slides: ML17219A096 Encl 3: Slides (Proprietary) ML17219A097**

<b>OFC:</b>	DSFM		DSFM		DSFM	
<b>NAME:</b>	JCuadrado		WWheatley via email		JMcKirgan	
<b>DATE:</b>	8/4/17		08/04/17		8/4/17	

OFFICIAL RECORD COPY

**PROPRIETARY INFORMATION**

July 5, 2017  
ATTENDANCE LIST

<u>Name</u>	<u>Affiliation</u>
Jose Cuadrado	NRC/DSFM
Meraj Rahimi	NRC/DSFM
John McKirgan	NRC/DSFM
John Wise	NRC/DSFM
Tae Ahn	NRC/DSFM
Marlone Davis	NRC/DSFM
Darrell Dunn	NRC/DSFM
John Vera	NRC/DSFM
Bruce Lin	NRC/RES
Matthew Hiser	NRC/RES
Jay Wallace	NRC/RES
Stefan Anton	Holtec
Gareth Thomas	Holtec
Chuck Bullard	Holtec
Alan Kepple	MPR
Mike Moran	SCE
<b>(Participating by phone)</b>	
Jerry Balayan	EPM, Inc.
Kris Singh	Holtec
Fred Bidrawn	Holtec
Randall Granaas	SONGS
Ruth Thomas	Self

**ENCLOSURE 2 and 3: Holtec Presentation Slides**

**“Holtec’s Laser Peening Development Program & Implementation Plan for Multi-purpose Canisters”**

**July 5, 2017**