



**PROPRIETARY INFORMATION**

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

January 13, 2016

**MEMORANDUM TO:** Michele Sampson, Acting Deputy Director  
Division of Spent Fuel Management  
Office of Nuclear Material Safety  
and Safeguards

**FROM:** Norma Garcia Santos, Project Manager */RA/*  
Spent Fuel Licensing Branch  
Division of Spent Fuel Management  
Office of Nuclear Material Safety  
and Safeguards

**SUBJECT:** SUMMARY OF DECEMBER 3, 2015, PARTIALLY CLOSED MEETING  
WITH NAC INTERNATIONAL TO DISCUSS ISSUES ASSOCIATED  
WITH THE MODEL NO. NAC-STC PACKAGE AMENDMENT  
REQUEST NO. 14

Background

A partially-closed meeting was held on December 3, 2015, in Rockville, Maryland, at the request of the NAC International (NAC, the applicant) to discuss unresolved issues associated with the portion of the amendment request to add uncanistered directly-loaded high-burnup fuel as authorized contents to the Model No. NAC-STC transport package. NAC also seeks to include high-level vitrified waste from the West Valley Demonstration Project as authorized contents under the same amendment request, but the meeting did not include discussion on this subject.

The meeting notice was added in ADAMS<sup>1</sup> on November 18, 2015 (ADAMS Accession No. ML15321A466). The meeting was partially closed to the public, since, per NAC, the majority of the information shared was proprietary. NAC provided presentation slides on December 2 and December 4.<sup>2,3</sup> A public version of the summary of the technical discussion is included in Enclosure 1. The non-public version of the summary of the technical discussion is included in Enclosure 2. The meeting attendees' list and agenda can be found in Enclosures 3 and 4, respectively. The public version of NAC's presentation slides are located in ADAMS Accession No. ML15336A961.<sup>3</sup> Enclosure 5 includes the presentation slides discussed at the meeting and submitted on December 4.

**Upon removal of Enclosures 2 and 5,  
this document is uncontrolled.**

<sup>1</sup> Agencywide Documents Access and Management System.

<sup>2</sup> On December 4, 2015, the applicant submitted slides presented at the partially closed meeting that were not submitted ahead of time. Per the applicant, these slides contained proprietary information.

<sup>3</sup> The proprietary NAC's presentation slides are located in ADAMS Accession No. ML15338A021

**PROPRIETARY INFORMATION**

**PROPRIETARY INFORMATION**

M. Sampson

-2-

Discussion

In November 2013, NAC submitted an application to revise the certificate of compliance for the NAC-STC transport package to include high-level vitrified waste from the West Valley Demonstration Project and uncanistered directly-loaded high burnup fuel as authorized contents for the NAC-STC.<sup>1</sup> The Table below includes a synopsis of the supplements submitted by the applicant.

SUBMITTALS	<i>SAR Submittal No. and Date</i>	13A	14A	14B	15A	15B
		11/26/2013	4/24/2014	8/29/2014	6/5/2015	8/12/2015
	<i>Submittal Type</i>	Original Application	RSI Response	Supplement to RSI	RAI Response	Supplement to RAI Response
	<i>ADAMS No(s)</i>	ML13352A202 ML14027A532	ML14118A056 ML14183B552	ML14247A104 ML14247A105	ML15174A288 ML15226A347	ML15231A352
	<i>Applicant's Correspondence No.</i>	ED20130164	ED20140028	ED20140081	ED20150060	ED20150113
DIRECTLY-LOADED UNCANISTERED HIGH BURNUP FUEL	<i>Proposed maximum heat load per package (for high burnup fuel)</i>	24.0 kW/package				
	<i>Proposed maximum fuel burnup per package (for high burnup fuel)</i>	60 GWd/MTU				
DIRECTLY LOADED UNCANISTERED SPENT NUCLEAR FUEL (as authorized in Revision 13 of the CoC)	<i>Authorized maximum heat load per package</i>	22.1 kW/package				
	<i>Authorized maximum fuel burnup per package</i>	45 GWd/MTU				

The applicant also submitted supplemental information on September 11, 2015, and October 15, 2015. In general, the staff found that information provided by the applicant regarding the evaluation of uncanistered directly-loaded high burnup fuel was insufficient to support the proposed licensing approach. The staff informed the applicant about the unresolved issues associated with uncanistered directly-loaded high burnup fuel in a letter dated November 24, 2015 (ADAMS Package Accession No. ML15328A484).

The discussion generally followed the agenda (Enclosure 4). The primary reasons for the meeting were for NAC to:

<sup>1</sup> ADAMS Accession Nos. ML13352A202 (cover letter) and ML14027A532 (non-proprietary version-redacted).

**PROPRIETARY INFORMATION**

M. Sampson

-3-

1. discuss the unresolved technical issues associated with the uncanistered directly-loaded high-burnup fuel portion identified by the staff; and
2. discuss potential approaches for addressing these technical issues and defining a path forward regarding this licensing action request.

To support these goals, the staff listened to a presentation from NAC explaining changes to its proposed methodology for evaluating uncanistered directly-loaded high burnup fuel as authorized contents of the NAC-STC transport package.

Several representatives from NAC attended and participated during the meeting. Staff from headquarters also attended the meeting. No regulatory decisions were made at this meeting. A summary of the technical discussion is included in Enclosure 1 of this document.

Docket No. 71-9235

CAC No. L24860

Enclosures:

1. Technical Discussion Summary
2. Technical Discussion Summary  
(Proprietary Information)
3. Meeting Attendance List
4. Meeting Agenda
5. Presentation Slides, "Assessment of [High Burnup Fuel] Unresolved Material Evaluation Issues – Relevant Additional Information," Joe Rashid, ANNATECH-SI. (Proprietary Information)
6. NAC International Affidavit Pursuant to 10 CFR 2.390 signed on December 15<sup>th</sup>, 2015.

**PROPRIETARY INFORMATION**

**PROPRIETARY INFORMATION**

M. Sampson

-3-

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Distribution:

NRC Attendees MFerdas, RI SWalker, RII RJOrlikowski, RIII RKellar, RIV  
G:\SFST\Garcia\Public Meetings NGS\NAC-STC Public Meetings\NAC-STC 12-3-15

**ADAMS P8 Package No.: ML16014A088 Cover Letter ADAMS P8 Accession No.: ML16014A105**

<b>OFC</b>	SFM	E	SFM		SFM		SFM		SFM		SFM	
<b>NAME</b>	NGarcia-Santos		DWalker		JIreland by e-mail		JSolis by e-mail		MCall by e-mail		EGoldfeiz by e-mail	
<b>DATE</b>	12/20/2015		1/5/2016		12/24/15		1/12/2016		1/5/2016		1/5/2016	
<b>OFC</b>	SFM		SFM		SFM		SFM		SFM		SFM	
<b>NAME</b>	RTorres by e-mail		DTang by e-mail		CARaguas by e-mail		MRahimi by e-mail		ACsontos		SRuffin	
<b>DATE</b>	1/7/2016		1/4/2016		12/21/2015		12/21/2015		1/7/2016		1/13/16	

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