

December 8, 2011

MEMORANDUM TO: Eric J. Benner, Acting Deputy Director  
Division of Spent Fuel Storage and Transportation, NMSS

FROM: Kimberly Hardin, Senior Project Manager **/RA/**  
Licensing Branch  
Division of Spent Fuel Storage and Transportation, NMSS

SUBJECT: SUMMARY OF NOVEMBER 17, 2011, MEETING WITH  
TRANSNUCLEAR, INC., TO DISCUSS AN UPCOMING REVISION  
REQUEST FOR COC NO. 9302 (MODEL NO. NUHOMS-MP197) (TAC  
NO. L24583)

#### Background

A meeting was held with Transnuclear, Inc. (TN) on June 16, 2011, in Rockville, Maryland, to discuss the Model No. NUHOMS-MP107 transportation package. The purpose of the meeting was to discuss an upcoming revision request to the NUHOMS-MP197 Certificate of Compliance (CoC) No. 9302.

The meeting was noticed on November 1, 2011 (ML113050563). The meeting attendance list is provided as Enclosure No. 1.

#### Discussion

The discussion generally followed the agenda (Enclosure No. 2). The primary reason for the meeting was to discuss the path forward for the technical review of an upcoming revision request to Certificate of Compliance (CoC) No. 9302 to authorize the use of several different canister configurations with different authorized contents. The contents requested include low burnup fuel with and without burnup credit and high burnup fuel with and without burnup credit.

By letter dated April 14, 2009, as supplemented by letters dated June 22, 2009; April 20 and July 15, 2010; and March 29 and August 11, 2011, Transnuclear, Inc. (TN or applicant) submitted an application for revision to CoC No. 9302 for the Model No. NUHOMS<sup>®</sup>-MP197 transportation package (MP197). The applicant requested the addition of a modified version of the MP197, designated the MP197HB, and included a request for various NUHOMS<sup>®</sup> Dry Shielded Canisters (DSCs) containing authorized payloads to be placed in the MP197HB transport package. This application also proposes to update the design in order to be assigned a package identification number of B(U)F-96. This application was superseded by a consolidated application dated August 17, 2011, as supplemented by letter dated September 15, 2011.

The amendment application requested approval of high burnup fuel for up to 70 GWd/MTU and nine DSC designs: 69BTH, 61BTH, 61BT, 37PTH, 32PTH, 32PTH1, 32PT, 24PTH, and 24PT4. However, since technical issues remain unsolved related to the high burnup fuel, the staff is

limiting the contents to low burnup fuel ( $\leq 45$  GWd/MTU) for four DSCs: 69BTH, 61BTH, 61BT, and 24PT4.

By letter dated September 29, 2011, staff issued Revision 3 of CoC No. 9302. The 37PTH, 32PTH, 32PTH1, 32PT, and 24PTH DSCs were not approved for transportation in this revision request. By letter dated October 11, 2011, staff issued Revision 4 to CoC No. 9302 for editorial corrections. By letter dated November 2, 2011, staff issued a letter of unresolved issues for those portions of the original request that was not approved. This letter and its enclosure were the subject of this meeting. The goals of the meeting were first defined by TN, followed by a short discussion of the unresolved issues.

TN informed staff that the moderator exclusion approach is planned to be used. The condition used in the normal conditions of transport (NCT) analyses considers intact fuel. Staff expressed concerns regarding the knowledge of the condition of the fuel and cladding for high burnup fuel, especially after some period of storage.

TN continued with the criticality analysis overview including the use of moderator exclusion, burnup credit, validation of the codes used (including a sensitivity analysis), the criticality analysis, and expected CoC conditions. The details are described in the attached proprietary slides.

The structural analysis was next discussed as described in the attached proprietary slides.

For the shielding analyses, TN informed staff of plans to replace the SAS2H source term code with the TRITON code. TN also plans to perform an isotopic depletion code validation and a misload analysis. Further details are described in the attached proprietary slides.

A short discussion was held on the thermal evaluations as described in the attached proprietary slide

A copy of the presentation is provided as Enclosure Nos. 3, 4, 5, 6, and 7.

Docket No. 71-9302  
TAC No. L24583

Enclosures:

1. Meeting Attendees
2. Agenda
3. Presentation
4. Proprietary Presentation Slides
5. Proprietary Presentation Slides
6. Proprietary Presentation Slides
7. Proprietary Presentation Slides

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1. Meeting Attendees
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3. Non-Proprietary Presentation Slides
4. Proprietary Presentation Slides
5. Proprietary Presentation Slides
6. Proprietary Presentation Slides
7. Proprietary Presentation Slides

Distribution: (closes TAC No. L24583)  
 NRC Attendees BBenney  
 G:\SFST\Hardin\TN NUHOMS MP197\MEETING SUMMARY 11-17-11.docx; MP 197HB-Intro.pdf; MP 197HB-Criticality.pdf; MP 197HB-Shielding.pdf; MP 197HB-Structural.pdf; MP 197HB-Thermal.pdf

**ADAMS Accession No.: ML113430846**

OFC	SFST	SFST	SFST
NAME	KHardin	MDeBose	MWaters
DATE	12/2/11	12/2/11	12/8/2011

"C" = Copy without attachment/enclosure "E" = Copy with attachment/enclosure "N" = No copy  
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**November 17, 2011, Public/Closed Meeting  
Between Transnuclear, Inc. and  
the Nuclear Regulatory Commission**

**MEETING ATTENDANCE LIST**

Kim Hardin	NRC/SFST
Michael Waters	NRC/SFST
Meraj Rahimi	NRC/SFST
Andrew Barto	NRC/SFST
Zhian Li	NRC/SFST
Jorge Solis	NRC/SFST
Matthew Gordon	NRC/SFST
John Vera	NRC/SFST
Robert Einziger	NRC/SFST
Michele Sampson	NRC/SFST
Chris Bajwa	NRC/SFST
Steve Ruffin	NRC/SFST
Jason Piotter	NRC/SFST
Jayant Bondre	Transnuclear, Inc.
Kamran Tavassoli	Transnuclear, Inc.
Venkata Venigalla	Transnuclear, Inc.
Peter Shih	Transnuclear, Inc.
Prakash Narayanan	Transnuclear, Inc.
Steve Streutker	Transnuclear, Inc.
Raheel Haroon	Transnuclear, Inc.
Olivier Gandon	Transnuclear, Inc.
Pierre-Alexandre Monsigny	AXPO
Vincent de Gasquet	TN International

Agenda for the  
NRC/TN NUHOMS-MP197 Unresolved Issues  
Meeting  
November 17, 2011, 9:00 a.m. – 12:00 p.m.

Purpose: Discuss unresolved issues and planned next steps proposed for the technical review of the TN NUHOMS-MP197 CoC revision review. (Docket No. 71-9302)

9:00 a.m.	Introduction/Opening Remarks	NRC/TN
9:05 a.m.	Discuss in general terms the unresolved technical issues with regard to a planned Revision request for the MP197	NRC/TN
9:15 a.m.	Licensing Considerations/Schedule	NRC/TN
9:45 a.m.	Public Questions/Comments	Public/NRC
10:15 a.m.	Materials/Structural Considerations (closed portion)	NRC/TN
10:15 a.m.	Break	
10:25 a.m.	Shielding/Criticality Considerations (closed portion)	NRC/TN
10:50 a.m.	Thermal Considerations (closed portion)	NRC/TN
11:20 a.m.	Licensing Considerations/Schedule (closed portion)	NRC/TN
11:40 p.m.	Questions and Answers (closed portion)	NRC/TN
11:50 p.m.	Closing Remarks (closed portion)	NRC/TN