

February 23, 2010

MEMORANDUM TO: Doug Weaver, Deputy Director
Division of Spent Fuel Storage and Transportation
Office of Nuclear Material Safety
and Safeguards

FROM: Chris Staab, Project Manager **/RAI/**
Licensing Branch
Division of Spent Fuel Storage and Transportation
Office of Nuclear Material Safety
and Safeguards

SUBJECT: SUMMARY OF FEBRUARY 22, 2010, MEETING WITH
TRANSNUCLEAR, INC., REGARDING REVISION TO CERTIFICATE
OF COMPLIANCE NO. 9302 FOR MODEL NO. NUHOMS-MP 197
TRANSPORTATION PACKAGE

Background. On February 22, 2010, a meeting was held in Rockville, Maryland, at the request of Transnuclear, Inc. (TN) to discuss a proposed revision to the Certificate of Compliance (CoC) for the NUHOMS-MP 197 transportation package and Request for Additional Information (RAI) issued to TN on December 2, 2009. No regulatory decisions were made at the meeting. The list of meeting attendees is Enclosure 1. An agenda provided by TN is Enclosure 2. Non-Proprietary presentation slides are Enclosure 3. Proprietary presentation slides are Enclosure 4.

Discussion. The discussion addressed the items identified in the agenda.

- Background. The proposed changes in the application to amend the CoC are complex and include: 1) authorizing eleven dry shielded storage canisters (DSCs) as payloads, including failed fuel; 2) the proposed use of burnup credit, including limited use of the proprietary French fission product data to develop code-to-code correction factors based on benchmarking TN codes with other French codes; and 3) incorporating high burnup fuel into a new inner canister.
- Summary of Meeting and Key Issue. Key concerns in the RAI pertain to high burnup intact fuel undergoing permanent plastic deformation under hypothetical accident conditions (HAC) for transportation. To address this issue, the applicant will propose an ISG-19 varied approach for moderator exclusion for BWR intact fuel, combined with a materials data approach to address the presence of radial hydrides for both BWR and PWR intact fuel to demonstrate compliance with regulations. The applicant emphasized they will need two additional weeks beyond the March 2 date for responding to the RAI. Therefore, the applicant committed to responding by March 17. Staff emphasized a moderator exclusion approach will more than likely mean a significant change to the application, and therefore will result in staff's treatment of the RAI responses as a new application, which would reset staff's clock for responding to the overall application. The applicant understood, but stated they will attempt to still justify the changes as non-

significant with the overall desire of not completely resetting the clock to zero. Staff may perform a short (two to three weeks) acceptance review of RAI responses to determine overall acceptability and significance of change to original application.

- Staff Comments.
 - Staff stated the applicant may be introducing unnecessary conservatisms into the licensing approach by analyzing the incorrect strain value since the strain may be a hoop strain without stress; and therefore the applicant may be analyzing the incorrect strain value for causing failure.
 - Staff encouraged the applicant to in most RAI responses ensure appropriate Safety Analysis Report (SAR) changes accompany the response as appropriate.
 - Staff encouraged the applicant with regard to shielding requests pertaining to source term calculations to ensure appropriate data is provided for SAS2H code calculations above which the code is invalid to address code uncertainties.
 - Staff encouraged the applicant with regard to shielding requests pertaining to the response function to provide a sensitivity study on the effect of number densities.
 - Staff encouraged the applicant with regard to shielding requests pertaining to fuel plastic deformation to make clear in the SAR the RAI as it pertains to Normal Conditions of Transport (NCT) and the basis for 50% of the height as the height pertains to compression of the original volume for HAC – 30 foot end drop.
 - Staff encouraged the applicant to provide criticality safety significant fuel parameters for inclusion in the transportation CoC. The applicant provided good comments with regard to how the parameters are not verifiable from an inspector perspective and suggested words be added to the CoC stating this caveat. Staff committed to thinking about this aspect and committed to discuss further with the applicant a best course.

Docket No. 71-9302

TAC No. L24414

Enclosures: 1. Meeting Attendees
2. Agenda
3. Handouts (Non-Proprietary)
4. Handouts (Proprietary)

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Distribution: NRC Attendees BWhite

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C=Without attachment/enclosure E=With attachment/enclosure N=No copy **OFFICIAL RECORD COPY**

MEETING ATTENDEES

Meeting Between the Nuclear Regulatory Commission
and Transnuclear, Inc.
February 22, 2010

Drew Barto	NRC/SFST
Chris Staab	NRC/SFST
Doug Weaver (part time)	NRC/SFST
Meraj Rahimi (part time)	NRC/SFST
Luis Cruz (part time)	NRC/SFST
Gordon Bjorkman (part time)	NRC/SFST
Matthew Gordon (part time)	NRC/SFST
Larry Campbell (part time)	NRC/SFST
Bob Einziger (part time)	NRC/SFST
Bob Tripathi (part time)	NRC/SFST
Chris Bajwa (part time)	NRC/SFST
Jorge Solis (part time)	NRC/SFST
Don Shaw	TN
Jayant Bondre	TN
Peter Shih	TN
Steve Streutker	TN
Raheel Haroon	TN
Prakash Narayanan	TN
Kamran Tavassoli	TN

AGENDA

Meeting Between the Nuclear Regulatory Commission
and Transnuclear, Inc.
February 22, 2010

1. Clarification of Structural and Materials Requests of Additional Information (RAIs)
2. Clarification of Thermal RAIs
3. Clarification of Shielding RAIs
4. Clarification of Criticality RAIs (Proprietary session)
5. Closing Remarks