

November 22, 2013

Mr. Paul Triska  
Vice President, Operations  
Transnuclear, Inc.  
7135 Minstrel Way, Suite 300  
Columbia, MD 21045

SUBJECT: REVISION NO. 6 OF CERTIFICATE OF COMPLIANCE NO. 9301 FOR THE  
MODEL NO. TNF-XI TRANSPORT PACKAGE

Dear Mr. Triska:

As requested by your application for renewal and amendment dated July 16, 2013, as supplemented November 1, 2013, enclosed is Certificate of Compliance No. 9301, Revision No. 6, for the Model No. TNF-XI transport package. Changes made to the enclosed certificate are indicated by vertical lines in the margin. The staff's Safety Evaluation Report is also enclosed.

This approval constitutes authority to use the package for shipment of radioactive material and for the package to be shipped in accordance with the provisions of 49 CFR 173.471.

Registered users of the package under the general license provisions of 10 CFR 71.17 or 49 CFR 173.471 have been provided a copy of this certificate.

If you have any questions regarding this certificate, please contact me or John Vera of my staff at (301) 287-9165.

Sincerely,

/RA/

Michele Sampson, Chief  
Licensing Branch  
Division of Spent Fuel Storage and Transportation  
Office of Nuclear Material Safety  
and Safeguards

Docket No. 71-9301  
TAC Nos. L24763 and L24764

Enclosures: 1. Certificate of Compliance  
No. 9301, Rev. No. 6  
2. Safety Evaluation Report  
3. Registered Users

Upon removal of Enclosure 3, this  
document is uncontrolled

cc w/encls. 1&2: R. Boyle, Department of Transportation

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**Closes TAC Nos. L24763 and L24764**

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**ADAMS Package No.: ML13333B937 Ltr&SER ML13333B978; CoC ML13333B980**

<b>OFC:</b>	SFST	E	SFST		SFST		SFST		SFST
<b>NAME:</b>	JVera		MDeBose		CHrabal		MRahimi		MSampson
<b>DATE:</b>	11/15/13		11/19/13		11/19/13		11/20/13		11/ 22/13

C = COVER

E = COVER & ENCLOSURE

N = NO COPY

**SAFETY EVALUATION REPORT**  
**Docket No. 71-9301**  
**Model No. TNF-XI Transport Package**  
**Certificate of Compliance No. 9301**  
**Revision No. 6**

**SUMMARY**

By application dated July 16, 2013, supplemented November 1, 2013, Transnuclear, Inc. (TN) submitted a renewal and amendment request to revise the certificate of compliance (CoC) for the Model No. TNF-XI transport package. The application requests to add a clarification as to what package content is homogeneous UO<sub>2</sub> powder and heterogeneous UO<sub>2</sub> material.

**CRITICALITY EVALUATION**

The applicant requests to add a clarification as to what is homogeneous UO<sub>2</sub> powder and heterogeneous UO<sub>2</sub> material in Section 6.1 of the SAR. As stated in the revised SAR, "homogeneous powders, such as fine powder, are those materials that were not subjected to any treatment that would lead to agglomeration. Heterogeneous materials, such as coarse powder, granulated powders, pellets, and scrap, are those materials that do not meet the definition of homogeneous powders. In case of a mix of several forms of fissile material, this mix is considered heterogeneous material." These additions will provide clarification for the registered users of this packaging as to the criteria for homogeneous powder and for heterogeneous material and did not affect the previous criticality evaluation.

Based on the review of the statements and representations in the application and supplemental information supplied by the applicant, the staff has reasonable assurance that the nuclear criticality safety design of the package continues to meet the criticality safety requirements of 10 CFR Part 71.

**CONDITIONS**

The following changes are included in Revision No. 6 to Certificate of Compliance No. 9301:

Condition No. 5(b)(1) was modified to add language that clarifies what constitutes homogeneous UO<sub>2</sub> powder and heterogeneous UO<sub>2</sub> material.

Condition No. 5(b)(1)(i): editorial change on table, the word "percent" is replaced by "%."

Condition No. 5(b)(1)(ii): editorial change on table, the word "percent" is replaced by "%."

Condition No. 9 was deleted because the transitional marking authorization expired January 2013.

New Condition No. 9 authorizes use of the previous revision for a period of approximately one year.

New Condition No. 10 (previously No. 11) was revised to reflect the expiration date of the renewed certificate, November 30, 2018.

The References section was modified to include the supplements dated June 27, 2013, and November 1, 2013.

## **CONCLUSION**

Based on the statements and representations contained in the application, and the conditions listed above, the staff concluded that the Model No. TNF-XI package meets the requirements of 10 CFR Part 71.

Issued with Certificate of Compliance No. 9301, Revision No. 6  
On November 22, 2013