

January 27, 2012

Mr. Phil Noss  
Licensing Manager  
AREVA Federal Services LLC  
505 South 336<sup>th</sup> Street, Suite 400  
Federal Way, WA 98003

SUBJECT: CERTIFICATE OF COMPLIANCE NO. 9305 FOR THE MODEL NO. TRUPACT-III (TAC NO. L24614)

Dear Mr. Noss:

As requested by your application dated December 23, 2011, as supplemented January 6 and 24, 2012, enclosed is Certificate of Compliance No. 9305, Revision No. 3, for the Model No. TRUPACT-III 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, you may contact me or Huda Akhavannik of my staff at 301-492-3273.

Sincerely,

**/RA/**

Michael D. Waters, Chief  
Licensing Branch  
Division of Spent Fuel Storage and Transportation  
Office of Nuclear Material Safety  
and Safeguards

Docket No. 71-9305  
TAC No. L24614

Enclosures: 1. Certificate of Compliance  
No. 9305, Rev. No. 3  
2. Safety Evaluation Report

cc w/encls 1&2: R. Boyle, Department of Transportation  
J. Shuler, Department of Energy  
Registered Users

Mr. Phil Noss  
 Licensing Manager  
 AREVA Federal Services LLC  
 505 South 336<sup>th</sup> Street, Suite 400  
 Federal Way, WA 98003

SUBJECT: CERTIFICATE OF COMPLIANCE NO. 9305 FOR THE MODEL NO. TRUPACT-III (TAC NO. L24614)

Dear Mr. Noss:

As requested by your application dated December 23, 2011, , as supplemented January 6 and 24, 2012, enclosed is Certificate of Compliance No. 9305, Revision No. 3, for the Model No. TRUPACT-III 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, you may contact me or Huda Akhavannik of my staff at 301-492-3273.

Sincerely,

**/RA/**

Michael D. Waters, Chief  
 Licensing Branch  
 Division of Spent Fuel Storage and Transportation  
 Office of Nuclear Material Safety  
 and Safeguards

Docket No. 71-9305

TAC No. L24614

- Enclosures: 1. Certificate of Compliance No. 9305, Rev. No. 3  
 2. Safety Evaluation Report

cc w/encls 1&2: R. Boyle, Department of Transportation  
 J. Shuler, Department of Energy  
 Registered Users

**DISTRIBUTION:**

**CLOSES TAC NO. L24588**

SFST r/f

G:\SFST\PART 71 CASEWORK\9305.R3.docx

G:\SFST\PART 71 CASEWORK\9305.R3.LTR&SER.docx

**ADAMS Package No.: ML120300115**

<b>OFC:</b>	SFST	E	SFST		SFST		SFST		SFST	
<b>NAME:</b>	HAkhavannik		DTaratino		NDay		DTang for DPstrak		MDeBose	MWaters
<b>DATE:</b>	1/25/12		1/26/12		1/26/2012		1/27/12		1/26/12	1/27/12

**C = COVER**

**E = COVER & ENCLOSURE**

**N = NO COPY**

**OFFICIAL RECORD COPY**

SAFETY EVALUATION REPORT  
Docket No. 71-9305  
Model No. TRUPACT-III  
Certificate of Compliance No. 9305  
Revision No. 3

## SUMMARY

By application dated December 23, 2011, as supplemented January 6 and 24, 2012, AREVA Federal Services LLC (AFS), requested a revision to Certificate of Compliance No. 9305, for the Model No. TRUPACT-III package. This revision clarified some of the design details defined on the TRUPACT-III Drawing No. 51199-SAR, requested several tolerance adjustments, and requested the use of ultrasonic or multi-pass liquid penetrant NDE examination for repairs of containment boundary welds. The remaining sections (e.g., thermal, containment, shielding, and criticality) were not affected by this revision. The requested clarifications and corrections do not affect the safety basis of the TRUPACT-III package. Based on the statements and representations in the application, the staff agrees that these changes do not affect the ability of the package to meet the requirements of 10 CFR Part 71.

## EVALUATION

### GENERAL INFORMATION

AFS revised the TRUPACT-III Drawing – 51199-SAR as follows:

- Sheet 2
  - Added General Note 48 to permit the use of ultrasonic examination (UT) or liquid penetrant NDE examination (PT) on each pass and final pass for repairs of containment boundary welds that are inaccessible for radiographic examination (RT). PT will be utilized when UT is not possible, and will only be done after package fabrication. This will be done per Subsection NB-5000 of the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel (B&PV) Code for repairs of containment boundary welds. See, “Weld Examination Evaluation,” below.
  - Added Flag Note 49 to reduce the outer diameter of the flat washer from 64 mm to 54 mm for the overpack cover bolts. The larger outer diameter washer would otherwise interfere with the inner wall of the 3 inch x 14-gauge access tube in the overpack. This reduced diameter is bounded by prototype testing found in the Safety Analysis Report (SAR), Chapter 2.12.3.3, “Test Unit Configuration.” The drop testing concluded there was no structural degradation when using 54 mm washers.
- Sheet 4
  - Added Flag Note 49 indicator, described above.
- Sheet 13
  - Deleted Flag Note 16 from the 5 mm bevel groove weld symbol for the M36 x 4 threaded round bar. Due to a machining operation of the threads, the weld surface is removed and is no longer relevant.

- Sheet 14
  - Changed lid thickness dimension of 148 mm from the block tolerance of  $\pm 9$  mm to an explicit tolerance of  $+14/-9$  mm. This increase in plus-side thickness accommodates thicker material that may occur on the welded structure. An increased thickness of the lid has no impact on safety basis.
  - Added clarification that closure lid lip dimension applies only to the outboard side of the closure lid and not the inboard side. The inboard height can vary and be less than the height of the closure lid lip due to the weld fabrication tolerances. This condition has no impact on safety basis as it results in less horizontal movement of the closure lid during the hypothetical accident condition free drop specified in 10 CFR 71.73(c)(1) and does not interfere with the containment structural assembly or the debris shield receptacle bar.
- Sheet 15
  - Changed seal test port passage diameters to referenced dimensions. These port passages only function to provide a passageway for leakage rate testing and so a block tolerance of  $\pm 0.2$  mm is not critical to this function.
- Sheet 19
  - Added option of a potential repair of the debris shield receptacle bar.

Additionally, minor text revisions were made to support these changes in the SAR, chapters two and eight. These modifications provide manufacturing flexibility to the package and do not impact the performance of the package design.

### **Weld Examination Evaluation**

The applicant requested performing post fabrication weld repair (i.e., when the package is in service) only using a multi-pass PT on containment boundary welds in lieu of ASME B&PV Code, Section III, Division 1, requirements, as evaluated below.

The ASME Code requires either RT, or in cases where RT cannot be performed, UT plus PT of the containment boundary welds identified. The applicant states that due to the geometric configuration of a completed TRUPACT-III shipping container, future containment boundary weld repairs may become inaccessible for either RT or UT.

The NRC staff notes the applicant will perform multi-pass PT only on identified indications inaccessible to RT and/or UT. UT will be performed to the maximum extent practicable on containment boundary weld repairs in addition to utilizing multi-pass PT. That is, should UT be accessible to perform on any portion of a weld repair, perform UT in addition to multi-pass PT. Further, as stated in Section 8 of the SAR, a pressure test shall be performed followed by a visual inspection of the containment boundary and followed with a leakage rate testing of the package.

The NRC staff notes that multiple examinations and tested are to be implemented when RT and/or UT of containment boundary welds cannot be performed due to geometric configuration. Therefore, the staff has reasonable assurance that the repaired welds will not adversely affect the performance of the package design to meet the requirements of 10 CFR Part 71.

## **CONDITIONS**

The following changes have been made to the Certificate of Compliance:

Condition No. 5(a)(3) Drawings, has been updated to reference the updated drawings.

The References section has been updated to include this revision request.

## **CONCLUSION**

The Certificate of Compliance has been revised to reference the revised drawings. Based on the statements and representations contained in the application, the staff concludes that these changes do not affect the ability of the package to meet the requirements of 10 CFR Part 71.

Issued with Certificate of Compliance No. 9305, Revision No. 3,  
on January 27, 2012.