

**CERTIFICATE OF COMPLIANCE  
FOR RADIOACTIVE MATERIAL PACKAGES**

1. a. CERTIFICATE NUMBER <b>9305</b>	b. REVISION NUMBER <b>11</b>	c. DOCKET NUMBER <b>71-9305</b>	d. PACKAGE IDENTIFICATION <b>USA/9305/B(U)F-96</b>	PAGE <b>1</b>	PAGES <b>OF 4</b>
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2. PREAMBLE

- a. This certificate is issued to certify that the package (packaging and contents) described in Item 5 below meets the applicable safety standards set forth in Title 10, Code of Federal Regulations, Part 71, "Packaging and Transportation of Radioactive Material."
- b. This certificate does not relieve the consignor from compliance with any requirement of the regulations of the U.S. Department of Transportation or other applicable regulatory agencies, including the government of any country through or into which the package will be transported.

3. THIS CERTIFICATE IS ISSUED ON THE BASIS OF A SAFETY ANALYSIS REPORT OF THE PACKAGE DESIGN OR APPLICATION

- a. ISSUED TO (*Name and Address*)  
**Orano Federal Services LLC  
505 South 336<sup>th</sup> Street, Suite 400  
Federal Way, WA 98003**
- b. TITLE AND IDENTIFICATION OF REPORT OR APPLICATION  
**AREVA Federal Services LLC  
application dated August 19, 2013, as supplemented.**

4. CONDITIONS

This certificate is conditional upon fulfilling the requirements of 10 CFR Part 71, as applicable, and the conditions specified below.

5.

(a) Packaging

- (1) Model No.: TRUPACT-III Package
- (2) Description

A package used to transport transuranic waste contained in a Standard Large Box 2 (SLB2) primarily by highway trucks. The packaging body is a rectangular box with an external width of 2,500 mm (98.4 inches), external height of 2,650 mm (104.3 inches), and an external length of 4,288 mm (168.8 inches). The internal cavity dimensions are 1,840 mm (72.4 inches) wide, 2,000 mm (78.7 inches) tall, and 2,790 mm (109.8 inches) long.

The TRUPACT-III packaging is comprised of the containment structural assembly (CSA) made from 8-mm inner and outer stainless steel plates with 4-mm thick V-shaped stiffeners in between. A debris shield receptacle is located all around the open end of the CSA inner cavity. The receptacle is a 26-mm x 38-mm cross section bar with a 15-mm wide by 20-mm deep groove cut along its length. The 109 - 120-mm polyurethane foam, 10-mm thick puncture resistant stainless steel plate, 60-mm balsa wood layer, and the 6-mm stainless steel skin form the integral energy-absorbing overpack structure. A 409-mm deep octagonal recess in the bottom end with 6-mm thick stainless steel plate, a 60-mm thick balsa wood layer, a 15-mm or 16-mm thick puncture-resistant stainless steel plate, and a 120-mm thick foam layer protect the bottom end of the packaging during drops or punctures.

A rectangular closure lid made from 4-mm thick V-shaped stiffeners sandwiched between an inner and an outer 12-mm thick stainless steel plate is attached to the packaging body

**CERTIFICATE OF COMPLIANCE  
FOR RADIOACTIVE MATERIAL PACKAGES**

1. a. CERTIFICATE NUMBER	b. REVISION NUMBER	c. DOCKET NUMBER	d. PACKAGE IDENTIFICATION N/A UNDEP	PAGE	PAGES
9305	11	71-9305	USA/9305/B(U)F-96	2	OF 4

5.(a) Packaging (continued)

by 44 socket head cap screws and contains two elastomer O-ring face seals. A sampling/vent port with elastomer O-ring seals is recessed into the closure lid. The inner stainless steel plates of the closure lid and the body along with the inner elastomer O-ring seal, the sampling/vent port insert, and the sampling/vent port inner elastomer O-ring seal form the single containment boundary.

An overpack cover is designed to protect the closure lid. The outer face of the overpack cover contains an octagonal recess 393 mm deep. The cover structure consists of a 6-mm thick stainless steel cover sheet plate encasing a 60-mm thick layer of balsa wood, a 15-mm or 16-mm thick puncture resistant stainless steel plate, a 120-mm thick layer of polyurethane foam, and a 6-mm thick inner stainless steel cover plate. The edges of the overpack cover consist of an inner 6-mm stainless steel plate, a 42-mm thick layer of calcium silicate insulation, a 15-mm or 16-mm thick puncture-resistant stainless steel plate, a 380-mm thickness of 0.48 kg/dm<sup>3</sup> polyurethane foam, a 6-mm thick puncture-resistant stainless steel plate, a 140-mm thick layer of 0.16 kg/dm<sup>3</sup> polyurethane foam, and an 8-mm thick external stainless steel plate.

The approximate dimensions and weights of the package are as follows:

Overall package outside dimensions	
Width	2,500 mm (98.4 inches)
Length	4,288 mm (168.8 inches)
Height	2,650 mm (104.3 inches)
Maximum content weight	5,210 kg (11,486 lbs)
Maximum package weight (Including contents)	25,000 kg (55,116 lbs)

(3) Drawings

The packaging is constructed in accordance with AREVA Federal Services LLC, Drawing No. 51199-SAR, Rev. 15, sheets 1 through 21.

(b) Contents

(1) Type and form of material

Dewatered, solid or solidified transuranic contaminated materials and wastes, any particle size, large objects, and bulky objects are directly loaded into an SLB2 to be placed in a TRUPACT-III packaging, in accordance with TRUPACT-III TRAMPAC, Revision 2.

(2) Maximum quantity of material per package

**CERTIFICATE OF COMPLIANCE  
FOR RADIOACTIVE MATERIAL PACKAGES**

1. a. CERTIFICATE NUMBER	b. REVISION NUMBER	c. DOCKET NUMBER	d. PACKAGE IDENTIFICATION AS SHIPPED	PAGE	PAGES
9305	11	71-9305	USA/9305/B(U)F-96	3	OF 4

5.(b) Contents (continued)

The TRUPACT-III packaging is designed to transport contact-handled transuranic (CH-TRU) waste and other authorized payloads that do not exceed  $10^5$  A<sub>2</sub> quantities. No more than 325 grams of Pu-239 fissile gram equivalent (FGE) is generally allowed per TRUPACT-III package. Per the TRUPACT-III TRAMPAC, Revision 2, the FGE limit per TRUPACT-III package may be increased if the payload is documented to contain Pu-240. A TRUPACT-III payload shall not contain greater than 1 percent by weight beryllium and/or beryllium oxide nor machine compacted waste. Only one SLB2 may be loaded in a TRUPACT-III package at a time.

(3) Maximum decay heat per package not to exceed 80 watts.

5.(c) Criticality Safety Index (CSI): 0

6. The package is for transport of the CH-TRU materials and other authorized payloads that are limited in form to solid or solidified material. Materials must be restricted to prohibit explosives, corrosives, nonradioactive pyrophorics, and pressurized containers. Within a payload container, radioactive pyrophorics must not exceed 1 percent by weight, and residual liquid volumes greater than 1 percent are prohibited.

7. Limits for physical, nuclear, chemical, and gas generation properties shall be as defined in the TRUPACT-III TRAMPAC, Revision 2.

8. Hydrogen must be limited to a molar quantity that would be no more than 5% by the volume of the innermost layer of confinement during transport.

9. Each payload shipping container must be assigned to a shipping category in accordance with TRUPACT-III TRAMPAC, Revision 2, Section 5.0.

10. The gas generated in the payload and released into the cavity shall be controlled to maintain the pressure within the containment vessel below the acceptable Maximum Normal Operating Pressure of 25 psig.

11. Venting and aspiration are required to the TRUPACT-III containers stored in an unvented condition prior to transport, to ensure equilibration of gases that may have accumulated in the closed container in accordance with TRUPACT-III TRAMPAC, Revision 2, Section 5.3.

12. In addition to the requirements of Subpart G of 10 CFR Part 71:

(a) Each package shall be operated and prepared for shipment in accordance with Chapter 7 of the application, as supplemented.

**CERTIFICATE OF COMPLIANCE  
FOR RADIOACTIVE MATERIAL PACKAGES**

1. a. CERTIFICATE NUMBER	b. REVISION NUMBER	c. DOCKET NUMBER	d. PACKAGE IDENTIFICATION N/A I/A D/E/D	PAGE	PAGES
9305	11	71-9305	USA/9305/B(U)F-96	4	OF 4

(b) Each package shall be acceptance tested and maintained in accordance with Chapter 8 of the application, as supplemented.

13. The package authorized by this certificate is hereby approved for use under the general license provisions of 10 CFR 71.17.
14. Transport by air of fissile material is not authorized.
15. Revision No. 10 of this certificate may be used until June 30, 2021.
16. Expiration date: July 31, 2025.

REFERENCES

AREVA Federal Services LLC application dated May 20, 2015, supplement dated August 19, 2013.

Orano Federal Services LLC application dated May 15, 2018.

Orano Federal Services LLC timely renewal request letter dated June 16, 2020.

FOR THE U.S. NUCLEAR REGULATORY COMMISSION

**John B. McKirgan**

Digitally signed by John B. McKirgan  
Date: 2020.06.24 09:51:45 -04'00'

John McKirgan, Chief  
Storage and Transportation Licensing Branch  
Division of Fuel Management  
Office of Nuclear Material Safety  
and Safeguards

Date: June 24, 2020

**SAFETY EVALUATION REPORT**  
**Docket No. 71-9305**  
**Model No. TRUPACT-III**  
**Certificate of Compliance No. 9305**  
**Revision No. 11**

**SUMMARY**

By letter dated June 16, 2020 (ADAMS Accession Number: ML20168A900), Orano Federal Services, LLC, (certificate holder) requested renewal of Certificate of Compliance No. 9305 for the Model No. TRUPACT-III package. The certificate holder did not request any changes to the package design, operating procedures, acceptance tests, or maintenance program of the package. The certificate has been renewed for an additional five years.

**EVALUATION**

By letter dated June 16, 2020, Orano Federal Services, LLC, requested renewal of Certificate of Compliance No. 9305 for the Model No. TRUPACT-III package without changes to the package design, operating procedures, acceptance tests, and maintenance program of the package. The certificate holder has an NRC-approved quality assurance program.

**CONDITIONS**

The following changes have been made to the Certificate:

Condition No. 15 was modified to extend the validity of the previous certificate by approximately one year.

Condition No. 16 (previously Condition No. 15) was added to the Certificate and shows the new expiration date of the certificate of July 31, 2025.

**CONCLUSION**

The certificate has been renewed for a five year term. 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. 11.