

**CERTIFICATE OF COMPLIANCE  
FOR RADIOACTIVE MATERIAL PACKAGES**

a. CERTIFICATE NUMBER	b. REVISION NUMBER	c. DOCKET NUMBER	d. PACKAGE IDENTIFICATION NUMBER	PAGE	PAGES
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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*)  
National Institute of Standards and  
Technology  
Gaithersburg, MD 20899
- b. TITLE AND IDENTIFICATION OF REPORT OR APPLICATION  
National Institute of Standards and Technology  
application dated February 7, 1992, 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.: ST
- (2) Description

A closed steel pipe for the transport of an unirradiated research reactor fuel element. The pipe is a 5-1/2-inch OD carbon steel pipe, approximately 71 inches in length, with a closed bottom end and flanged top end. The top end is closed by a cover plate, which is 1/4-inch thick, and 6-1/2 inches in diameter, and a gasket. The cover plate is secured to the pipe flange by 8 cap screws. A wooden nozzle support and top support position the fuel assembly within the pipe. The package weighs approximately 75 pounds, including the fuel element.

(3) Drawing

The packaging is constructed and assembled in accordance with National Institute of Standards and Technology Drawing No. D-04-048, Sheet 1, Rev. 4, and Sheet 2, Rev. 4.

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5. (b) Contents

(1) Type and form of material

Unirradiated NBSR fuel element composed of enriched uranium and aluminum.

(2) Maximum quantity of material per package

One fuel element containing not more than 360 grams U-235. The total quantity of radioactive material within a package may not exceed a Type A quantity.

(c) Criticality Safety Index 50.0

6. In addition to the requirements of Subpart G of 10 CFR Part 71, the package shall be prepared for shipment, operated, and maintained in accordance with the loading, unloading, and quality assurance procedures in the application. Prior to each shipment, the shipper shall make the determinations specified in the NIST "ST" Series Shipping Container Shipper's Checklist in the application.
7. Transport by air is not authorized.
8. The package authorized by this certificate is hereby approved for use under the general license provisions of 10 CFR 71.17.
9. Revision No. 5 of this certificate may be used until January 31, 2009.
10. Expiration date: November 30, 2011.

REFERENCES

National Institute of Standards and Technology application dated February 7, 1992.

Supplements dated: February 14, 1992; August 7, 1996; August 17, 2001; September 5, 2006; September 28, 2007; and January 9, 2008.

FOR THE U.S. NUCLEAR REGULATORY COMMISSION

**/RA/**

Robert A. Nelson, Chief  
Licensing Branch  
Division of Spent Fuel Storage and Transportation  
Office of Nuclear Material Safety  
and Safeguards

Date: January 30, 2008