

June 2, 2006

Mr. Marc-Andre Charette  
International Transport  
& Nuclear Initiatives  
MDS Nordion  
447 March Road  
Ottawa, ON K2K 1X8 Canada

SUBJECT: CERTIFICATE OF COMPLIANCE NO. 9299 FOR THE MODEL NO. F-423  
PACKAGE

Dear Mr. Charette:

As requested by your application dated September 1, 2005, as supplemented November 18, 2005, and May 25, 2006, enclosed is Certificate of Compliance No. 9299, Revision No. 1, for the Model No. F-423 package. Changes made to the enclosed certificate are indicated by vertical lines in the margin. The staff's Safety Evaluation Report is also enclosed.

The 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. MDS Nordion has been registered as a user of the package under the provisions of 49 CFR 173.471.

If you have any questions regarding this certificate, please contact me or Nancy Osgood of my staff at (301) 415-8500.

Sincerely,

**/RA/**

Robert A. Nelson, Chief  
Licensing Section  
Spent Fuel Project Office  
Office of Nuclear Material Safety  
and Safeguards

Docket No. 71-9299  
TAC No. L23894

Enclosures: 1. Certificate of Compliance  
No. 9299, Rev. No. 1  
2. Safety Evaluation Report

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

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NAME	NLOsgood		MRDeBose		RESheemaker		GSBjorkman		RANelson	
DATE	5/30/06		5/31/06		6/01/06		6/01/06		6/02/06	

**OFFICIAL RECORD COPY**

**SAFETY EVALUATION REPORT**  
**Model No. F-294 Package**  
**Certificate of Compliance No. 9299**  
**Revision No. 1**

**SUMMARY**

By application dated September 1, 2005, as supplemented November 18, 2005, and May 25, 2006, MDS Nordion requested an amendment to Certificate of Compliance No. 9299, for the Model No. F-294 package. MDS Nordion requested certain design changes in the package, and submitted revised packaging drawings. In addition MDS Nordion requested a minor change in the acceptance tests for qualification of the rigid polyurethane foam of the package.

Based on the statements and representations in the application, as supplemented, and for the reasons stated below, the staff agrees that these changes do not affect the ability of the package to meet the requirements of 10 CFR Part 71.

**EVALUATION**

MDS Nordion requested minor design changes to the packaging to allow operational and manufacturing flexibility. The most significant changes as identified by the applicant, are as follows:

1. The weights of the individual components in the Table of Weights were revised based on measurements of production units. The design weight remained unchanged.
2. References to Type 304L stainless steel were changed to Type 304. This was changed in recognition of the fact that much of the stainless steel is welded to carbon steel hollow structural sections. Therefore specifying 304L, a low carbon stainless steel, is not practical, since the welds may be contaminated by carbon during welding.
3. The material specifications for the GC220 device were simplified, since many of the GC220's were manufactured more than 40 years ago, and there are not sufficient records to demonstrate what materials were used in their construction.

The following revised engineering drawing was provided: MDS Nordion Drawing No. F642301-001, "F-423/GC220 Transportation Package Information Drawing;" Sheet 1, Rev. G; and Sheet 2, Rev. D.

The drawing was revised to consolidate the information previously shown on four sheets, onto two sheets. Minor changes were made throughout the drawings for clarification. Overall dimensional tolerances were added, and tolerances were specified or modified for specific features, such as minimum bolt lengths. In general, the drawings were revised to correctly show as-built configurations and to give appropriate flexibility in the packaging design and fabrication, for example, by eliminating manufacturer's part numbers for non-safety components. The staff agrees that the elimination of material specifications for the GC220 does not affect the safety of the package, since the overpack provides impact and thermal protection of the device.

The applicant has concluded, and the staff agrees that these changes do not affect the ability of the package to meet the requirements of 10 CFR Part 71.

## **CONCLUSION**

The Certificate of Compliance has been amended to reference the revised packaging drawings, as requested by the applicant. In addition, Condition No. 9 was added to the certificate, which authorizes use of the previous revision of the certificate for a period of approximately 3 months, until the expiration of the current revision of the certificate.

Issued with Certificate of Compliance No. 9299,  
Revision No. 1, on June 2, 2006.