

August 3, 2012

Mr. John J. Miller  
International Isotopes, Inc.  
4137 Commerce Circle  
Idaho Falls, ID 83401

SUBJECT: EXTENSION OF USE OF THE DOT SPECIFICATION 20WC-5 PACKAGE

Dear Mr. Miller:

As requested by your application dated July 25, 2012, and pursuant to 10 CFR Part 71, this letter constitutes authorization for the transport of Type B quantities of radioactive material in DOT Specification 20WC-5 packages with the following conditions:

1. All shipments must be made in accordance with DOT Special Permit No. DOT-SP 14728, dated July 12, 2012.
2. The packaging and contents are as described in International Isotopes, Inc., application dated July 25, 2012.
3. This authorization is not to exceed 6 shipments, and expires December 31, 2012.

FOR THE U.S. NUCLEAR REGULATORY COMMISSION

**/RA/**

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

Docket No. 71-9345  
TAC No. L24672

Enclosure: Safety Evaluation Report

cc: R. Boyle, Department of Transportation

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SAFETY EVALUATION REPORT  
DOCKET NO. 71-9345  
DOT SPECIFICATION 20WC-5 PACKAGE  
INTERNATIONAL ISOTOPES, INC.

## SUMMARY

By application dated July 25, 2012, International Isotopes, Inc., requested authorization to use a DOT Specification 20WC-5 package beyond the package authorization expiration date of October 1, 2008.

Based on the statements and representations in the application dated July 25, 2012, the staff finds that the extension of use of the package, with the additional conditions stated below, meets the requirements of 10 CFR Part 71.

## BACKGROUND

NRC amended the regulations in 10 CFR Part 71, effective October 1, 2004, to be compatible with the 1996 edition of the International Atomic Energy Agency (IAEA), "Regulations for the Safe Transport of Radioactive Material" (TS-R-1, as amended in 2000). As a result, certain transportation packages that are compatible to the IAEA 1967 edition were no longer authorized for use under the 10 CFR Part 71 general license after October 1, 2008.

In their application dated September 26, 2008, International Isotopes, Inc., requested authorization to use a DOT Specification 20WC-5 package beyond the expiration date of October 1, 2008. International Isotopes, Inc., supplied the information as described in U.S. Nuclear Regulatory Commission, Regulatory Issue Summary 2008-18, "Information on Requests for Extending Use of Expiring Transportation Packages." The package was authorized for transport by NRC letter dated October 20, 2008 [ML082940556], and by Special Permit issued by the Department of Transportation (DOT), DOT-SP 14728, dated October 7, 2008, allowing continued use of the packaging until September 30, 2009. Additional extensions for use of the DOT Specification 20WC-5 packaging were granted until September 30, 2010, [ML092740553], and December 31, 2011, [ML102500361], respectively.

## EVALUATION

By application dated July 25, 2012, International Isotopes, Inc., requested authorization for an additional extension to their approval for use of the DOT Specification 20WC-5 package beyond the package authorization expiration date of October 1, 2008.

The packaging replacing the DOT Specification 20WC-5 packaging, is the Model No. AOS-100A-S, certified under Docket No. 71-9316. International Isotopes, Inc., requests continued use of the DOT Specification 20WC-5 packaging until December 31, 2012, to support continued Cobalt-60 source manufacturing activities until their replacement packaging is available. International Isotopes, Inc., anticipates that the Model No. AOS-100A-S will be delivered and ready for use in February 2013.

Staff approves this limited number of shipments because International Isotopes, Inc., has (i) demonstrated there were no other reasonable alternatives, (ii) proposed specific and adequate compensatory measures, and (iii) has a plan and a schedule to acquire an NRC certified replacement package ready for use soon after December 31, 2012. Staff does not intend to grant further authorizations beyond December 31, 2012.

#### DOT SPECIAL PERMIT

On July 12, 2012, the U.S. Department of Transportation issued Special Permit No. DOT-SP 14728, to International Isotopes, Inc., to authorize up to 6 shipments, by exclusive use, of Cobalt-60 in DOT 20WC-5 Specification Packaging Serial No. 2228, containing DOT Specification 2R Serial No. INIS-2R-1 and the tungsten/lead shield insert referred to as the INIS-2 Isotope Transfer Container with an inner tungsten sleeve for single target use or without an inner tungsten sleeve for 2 or 3 target uses. This permit expires December 31, 2012.

#### CONDITIONS

Based on the statements and representations in the application, authorization is granted for the transport of Type B quantities of radioactive material by International Isotopes, Inc., using DOT Specification 20WC-5 package with the following conditions:

1. All shipments must be made in accordance with DOT Special Permit No. DOT-SP 14728, dated July 12, 2012.
2. The packaging and contents are as described in International Isotopes, Inc., application dated July 25, 2012.
3. This authorization is not to exceed 6 shipments, and expires December 31, 2012.

#### CONCLUSIONS

Based on the statements and representations in the International Isotopes, Inc., application dated July 25, 2012, the staff finds that the use by International Isotopes, Inc., of the DOT Specification 20WC-5 package meets the requirements of 10 CFR Part 71, subject to the conditions listed above.

Issued with letter to J. Miller,  
dated August 3, 2012.