May 23, 2014

U.S. Department
of Transportation

**Pipeline and Hazardous
Materials Safety Administration**

East Building, PHH-30
1200 New Jersey Avenue S.E.
Washington, D.C. 20590

DOT-SP 14657
(SEVENTH REVISION)

EXPIRATION DATE: August 31, 2014

(FOR RENEWAL, SEE 49 CFR § 107.109)

1. GRANTEE: University of Missouri Research Reactor (MURR)
Columbia, MO

2. PURPOSE AND LIMITATION:

a. This special permit authorizes the transportation in commerce of specified radioactive materials in designated DOT specification 6M and 20WC-1 packagings on or after October 1, 2008, in order to allow the Grantee a transition period to performance oriented package use. This special permit provides no relief from the Hazardous Materials Regulations (HMR) other than as specifically stated herein. The most recent revision supersedes all previous revisions.

b. The safety analyses performed in the development of this special permit only considered the hazards and risks associated with the transportation in commerce.

c. No party status will be granted to this special permit.

3. REGULATORY SYSTEM AFFECTED: 49 CFR Parts 106, 107 and 171-180.

4. REGULATIONS FROM WHICH EXEMPTED: 49 CFR § 173.416(c) insofar as the 6M and 20WC-1 packagings and radioactive contents specified herein are authorized for shipments exceeding an A_2 quantity of normal form radioactive material, on or after October 1, 2008. The packages must be in conformance with all aspects of the requirements of 49 CFR Subchapter C in effect on October 1, 2003.

5. BASIS: This special permit is based on the application of University of Missouri Research Reactor (MURR) dated April 22, 2014, submitted in accordance with § 107.109.

6. HAZARDOUS MATERIALS (49 CFR § 172.101):

Hazardous Materials Description			
Proper Shipping Name	**Hazard Class/ Division**	**Identification Number**	**Packing Group**
Radioactive material, transported under special arrangement, *non fissile or fissile-excepted*	7	UN2919	N/A

7. SAFETY CONTROL MEASURES:

a. PACKAGING - This special permit is limited to University of Missouri - Columbia Research Reactor Facility 6M specification packaging serial numbers 1802, 1803, 1820, 1824, 1863, 1864, 1866, 2160, 2161, 2162, 2165, 2256, 2257, 2258, 2990, 2991, 2992, 2993, 2994, 2995, 2996, 2997, 2998, and 2999; and 20WC-1 specification packaging serial numbers 4001, 4002, 4003, 4004, 4016, 4018, 4021, 4023 and 4025.

b. OPERATIONAL CONTROLS -

(i) This special permit is limited to solid radioactive materials only. No liquid or gaseous materials are permitted to be transported under the provisions of this special permit.

(ii) Each package may contain no more than the one of the following quantities of radioactive material:

1) Sm-153 ($50A_2$) - Powder in quartz vial in either welded aluminum canister or secured in sealed lead confinement
2) Ir-192 (300 A_2) and Ir-194 (10 A_2) - - Metal solids in either aluminum block or aluminum canister confinement
3) Cs-131 (20 A_2) and Ba-131 (10 A_2) and Ba-135m (100 A_2) - Powder in welded canister
4) P-32 (400 A_2) - Powder in welded canister
5) Yb-169 (200 A_2) - Powder in quartz vial in either welded aluminum canister or secured in sealed lead confinement

(iii) The use, repair, and maintenance of the specification packages must be conducted in accordance with the current U.S. Nuclear Regulatory Commission Quality Assurance Program Approval #0108.

(iv) The material condition of the specification packages must be in Excellent or Good condition, as outlined in the additional technical information dated July 10, 2008. Inspections must be conducted by a Certified Shipping Technician and documented on the "Type B Cask Inspection Log."

(v) Inspections and shipments must be conducted in accordance with the current revision of the following documents, as applicable:

1) AP-SH-001, Administrative Procedure, Radioactive Materials Shipping

2) RP-HP-110, Survey and Decontamination of Returned Shipping Containers

3) BPB-SH-002, 20WC-1 Packaging and Shipment of Type B Non-Waste Radioactive Material

4) FM-35, Control Check sheet for Type B USA DOT 20WC-1 Radioactive Materials Shipment

5) MURR-SAS-0007, Service Applications QA/QC Program: USA DOT 7A Inner Cask

6) MURR-SAS-0007, Quality Control Inspection: Control Check Sheet for DOT 7A Inner Cask Lid Gasket

7) MURR-SAS-0007, Quality Control Inspection: Control Check Sheet for DOT 7A Inner Cask Lid Hold Down Bolt

8) BPB-SH-005, DOT 6M Packaging of Type B Non-Waste Radioactive Material

9) FM-74, Control Check sheet for Type B USA DOT 6M Radioactive Materials Shipment

(vi) As replacement packages become available that are permitted for use in accordance with 49 CFR § 173.416(a), they must be used to the extent practical in lieu of the specification packages described herein.

c. COMMUNICATIONS -

(i) Each shipping paper issued in connection with a shipment made under this special permit must bear the notation "DOT-SP 14657" and be located so that the notation is clearly associated with the description to which the special permit applies.

(ii) The outside of each package used under the terms of this special permit must be plainly and durably marked "DOT-SP 14657".

8. SPECIAL PROVISIONS:

a. A person who is not a holder of this special permit who receives a package covered by this special permit may reoffer it for transportation provided no modification or change is made to the package and it is reoffered for transportation in conformance with this special permit and the HMR.

b. A current copy of this special permit must be maintained at each facility where the package is offered or reoffered for transportation.

c. A quarterly update of package transition activities (actual vs. scheduled milestones for design, testing, application, certification, production, and completion) must be provided to the Office of Hazardous Materials Special Permits and Approvals by January 1, April 1, July, 1 and October 1 of each year this special permit is in effect.

9. MODES OF TRANSPORTATION AUTHORIZED: Cargo Aircraft Only (6M packages containing Sm-153 only) and Motor Vehicle.

10. MODAL REQUIREMENTS: A current copy of this special permit must be carried aboard each cargo aircraft or motor vehicle used to transport packages covered by this special permit. The shipper must furnish a copy of this special permit to the air carrier before or at the time the shipment is tendered.

11. COMPLIANCE: Failure by a person to comply with any of the following may result in suspension or revocation of this special permit and penalties prescribed by the Federal hazardous materials transportation law, 49 U.S.C. 5101 et seq:

    - All terms and conditions prescribed in this special permit and the Hazardous Materials Regulations, 49 CFR Parts 171-180.
    - Persons operating under the terms of this special permit must comply with the security plan requirement in Subpart I of Part 172 of the HMR, when applicable.
    - Registration required by § 107.601 et seq., when applicable.

    Each "Hazmat employee", as defined in § 171.8, who performs a function subject to this special permit must receive training on the requirements and conditions of this special permit in addition to the training required by §§ 172.700 through 172.704.

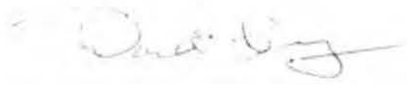
    No person may use or apply this special permit, including display of its number, when this special permit has expired or is otherwise no longer in effect.

    Under Title VII of the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU)—"The Hazardous Materials Safety and Security Reauthorization Act of 2005" (Pub. L. 109-59), 119 Stat. 1144 (August 10, 2005), amended the Federal hazardous materials transportation law by changing the term "exemption" to "special permit" and authorizes a special permit to be granted up to two years for new special permits and up to four years for renewals.

12. REPORTING REQUIREMENTS: Shipments or operations conducted under this special permit are subject to the Hazardous Materials Incident Reporting requirements specified in 49 CFR §§ 171.15 - Immediate notice of certain hazardous materials incidents, and 171.16 - Detailed hazardous

materials incident reports. In addition, the grantee(s) of this special permit must notify the Associate Administrator for Hazardous Materials Safety, in writing, of any incident involving a package, shipment or operation conducted under terms of this special permit.

Issued in Washington, D.C.:



for Dr. Magdy El-Sibaie
Associate Administrator for Hazardous Materials Safety

Address all inquiries to: Associate Administrator for Hazardous Materials Safety, Pipeline and Hazardous Material Safety Administration, U.S. Department of Transportation, East Building PHH-30, 1200 New Jersey Avenue, Southeast, Washington, D.C. 20590.

Copies of this special permit may be obtained by accessing the Hazardous Materials Safety Homepage at http://hazmat.dot.gov/sp_app/special_permits/spec_perm_index.htm. Photo reproductions and legible reductions of this special permit are permitted. Any alteration of this special permit is prohibited.

PO: JW/dl/kah