U.S. Department
of Transportation

**Research and
Special Programs
Administration**

400 Seventh Street, S.W.
Washington, D.C. 20590

OCT 14 2004

DOT-E 13133
(FOURTH REVISION)

EXPIRATION DATE: July 31, 2006

(FOR RENEWAL, SEE 49 CFR § 107.109)

1. GRANTEE: U.S. Department of Energy (DOE) and persons conducting operations under the direction of DOE officials and their designees
Washington, DC

(See Appendix A to this document for a list of additional grantees.)

2. PURPOSE AND LIMITATION:

a. This exemption authorizes the transportation in commerce of not more than 25 grams of explosive or pyrotechnic material that has energy density not greater than that of pentaerythritol tetranitrate (PETN), classed as Division 1.4E when packed in a special shipping container. This exemption provides no relief from the Hazardous Materials Regulations (HMR) other than as specifically stated herein.

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

c. This exemption is limited to use for US government purposes.

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

4. REGULATIONS FROM WHICH EXEMPTED: 49 CFR § 172.320 in that the EX number need not be marked on the package, §§ 173.54(a), (e), (j), and (l) in that explosives defined as forbidden under these paragraphs may be transported in accordance with terms of this exemption, §§ 173.56(b),

173.57 and 173.58, in that a new explosive need not be examined and tested prior to transportation and §§ 173.60 and 173.62 in that an alternate packing method is authorized.

5. BASIS: This exemption is based on the application of the Department of Energy dated October 14, 2004, submitted in accordance with § 107.109.

6. HAZARDOUS MATERIALS (49 CFR § 172.101):

Hazardous materials description			
Proper Shipping Name	**Hazard Class/ Division**	**Identi-fication Number**	**Packing Group**
Articles, explosive, n.o.s.(*)	1.4E	UN0471	II

* Technical name of material being shipped

7. SAFETY CONTROL MEASURES:

a. Explosives (including pyrotechnics, articles containing explosives, and waste containing explosives) authorized for transportation under the terms of this exemption must meet the following conditions:

(1) Explosives are limited to samples for evaluations or testings. Only explosives having an energy density not greater than that of PETN are authorized.

(2) No more than 25 grams of liquid or solid explosive substances or articles containing no more than 25 grams (net weight) of explosive may be transported in one package.

(3) Prior to first transport, new explosive substances must be tested and pass the UN Test Series 3 tests for Impact, Thermal, Friction, and Small Scale Burning sensitivities in accordance with TB-700-2, Department of Defense Ammunition and Explosives Hazard Classification Procedures, unless closely analogous to explosive substances which have been previously tested by the DOE and found to meet the UN Test Series criteria or for which comparable UN Test Series 3 data can be found in technical publications.

(4) An explosive article forbidden under § 173.54(l) must have its means of initiation or ignition protected against accidental functioning during transportation.

(5) The explosives authorized for transportation under this exemption must be transported exclusively for US Government purposes.

b. Packing methods authorized:

(1) Inner packaging:

(i) Solid explosive must be placed in a leak-proof receptacle.

(ii) Liquid explosive must be placed in a 60-milliliter capacity leak-proof glass bottle with threaded plastic lid. The glass bottle must then be wrapped in absorbent material and placed into a one-quart metal paint can fitted with a lid which is closed tight with a ring lock. Sufficient absorbent must be used to prevent movement of the glass bottle inside the metal can.

(iii) Small explosive articles shall be placed in fiberboard or plastic receptacles with sufficient dunnage to prevent movement in the intermediate packaging. Larger explosive articles shall be wrapped in fiberboard or expanded plastic foam or bubble-wrap sheeting to prevent movement in the intermediate packaging.

Inner packaging must be placed in the Intermediate packaging with cushioning material or the material so the inner packaging is located in the center of the intermediate packaging to keep the inner packaging away from the side walls and ends of the capped intermediate packaging.

(2) Intermediate packaging: The following intermediate packagings are authorized:

(i) A 4-inch X 14-inch Schedule 80 seamless steel pipe nipple closed at both ends with 4-inch diameter forged steel end caps, 3,000 psi per ASTM 105, or other caps which have been shown by test to contain the explosive effect of 25 grams of PETN, or

(ii) A 6-inch X 12 to 14-inch Schedule 80 seamless steel pipe nipple closed at both ends with 6-inch diameter malleable iron end caps with a minimum strength of 250 psi, or other caps which have been shown by test to contain the explosive effect of 25 grams of PETN.

For pipe nipples described in paragraphs 7.b.(2)(i) and (ii), the threads must be cut so that the end caps can be screwed on a minimum of 5 threads by hand, but the caps must be tightened with a wrench.

(3) Outer packaging: intermediate packaging must be placed in one of the following outer packagings with sufficient cushioning material or other means to prevent movement of the intermediate packaging.

(i) A cushioned UN 4G fiberboard box, 4C wooden box, 4D plywood box;

(ii) A 4A steel box, 4B aluminum box, 4N metal (other than steel or aluminum) box;

(iii) A 1A2 removable head steel drum, 1B2 removable head aluminum drum, or 1N2 removable head metal (other than steel or aluminum) drum; or

(iv) A container that meets the requirements of the Institute of Makers of Explosives' Safety Library Publication No. 22.

8. SPECIAL PROVISIONS:

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

b. For purposes of domestic transportation by air in accordance with § 171.11, this document also constitutes an exemption to the International Civil Aviation Organization's Technical Instructions for the Safe Transportation of Dangerous Goods in accordance with Part 1;1.1.1. This does not constitute authority to offer hazardous materials for international transportation.

9. MODES OF TRANSPORTATION AUTHORIZED: Motor vehicle and cargo aircraft only.

10. MODAL REQUIREMENTS: A current copy of the exemption must be carried aboard each aircraft or motor vehicle used to transport packages covered by this exemption. The shipper must furnish a current copy of this exemption 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 exemption and penalties prescribed by the Federal hazardous materials transportation law, 49 U.S.C. 5101 et seq:

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

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

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

12. REPORTING REQUIREMENTS: The carrier is required to report any incident involving fire, explosion or loss of packaging contents or packaging failure to the Associate Administrator for Hazardous Materials Safety (AAHMS) as soon as practicable. (Sections 171.15 and 171.16 apply to any activity undertaken under the authority of this exemption.) In addition, the holder(s) of this exemption must inform the AAHMS, in writing, of any incidents involving the package and shipments made under the terms of this exemption.

Issued in Washington, D.C.:

Robert A. McGuire
Associate Administrator for
Hazardous Materials Safety

OCT 14 2004
(DATE)

Address all inquiries to: Associate Administrator for Hazardous Materials Safety, Research and Special Programs Administration, Department of Transportation, Washington, D.C. 20590. Attention: DHM-31.

Copies of this exemption may be obtained by accessing the Hazardous Materials safety Homepage at http://hazmat.dot.gov/exemptions Photo reproductions and legible reductions of this exemption are permitted. Any alteration of this exemption is prohibited.

PO: sln

OCT 14 2004

The following are hereby granted party status to this exemption based on their application(s) submitted in accordance with § 107.107 or § 107.109, as appropriate:

Company Name City/State	Application Date	Issue Date	Expiration Date
U.S. Department of Defense (DOD) and persons conducting operations under the direction of DOD officials and their designees Fort Eustis, VA	Aug 24, 2004	Sept 9, 2004	Jul 31, 2006

Robert A. McGuire
for Associate Administrator for
Hazardous Materials Safety

OCT 14 2004
Date