



DEPARTMENT OF TRANSPORTATION  
MATERIALS TRANSPORTATION BUREAU

WASHINGTON, D.C. 20590

24335

[49 CFR Parts 171, 172, 173, 175, 176]

[Docket No. HM-139; Notice No. 7]

**TRANSPORTATION OF HAZARDOUS  
MATERIALS**

**Individual Exemptions, Conversion to  
Regulations of General Applicability**

**AGENCY:** Materials Transportation Bureau, DOT.

**ACTION:** Notice of proposed rulemaking.

**SUMMARY:** The Materials Transportation Bureau is considering amending the regulations governing the transportation of hazardous materials to incorporate therein a number of changes based on existing exemptions which have been granted to individual applicants allowing them to perform particular functions in a manner that varies from that specified by the regulations. Adoption of these exemptions as rules of general applicability would provide wider access to the benefits of transportation innovations recognized as effective and safe.

**DATES:** Comments by July 5, 1978.

**ADDRESS COMMENTS TO:** Dockets Section, Office of Hazardous Materials Regulation, Materials Transportation Bureau, Department of Transportation, Washington, D.C. 20590. It is requested that five copies be submitted.

**FOR FURTHER INFORMATION CONTACT:**

Alan I. Roberts, Associate Director for Hazardous Materials Regulation, Materials Transportation Bureau, 2100 Second Street SW., Washington, D.C. 20590, 202-426-0656.

**SUPPLEMENTARY INFORMATION:** Each of the proposed amendments described in the following table is founded upon either: (1) Actual shipping experience gained under an exemption, or (2) the data and analysis supplied in the application. In each case the resulting level of safety being afforded the public is considered at least equal to the level of safety provided by the current regulations. Primary drafters of this proposal are Darrell L. Raines, and John C. Allen, Office of Hazardous Materials Regulation, and Evan Braude, Office of the Chief Counsel, Research and Special Programs Administration. These proposals would

not significantly affect the costs of regulatory enforcement, nor would additional costs be imposed on the private sector, consumers, or Federal, State or local governments, since these proposals would merely authorize the general use of shipping alternatives previously available to only a few users under exemptions. The safety record of shipments under the identified exemptions demonstrates that significant environmental impacts would not result from any of the proposals. Adoption of an amendment derived from an existing exemption would obviate the need for that exemption and effectively terminate it. Upon such termination, the holder of the exemption and parties thereto would be individually notified. Adoption of an amendment derived from an application for exemption should provide the relief sought, in which event the exemption request would be denied and the applicant so notified. In the event the Bureau decides not to adopt any of these proposals each pertinent application would be evaluated and acted upon in accordance with the applicable provisions of the exemption procedures in 49 CFR Part 107, Subpart B. Consequently, persons commenting on proposed amendments may wish to address both the proposed amendment and the exemption application. Consideration of comments of the merits of including within an amendment modes of transportation other than those for which the exemption application requested is anticipated. Each mode of transportation for which a particular exemption is authorized or requested is indicated in the "Nature of Exemption or Application" portion of the table below as follows: 1—Motor Vehicle, 2—Rail freight, 3—Cargo vessel, 4—Cargo-only aircraft, 5—Passenger-carrying aircraft. The status of the exemption action is indicated in the column titled Identification Number where prefix "E" means an exemption has been issued and Prefix "SP" means a special permit exists under previous authorities. The suffix "No" means no applications for exemptions are pending, but the Bureau is taking action by this proposal; the suffix "X" means a renewal application is pending; the suffix "P" means one or more party status applications are pending; and the suffix "N" means a new application for exemption is pending.

*Proposed amendments of hazardous materials regulations to terminate special permits and exemptions*

Identification No.	Applicant holder	Regulation affected	Nature of exemption or application	Nature of proposed amendment
353-No. E 4765-No.	Kerr-McGee Chemical Corp.; Pennwalt Corp.	173.163(a)	Authorizes shipment of sodium chlorate and potassium chlorate in DOT Specification 56 portable tanks (modes 1 and 2).	To add paragraph (9) to read: (9) Specification 56 (§ 178.252 of this subchapter): Metal portable tank. Authorized only for sodium chlorate and potassium chlorate. Aluminum tanks not authorized for transportation by water.
E 3897-No.	Dow Chemical Co.	173.34(e)(10)	Authorizes shipments of ethylene imine, inhibited in DOT specification 4B240 and 4BW240 cylinders. Cylinders may be inspected in accordance with 49 CFR 173.34(e)(10) (modes 1 and 3). Cylinders made in compliance with DOT-4B240, DOT-4BW240. Used exclusively for ethylene imine, inhibited.	To revise the table in paragraph (e)(10) by adding.

Identification No.	Applicant holder	Regulation affected	Nature of exemption or application	Nature of proposed amendment
E 6260-No., E 7256-No., E 7588-No.	Amtrol Inc.; State Industries; Hoyt Corp.	172.101 173.306	Authorizes shipments of compressed air or nitrogen in non-DOT specification, single-trip steel tanks having a rated capacity of not over 87 gallons and charged to a pressure of not over 35 psig at 70° F (modes 1, 2 and 3).	To amend the table in § 172.101 by adding water pump system tanks to read:

(1) Hazardous materials descriptions and proper shipping names	(2) Hazard class	(3) Label(s) required (if not excepted)	(4) Packaging		(5) Maximum net quantity in 1 package		(6) Water shipments			
			(a) Exceptions	(b) Specific requirements	(a) Passenger carrying aircraft or railcar	(b) Cargo only aircraft	(a) Cargo vessel	(b) Passenger vessel	(c) Other requirements	
										(a)
Water pump system tank charged with nonflammable compressed gases.	Nonflammable gas.	None	173.306	Forbidden	Forbidden	1, 2	1, 2			

Identification No.	Applicant holder	Regulation affected	Nature of exemption or application	Nature of proposed amendment
E 6260-No., E 7256-No., E 7588-No.	Amtrol Inc., State Industries, Hoyt Corp.	172.101 173.306	Authorizes shipments of compressed air or nitrogen in non-DOT specification, single-trip steel tanks having a rated capacity of not over 87 gallons and charged to a pressure of not over 35 psig at 70° F (modes 1, 2 and 3).	To add paragraph (g) to 173.306 to read: (g) <i>Water pump system tank</i> . Water pump system tanks charged with limited quantities of nonliquefied, nonflammable gases to not over 40 psig for single-trip shipment to installation sites are excepted from labeling (except when offered for transportation by water-transportation by air not authorized) and the specification packaging requirements of this subchapter when shipped under the following conditions. In addition, shipments are not subject to Subpart F of this subchapter, to Part 174 of this subchapter except § 174.24 and Part 177 except § 177.817. (1) The tank must be of steel, welded with heads concave to pressure, having a rated water capacity not exceeding 100 gallons and with outside diameter not exceeding 24 inches. Safety relief device not required. (2) The tank must be hydrostatically or pneumatically tested to 3 times the charged pressure at 70° F or 100 psig, whichever is greater. Test pressure must be permanently marked on the tank. (3) The stress at test pressure must not exceed 20,000 psi using the formula: $S = Pd/2t$ Where: S = Wall stress in pounds per square inch. P = Test pressure prescribed in subparagraph (2) above, in pounds per square inch. d = Inside diameter in inches. t = Minimum wall thickness, in inches. (4) The burst pressure must be at least 2 times the test pressure. (5) Each tank must be overpacked in a strong outside container in accordance with § 173.301(k). To amend the table in § 172.101 by adding <i>cyclotetramethylene tetranitramine, wet with not less than 10% water</i> . See high explosives.
E 6485-No.	U.S. Department of Defense	172.101 173.65(c)(3)	Authorizes shipments of cyclotetramethylene tetranitramine (HMX), wet with not less than 10 pounds of water to each 90 pounds of dry material in DOT specification 21C fiber drums which do not contain an antifreeze to prevent freezing (mode 1).	To amend the table in § 172.101 by adding <i>cyclotetramethylene tetranitramine, wet with not less than 10% water</i> . See high explosives.

* / W/ A	(2) Hazardous materials descriptions and proper shipping names	(3) Hazard class	(4) Label(s) required (if not excepted)	(5) Packaging		(6) Maximum net quantity in 1 package		(7) Water shipments		
				(a) Exceptions	(b) Specific requirements	(a) Passenger carrying aircraft or railcar	(b) Cargo only aircraft	(a) Cargo vessel	(b) Passenger vessel	(c) Other requirements

Cyclotetramethylene  
Tetranitramine,  
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Identification No.	Applicant holder	Regulation affected	Nature of exemption or application	Nature of proposed amendment
E 6685-No.....	U.S. Department of Defense	172.101 173.65(e)(3)	Authorizes shipments of cyclotetramethylene tetranitramine (HMX), wet with not less than 10 pounds of dry material in DOT Specification 21C fiber drums which do not contain an antifreeze to prevent freezing (mode 1).	To revise paragraph 173.65(e)(3) to read as follows: (3) Specification 5B (§178.82 of this subchapter). Metal barrels or drums or Specification 21C (§178.224 of this subchapter) fiber drums. Authorized only for cyclotrimethylene-trinitramine or cyclotetramethylene-tetranitramine, each wet with not less than 10 pounds of water to each 90 pounds of dry material in inside containers which must be bags made of at least 10-ounce cotton duck, rubber, or rubberized cloth and securely closed. The dry weight of cyclotrimethylene-trinitramine or cyclotetramethylene-tetranitramine in one metal barrel or drum must not exceed 300 pounds and not more than 225 pounds in fiber drums. These bags containing the cyclotrimethylene-trinitramine or cyclotetramethylene-trinitramine must then be placed in a rubber bag, rubberized cloth bag, or bag made of suitable water-tight material which must be securely closed and then placed in the drum. If shipment of cyclotrimethylene-tetranitramine or cyclotetramethylene-tetranitramine is to take place at time freezing weather is to be anticipated, it must be wet with a mixture of denatured ethyl alcohol or other suitable antifreeze and water of such proportions that freezing will not occur in transit.
E 6643-No.....	Stauffer Chemical Co.....	173.245(a)	Authorizes shipments of certain corrosive liquids in DOT Specification 5K nickel drums. Shipments by cargo-only aircraft are limited to those commodities which were unregulated prior to Docket No. HM-57, in drums having a marked capacity not over 55 gallons (modes 1, 2, 3, and 4).	To revise paragraph (a)(5) to read: (5) Specification 5K (§178.88 of this subchapter). Nickel barrels or drums. Authorized only for commodities that will not react with nickel and result in container failure.
E 7020-No.....	Kerr-McGee Chemical Co.....	173.154(a)	Authorizes shipments of dry sodium chlorate mixture and hydrated calcium hypochlorite in containers as prescribed in 49 CFR 173.163(a)(7) (modes 1 and 2).	To add paragraph (19) to read: (19) As prescribed in §173.163(a)(7). Authorized only for sodium chlorate, dry and hydrated calcium hypochlorite.
E 7094-No.....	Dow Chemical Co., Tennessee Eastman Co., Jefferson Chemical Co., Union Carbide Corp., Diamond Shamrock Corp.	172.101	Authorizes under deck stowage of corrosive liquids, n.o.s., and corrosive solids, n.o.s., which meet only the corrosion to skin criteria of 49 CFR 173.240(a)(1) and do not meet the corrosion to metal criteria of 49 CFR 173.240(a)(2) (mode 3).	To add the following in column (7)(c) for corrosive liquids, n.o.s. and corrosive solids, n.o.s.: For materials that meet only the corrosion to skin criteria of 49 CFR 173.240(a)(1) "under deck" stowage is also authorized if the description includes the additional entry specified by §172.203(i)(3).
		172.203(i)	do.....	Add paragraph (3) to read: The entry "Skin Corrosive Only" must be included in order to also authorize "under deck" stowage for corrosive liquid, n.o.s., and corrosive solid, n.o.s., that meet only the corrosion to skin criteria of §173.240(a)(1).
E 7686-No.....	Arthur E. Scholl.....	175.10	Authorizes smoke grenades and other pyrotechnic devices to be affixed to the wings and tail section of certain aircraft under specified conditions (mode 4).	To add paragraphs (a)(11) to §175.10 to read: (11) Smoke grenades, flares, and pyrotechnic devices affixed to aircraft carrying no person other than a required flight crew member during any flight conducted at and as a part of a scheduled air show or exhibition of aeronautical skill. The affixed installation accommodating the smoke grenades, flares, or pyrotechnic devices on the aircraft must be approved by the FAA for its intended use.

Proposed amendments of hazardous materials regulations to terminate special permits and exemptions—Continued

Identification No.	Applicant holder	Regulation affected	Nature of exemption or application	Nature of proposed amendment
E 7724-No	Atmospherics Inc., Colorado River Municipal Water Division.	175.10	Authorizes carriage of certain hazardous materials aboard special aircraft used in weather modification, avalanche control or forest fire fighting under specified conditions.	To add paragraph (a)(12) to § 175.10 to read: (12) Hazardous materials which are loaded and carried on or in cargo-only aircraft and which are to be dispensed or expended during flight for weather control, forest preservation and protection, or avalanche control purposes when the following requirements are met: (i) Operations may not be conducted over densely populated areas, in a congested airway, or near any airport where air carrier passenger operations are conducted. (ii) Each operator shall prepare and keep current a manual containing operational guidelines and handling procedures, for the use and guidance of flight, maintenance, and ground personnel concerned in the dispensing or expending of hazardous materials. The manual must be approved by the FAA district office having jurisdiction over the operator's certificate, if any, or the FAA regional office in the region where the operator is located. Each operation must be conducted in accordance with the manual. (iii) No person other than a required flight crew member, FAA inspector, or person necessary for handling or dispensing the hazardous material may be carried on the aircraft. (iv) The operator of the aircraft must have advance permission from the owner of any airport to be used for the dispensing or expending operation. (v) When dynamite and blasting caps are carried for avalanche control flights, the explosives must be armed, dropped, and, at all times be, under the control of a blaster who is licensed under an authority approved by the FAA district office having jurisdiction over the operator's certificate, if any, or the FAA regional office in the region where the operator is located.
E 7792-No	Dow Chemical	§ 171.8	Authorized the return of empty tank cars without snippers certification required by § 172.204. To establish the definition of "empty tank car," for clarification purposes, which is the same as that found in the Uniform Freight Classification Rule 35, Section 7.	To add the following definition in alphabetical sequence in § 171.8: "Empty tank car" means a tank car containing a hazardous material which does not exceed 3 percent of the weight of the last loaded movement.
7813-No	Lithium Corp. of America	173.245b(a)(5)	Authorizes shipment of lithium hydroxide monohydrate in DOT Specification 21C fiber drum having a capacity of 65 gallons and a maximum net weight of 550 pounds (modes 1, 2, and 3).	To revise paragraph (5) to read (5) Fiber drum not exceeding 550 pounds net weight and not over 65-gallon capacity. When shipped by water, each drum must include a moisture barrier.
E 7837-No	Barber Steamship Lines	172.101	Authorizes shipments of cigarette lighters charged with a flammable gas in nonventilated freight containers. The access doors of each nonventilated freight container must have the following warning sign: "WARNING—MAY CONTAIN EXPLOSIVE MIXTURES WITH AIR—KEEP IGNITION SOURCES AWAY WHEN OPENING." The warning sign must be on a contrasting background and must be readily legible from a distance of 25 feet (mode 3).	To amend column (7)(c) by deleting the requirement "Not permitted in nonventilated container" for the entries for "Cigarette lighter" (when classed as flammable gas) and "Motor vehicle."
		173.302	do	To add paragraph (c) to read: (c) For transportation by vessel in a closed transport vehicle or a closed freight container, the following warning must be affixed to the access doors "WARNING—MAY CONTAIN EXPLOSIVE MIXTURES WITH AIR—KEEP IGNITION SOURCES AWAY WHEN OPENING." The warning must be on a contrasting background and must be readily legible from a distance of 25 feet.
		176.905(k)	do	To revise paragraph (k) to read: (k) Motor vehicles with fuel in their tanks may be stowed in closed freight containers if the following warning is affixed to the access doors "WARNING—MAY CONTAIN EXPLOSIVE MIXTURES WITH AIR—KEEP IGNITION SOURCES AWAY WHEN OPENING." The warning must be on a contrasting background and must be readily legible from a distance of 25 feet.

*Proposed amendments of hazardous materials regulations to terminate special perm*

Identification No.	Applicant holder	Regulation affected	Nature of exemption or application	
E 7839-No	Texstar Chemical Corp.	173.297(a)	Authorizes shipments of titanium sulfate solution containing not more than 20 percent sulfuric acid in DOT Specification 21P fiber drum overpack with inside specification 2SL polyethylene container not over 55-gallon capacity or 2U polyethylene container not over 15-gallon capacity (mode 1).	To add para- (5) Spec- Fiber dru- (\$178.24 o- over 15-ga- of this su- gallon cap- not over 20-
E 7868-No	Virginia Chemicals	173.119(m)(10)	Authorizes shipment of various flammable liquids which are also corrosive in a DOT Specification MC 303 cargo tank (mode 1).	To revise pa- (10) Spec- hicle meet- cargo tank meet \$178 for flamm-
E 7932-No	Petroleum Equipment Suppliers' Association	172.101 173.110(b)	Authorizes shipment of charged oil well jet perforating guns as Class C explosives for water shipments under limited conditions. These devices may be shipped in specialized motor vehicles or in offshore downhole tool pallets aboard private offshore oil well supply vessels. Such shipments were authorized under U.S. Coast Guard regulations (49 CFR 146.20-7(i)) prior to the consolidation of the hazardous materials regulations (Docket HM-112). Docket HM-112 failed to provide for these shipments. The devices are needed at offshore drilling rigs for oil exploration and exploitation purposes.	To revise th- perforating

(1)	(2)	(3)	(4)	(5)		(6)	
				Packaging		Maximum net quantity in 1 package	
				(a)	(b)	(a)	(b)
*/ W/ A	Hazardous materials descriptions and proper shipping names	Hazard class	Label(s) required (if not excepted)	Exceptions	Specific requirements	Passenger carrying aircraft or railcar	Cargo only aircraft
	Charged oil well jet perforating gun (total explosive content in guns not exceeding 20 lb per motor vehicle, special offshore downhole tool pallet, or vessel).	Class C explosive.	Explosive C	None	173.110	Forbidden	Forbidden

*Proposed amendments of hazardous materials regulations to terminate special permits and exemptions—Continued*

Identification No.	Applicant holder	Regulation affected	Nature of exemption or application	Nature of proposed amendment
E 7932-N9	Petroleum Equipment Suppliers' Association.	172.01 173.110(b)	Authorizes shipment of charged oil well jet perforating guns as Class C explosives for water shipments under limited conditions. These devices may be shipped in specialized motor vehicles or in offshore downhole tool pallets aboard private offshore oil well supply vessels. Such shipments were authorized under U.S. Coast Guard regulations (49 CFR 146.20-7(i)) prior to the consolidation of the hazardous materials regulations (Docket HM-112). Docket HM-112 failed to provide for these shipments. The devices are needed at offshore drilling rigs for oil exploration and exploitation purposes.	To revise the section heading in § 173.110 and to add paragraph (c) to read: § 173.110 <i>Charged oil well jet perforating guns, total explosive content in guns not exceeding 20 pounds per motor vehicle, pallet, or vessel.</i> * * * (c) Charged oil well jet perforating guns may be offered for transportation and transported by private offshore oil well supply vessels only when carried in special motor vehicles as prescribed in § 173.80 or on offshore downhole tool pallets, and accompanied by personnel trained in the safe handling of these devices, provided that: (1) No blasting caps, electric blasting caps or other firing devices shall be affixed or installed in the guns. (3) Each shaped charge, if not completely enclosed in glass or metal, shall be fully protected by a metal cover after installation in the gun. (4) The total weight of the explosive contents of shaped charges assembled in guns being carried does not exceed 20 pounds per vehicle, pallet or vessel.

(49 U.S.C. 1803, 1804, 1808; 49 CFR 1.53(e) and paragraph (a)(4) of app. A to part 102.)

NOTE.—The Materials Transportation Bureau has determined that this document does not contain a major proposal requiring preparation of an economic impact statement under Executive Order 11821, as amended by Executive Order 11949, and OMB Circular A-107 nor an environmental impact statement under the National Environmental Policy Act (49 U.S.C. 4321 et seq.).

Issued in Washington, D.C., on May 26, 1978.

ALAN I. ROBERTS,  
*Associate Director for Hazardous Materials Regulation,  
Materials Transportation Bureau.*

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