DEPARTMENT OF TRANSPORTATION
HAZARDOUS MATERIALS REGULATIONS BOARD
WASHINGTON, D.C. 20590

7470

[Docket No. HM-106; Notice No. 73-2]

TRANSPORTATION OF HAZARDOUS MATERIALS

Notice of Proposed Rule Making

The Hazardous Materials Regulations Board is considering amendments to several unrelated sections of the Department of Transportation Hazardous Materials Regulations. Commenters need only identify the particular proposal on which they wish to comment when responding. The proposals covered in this document are:

A--Iodine pentafluoride and other fluoride materials.
B--DOT specification 51 portable tanks.
C--Flammable liquids, n.o.s., in tank motor vehicles.
D--Mercaptans in DOT specification 51 portable tanks.
E--Sodium hydrosulfite in DOT specification 56 portable tanks.
F--Lithium metal wire and certain alkali materials.
G--Wet zirconium metal powder in DOT 37M/2S packaging.
H--Bromine in MC 310 and MC 312 cargo tanks.
I—Fluosulfonic acid in cargo tanks.
J—Liquefied petroleum gas in DOT specification 2P and 2Q containers.
K--Audible fire alarm systems and fire extinguishers.
L—Hydrogen sulfide in multiunit tank car tanks.
M--Deletion of obsolete specifications.

Proposal A—Iodine Pentafluoride and Other Fluoride Materials

The Hazardous Materials Regulations Board is considering an amendment to §§ 172.5, 173.246, 173.283, 173.284, and 173.285 of the Department's Hazardous Materials Regulations to identify iodine pentafluoride by name as a hazardous material and to authorize the shipment of iodine pentafluoride in Specification 3A, 3AA, 3BN, 3E, and 4BA cylinders and in Specification 106A and 110AW multiunit tank car tanks. In addition, the Board proposes to make certain editorial changes which will group a number of the fluoride materials presently covered in different sections into one section, to delete the authorization for 10 pounds or less of these materials to be shipped in cylinders approved by the Bureau of Explosives, and to further delete unnecessary references to DOT-106A500 tanks.

Iodine pentafluoride is not presently listed by name in the regulations. However, it is shipped as a corrosive liquid, not otherwise specified, and is subject to the packagings prescribed in § 173.245. Because of the similar characteristics between iodine pentafluoride and other fluoride materials (i.e., antimony pentafluoride, bromine pentafluoride, chlorine trifluoride, et al.) which are listed by name in § 172.5, the Board proposes to incorporate iodine pentafluoride in the list of hazardous materials in roman type so that it may be used as a proper shipping name to be shown on outside packagings.

For packagings, the Board proposes that iodine pentafluoride be authorized to be shipped in the specific cylinders and multiunit tank car tanks previously described. The proposed authorization to use these packagings is based on 7 years of satisfactory shipping experience reported to the Board and on the experience obtained with these packagings now in use for the transportation of other fluoride materials. This regulation change would give shippers an alternate method of packaging without detriment to the safe transportation of this commodity.

A review of the present regulations reveals that antimony pentafluoride, bromine pentafluoride, bromine trifluoride, and chlorine trifluoride are found under different sections even though basically the packagings prescribed for each material are similar. To simplify the regulations the Board proposes to combine the fluoride materials presently listed with the proposed iodine pentafluoride entry into a single § 173.246.

Each fluoride section except § 173.246 covering antimony pentafluoride authorizes 10 pounds or less of material to be shipped in cylinders approved by the Bureau of Explosives. The Board believes that this packaging authorization is no longer used because it appears that it was established many years ago for specific needs at the time. Therefore, the authorization based on Bureau of Explosives approval is proposed to be canceled. Any person who may be using such cylinders or may know of their use is requested to notify the Board.

On January 28, 1970, in Docket No. HM-14; Amendment 173-18 (35 FR 1108) the hazardous materials regulations were amended to remove the specification designation 106A500 from sections affected since the "grandfather" authorization for the use of this specification is provided for in § 173.31(a)(2). Section 173.285 was overlooked in making this editorial change. The Board proposes to delete the unnecessary reference to DOT-106A500 tanks in § 173.285. However, since the provisions of §173.285 are proposed to be combined into § 173.246 the reference to 106A500 tanks in this latter section is also proposed to be omitted.

In consideration of the foregoing, it is proposed to amend 49 CFR Parts 172 and 173 as follows:

I. Part 172—List of Hazardous Materials Containing the Shipping Name or Description of all Materials Subject to Parts 170-189 of this subchapter.

In § 172.5, paragraph (a), the list of hazardous materials would be amended as follows:

§ 172.5 List of hazardous materials.

(a) * * *

Article	Classed as—	Exemption and packing (see sec.)	Label required if not exempt	Maximum quantity in 1 outside container by rail express
(Add)				
Iodine pentafluoride	Cor	No exemption, 173.246	Corrosive	100 pounds.
(Change)				
Antimony pentafluoride	Cor	No exemption, 173.246	Corrosive	25 pounds.
Bromine pentafluoride	Cor	No exemption, 173.246	Corrosive	100 pounds.
Bromine trifluoride	Cor	No exemption, 173.246	Corrosive	100 pounds.
Chlorine trifluoride	Cor	No exemption, 173.246	Corrosive	100 pounds.

II. Part 173—Shippers:

(A) In Part 173—Table of contents, § 173.246 would be amended; §§ 173.283, 173.284, and 173.285 would be canceled as follows:

Sec.
173.246 Antimony pentafluoride, bromine pentafluoride, iodine pentafluoride, bromine trifluoride, and chlorine trifluoride.
173.283 [Canceled]
173.284 [Canceled]
173.285 [Canceled]

(B) In § 173.246, the heading, paragraph (a), and paragraph (a) (1) would be amended; paragraph (a) (2) would be added to read as follows:

§ 173.246 Antimony pentafluoride, bromine pentafluoride, iodine pentafluoride, bromine trifluoride, and chlorine trifluoride.

(a) Antimony pentafluoride must be commercially anhydrous. Materials cited in the heading of this section must be packed in specification packagings as follows:

(1) Specification 3A150, 3AA150, 3B240, 3BN150, 4B240, 4BA240, 4BW240, or 3E1800 (§§ 178.36, 178.37, 178.38, 178.39, 178.50, 178.51, 178.61, 178.42 of this subchapter). Cylinders. Each valve outlet must be sealed by a threaded cap or a threaded plug. Cylinder valves must be protected as specified for corrosive gases in § 173.301(g). No cylinder may be equipped with any safety relief device. Specification 3E1800 cylinders must be packaged in accordance with the requirements of § 173.301(k).

(2) Specification 106A500X or 110A 500W (§§ 179.300, 179.301 of this subchapter). Tanks. Authorized for iodine pentafluoride and chlorine trifluoride only. Each tank must be equipped with a valve protection cover and with solid steel plugs in place of fusible plug safety devices. No tank may be equipped with any safety relief device.

§§ 173.283, 173.284 and 173.285 [Canceled]

(C) Section 173.283 would be canceled.
(D) Section 173.284 would be canceled.
(E) Section 173.285 would be canceled.

Proposal B—DOT Specification 51 Portable Tanks

The Hazardous Materials Regulations Board is considering an amendment to §§ 173.32, 173.206, and 178.245 of the Department's hazardous materials regulations to limit the requirement for a reflective exterior surface finish on DOT Specification 51 portable tanks to only those tanks containing compressed gas, and to eliminate this requirement for other substances, such as flammable liquids. The Board is also proposing to refine the language that provides for this requirement.

The present requirements in § 178.245–1(c) specify that every uninsulated or nonjacketed DOT Specification 51 portable tank must be painted a white, aluminum, or similar reflecting color. This requirement applies to all DOT Specification 51 portable tanks containing hazardous materials, except when otherwise provided in the regulations.

This proposal is based primarily on a petition submitted by the Manufacturing Chemists Association, Inc.

The petitioner states that sunlight and its reflection on a DOT Specification 51 portable tank is a significant concern only for tanks containing liquid products having relatively high vapor pressures such as liquefied compressed gases.

The Board considers that the petitioner's comments with regard to the effect of sunlight on these tanks have merit and proposes to require that only those uninsulated DOT Specification 51 portable tanks used to transport compressed gases have a reflective exterior surface.

Section 173.206(c) (4) presently exempts DOT Specification 51 portable tanks from the painting requirements of § 178.245–1(c) when these tanks are used exclusively to transport metallic sodium. Confining the application of the light reflecting exterior surface requirement only to DOT specification 51 portable tanks containing compressed gases makes this exemption redundant for metallic sodium. Therefore, the Board proposes to amend § 173.206(c) (4) by removing the redundant sentence.

In consideration of the foregoing, it is proposed to amend 49 CFR Parts 173 and 178 as follows:

I. Part 173—Shippers:

(A) In § 173.32, paragraph (a) (3) would be added to read as follows:

§ 173.32 Qualification, testing, maintenance, and use of portable tanks.

(a) * * *

(3) Each uninsulated portable tank used for the transportation of compressed gases, as defined in § 173.300, must have an exterior surface finish complying with § 178.245–1(c) of this subchapter.

* * * * *

(B) In § 173.206, paragraph (c) (4) would be amended as follows:

§ 173.206 Sodium or potassium, metallic, sodium amide, sodium potassium alloys, sodium aluminum hydride, lithium metal, lithium silicon, lithium ferro silicon, lithium hydride, and lithium aluminum hydride.

* * * * *

(c) * * *

(4) Specification 51 (§ 178.245 of this subchapter). Portable tank. Each tank must have a minimum design pressure of 150 p.s.i.g. Each tank must be equipped with safety valves having a start-to-discharge pressure of 150 p.s.i.g. If a tank has exterior heating coils these coils must be welded to the tank and must be stress relieved. The material must be in molten condition when loaded and the tank must be held for sufficient time to allow the material to be completely solidified before being offered for transportation. Outage must be five percent or more at sodium fusion temperature of 208° F.

* * * * *

II. Part 178—Shipping Container Specifications.

In § 178.245–1, paragraph (c) would be amended as follows:

§ 178.245 Specification 51; steel portable tanks.

§ 178.245–1 Requirements for design and construction.

* * * * *

(c) Each uninsulated tank used for the transportation of compressed gas, as defined in § 173.300 of this subchapter, must have an exterior surface finish that is significantly reflective such as a light reflecting color if painted, or a bright reflective metal or other material if unpainted.

PROPOSAL C—FLAMMABLE LIQUIDS, N.O.S. IN TANK MOTOR VEHICLES

The Hazardous Materials Regulations Board is considering an amendment to § 173.119(e)(3) of the Department's Hazardous Materials Regulations to prohibit the transportation of flammable liquids, having a Reid vapor pressure between 16 p.s.i.a. and 27 p.s.i.a. at 100° F., in certain tank motor vehicles.

The Manufacturing Chemists Association, Inc. (MCA) submitted a petition to the Board which proposed to prohibit the use of certain tank motor vehicles for products having vapor pressures in excess of 18 p.s.i.a. except under certain conditions. MCA stated that many products which fall within § 173.119(e)(3) can generate up to 12 p.s.i.g. The Board is aware that with such pressures, intermittent or continuous venting of flammable vapors will occur if the tank motor vehicle is equipped with safety relief devices of 3 p.s.i.g. or less.

The Board does not agree completely with the MCA petition because it does not provide for safety relief valves of a proper design and setting for the flammable materials involved. Also, some of these tanks do not have adequate design pressures to prevent the venting of vapors under normal conditions of transportation.

Therefore, the Board proposes to amend § 173.119(e)(3) to prohibit use of certain lower design pressure cargo tanks in order to more adequately preclude venting of flammable vapors during transportation of these products.

In consideration of the foregoing, it is proposed to amend 49 CFR Part 173 as follows:

In § 173.119, paragraph (e)(3) would be amended to read as follows:

§ 173.119 Flammable liquids not specifically provided for.

* * * * *

(e) * * *

(3) Specification MC 304, MC 307, MC 330, or MC 331 (§§ 178.340, 178.342, 178.337 of this subchapter). Tank motor vehicles. Necessary interior cleaning of the tanks must be performed between changes in lading. Each safety relief device must have a start-to-discharge pressure of not less than 25 p.s.i.g. Each tank must meet the following requirements as applicable:

(i) Bottom outlets on each specification MC 304 cargo tank must be equipped with valves conforming to the requirements of § 178.342–5(a) of this subchapter; and

(ii) Bottom outlets on each specification MC 330 and MC 331 cargo tank must be equipped with valves conforming to the requirements of § 178.337–11(c) of this subchapter. Safety relief devices on these tanks must be in accordance with specification MC 331 (§ 178.337 of this subchapter) requirements.

PROPOSAL D—MERCAPTANS IN DOT SPECIFICATION 51 PORTABLE TANKS

The Hazardous Materials Regulations Board is considering an amendment to § 173.141 of the Department's Hazardous Materials Regulations to authorize shipment of amyl mercaptan, butyl mercaptan, ethyl mercaptan, isopropyl mercaptan, propyl mercaptan, and aliphatic mercaptan mixtures in specification 51 steel portable tanks.

This proposal is based on a petition from a special permit holder who has reported to the Board that he has had satisfactory shipping experience with DOT Specification 51 portable tanks in transporting the previously mentioned materials.

The proposed amendment would require the use of a safety-relief valve with the specification 51 tank. In the case of extremely dangerous poisons, the likelihood of leakage of a valve must be weighed against the probability of the tank being involved in a fire. Probabilities may sometimes indicate that a valve would be more hazardous under overall continual exposure in transportation. Mercaptans do not pose this type of toxic hazard. Therefore, the Board proposes to require safety relief valves.

In consideration of the foregoing, it is proposed to amend 49 CFR Part 173 as follows:

In § 173.141, paragraph (a)(10) would be added to read as follows:

§ 173.141 Amyl mercaptan, butyl mercaptan, ethyl mercaptan, isopropyl mercaptan, propyl mercaptan, and aliphatic mercaptan mixtures.

(a) * * *

(10) Specification 51 (§ 178.245 of this subchapter). Portable tank. Each tank must be equipped with safety relief valves which must be in compliance with all requirements of § 173.315(i) except for paragraphs (i)(9), (10), and (11). A tank must not be liquid full at 130° F.

* * * * *

Proposal E—Sodium Hydrosulfite in DOT Specification 56 Portable Tanks

The Hazardous Materials Regulations Board is considering an amendment to section 173.204 to authorize the shipment of sodium hydrosulfite in DOT Specification 56 portable tanks.

This proposal is based on a petition by a special permit holder who has submitted reports indicating satisfactory shipping experience for over 3 years with the packaging authorized under the special permit.

To insure safety in transportation with sodium hydrosulfite in DOT Specification 56 portable tanks, the proposal requires that each tank be shipped in closed transportation equipment to protect against moisture contact. For trailer-on-flat-car and container-on-flat-car service each tank must be secured in accordance with Bureau of Explosives' Pamphlet 6C to prevent damages under normal conditions of transportation.

In consideration of the foregoing, it is proposed to amend 49 CFR Parts 173 and 174 as follows:

I. Part 173—Shippers:

In § 173.204, paragraph (a)(8) would be added to read as follows:

§ 173.204 Sodium hydrosulfite.

(a) * * *

(8) Specification 56 (§§ 178.251, 178.-252 of this subchapter). Portable tank. Authorized only for shipment in a closed transport vehicle. For rail transportation see § 174.534 of this subchapter. Not authorized for transportation by water.

II. Part 174—Carriers by Rail Freight:

In § 174.534, paragraph (b) would be added to read as follows:

§ 174.534 Portable containers or tanks.

* * * * *

(b) Specifications 52, 53, 56, and 57 (§§ 178.251, 178,252, 178.253 of this subchapter) portable tanks must be shipped only in a rail car that provides specific facilities for bracing and tie down of these tanks. If TOFC or COFC service is utilized, tanks must be secured in trailer bodies in compliance with Bureau of Explosives' Pamphlet 6C.

Proposal F—Lithium Metal Wire and Certain Alkali Materials

The Hazardous Materials Regulations Board is considering an amendment to § 173.206 of the Department's Hazardous Materials Regulations to authorize the shipment of lithium metal wire in a Specification 12B fiberboard box with inside air-tight nonsparking metal packagings, and to authorize the shipment of certain alkali metal and alkali metal compounds in either a Specification 19A or 19B wooden box with inside air-tight metal packagings.

The lithium metal wire proposal is based on a petition by a special permit holder who has submitted reports indicating satisfactory shipping experience for over 7 years with the packaging authorized under the special permit.

The proposal to amend § 173.206(a)(1) is based on a petition by a special permit holder, that proposes use of the packaging authorized by the special permit. The petitioner contends that the integrity of Specifications 19A and 19B outer packagings is equal to or exceeds that of other wooden boxes authorized by the Hazardous Materials Regulations in section 173.206.

In consideration of the foregoing, it is proposed to amend 49 CFR Part 173 as follows:

In § 173.206, paragraph (a)(1) would be amended and (a)(11) would be added to read as follows:

§ 173.206 Sodium or potassium, metallic, sodium amide, sodium potassium alloys, sodium aluminum hydride, lithium metal, lithium silicon, lithium ferro silicon, lithium hydride, and lithium aluminum hydride.

(a) * * *

(1) Specification 15A, 15B, 19A, or 19B (§§ 178.168, 178.169, 178.190, 178.191 of this subchapter). Wooden boxes must have inside air-tight metal packagings. Each inside air-tight metal packaging must have a closing device securely fastened by positive means (not friction). For shipments of lithium aluminum hydride, each inside metal packaging must not exceed 1 gallon capacity and must be securely closed, positive means not required. Each inside metal packaging containing lithium aluminum hydride must be cushioned in outside packagings with sufficient incombustible packaging material.

* * * * *

(11) Specification 12B (§ 178.205 of this subchapter). Fiberboard box. Authorized only for lithium metal in wire form. Fiberboard box must have inside nonsparking metal packaging. Each inside nonsparking metal packaging must be tin coated and sealed by rolled-on lids. The contents of each inside packaging must be coated with heavy mineral oil or petroleum and wound on a 3-inch by 3-inch nonsparking metal spool. The net weight of the contents in each inside packaging must not exceed one-fourth pound.

* * * * *

Proposal G—Wet Zirconium Metal Powder in DOT 37M/2S Packaging

The Hazardous Materials Regulations Board is considering an amendment to § 173.214(c) of the Department's Hazardous Materials Regulations to authorize the shipment of wet zirconium metal powder in a DOT specification 37M nonreusable cylindrical steel overpack with an inside DOT specification 2S polyethylene container. The overpack would be required to be constructed of 24-gage steel throughout and the packaging would be restricted to a maximum capacity of 5 gallons.

Under the present regulations wet zirconium metal powder may be shipped in a 5 gallon capacity 24-gage nonreusable steel drum (DOT-37P) with an inside polyethylene container having a minimum thickness of 0.010 inch. Also, this material has been shipped under special permit for over 5 years without any loss of product in a 5 gallon capacity, 24-gage steel drum (DOT-6D) with an inside polyethylene container (DOT-2S) having a minimum thickness of 0.0625 inch. The permit prohibited reuse of the packaging. The proposed packaging would allow use of a 5 gallon capacity, 24-gage nonreusable steel drum (DOT-37M) with an inside polyethylene container (DOT-2S) having a minimum thickness of 0.0625 inch.

The Board considered a petition requesting an amendment to the regulations which would have provided for the use of nonreusable DOT–6D/2S packagings with wet zirconium metal power based on the satisfactory shipping data that was reported under special permit. However, in the regulations, the DOT–6D outside packaging is reusable. The Board believes that a change to make this reusable packaging nonreusable for shipment of one hazardous material could be confusing and increase the possibility of reuse of the packaging which could detrimentally affect the safe transportation of this material. Therefore, the Board proposes that wet zirconium metal powder be authorized for shipment in a nonreusable DOT specification 37M, made of 24 gage throughout and restricted to 5 gallons capacity, with an inside DOT specification 2S polyethylene container.

The fact that a DOT–37M nonreusable packaging is required to be constructed similar to the DOT–6D reusable packaging except for gage requirements lends support to the Board's proposal. By requiring the DOT–37M to be constructed of 24 gage, it is the Board's opinion that the proposed packaging is equivalent to the DOT–6D packaging currently authorized under special permit and is better than the DOT–37P packaging presently authorized. This regulation change would give shippers an alternate method of packaging without detriment to the safe transportation of this material.

In consideration of the foregoing, it is proposed to amend 49 CFR Part 173 as follows:

In § 173.214, paragraph (c)(4) would be added to read as follows:

§ 173.214 Hafnium metal or zirconium metal, wet, minimum 25 percent water by weight, mechanically produced, finer than 270 mesh particle size; hafnium metal or zirconium metal, dry, in an atmosphere of inert gas, mechanically produced, finer than 270 mesh particle size; hafnium metal or zirconium metal, wet, minimum 25 percent water by weight, chemically produced (see Note 1), finer than 20 mesh particle size; hafnium metal or zirconium metal, dry, in an atmosphere of inert gas, chemically produced (see Note 1), finer than 20 mesh particle size.

* * * * *

(c) * * *

(4) Specification 37M (§ 178.134 of this subchapter). Cylindrical steel overpack with inside specification 2S (§ 178.35 of this subchapter) polyethylene container. Each overpack must be constructed of at least 24-gage steel. Each packaging may not exceed a capacity of 5 gallons. Net weight of contents may not exceed 50 pounds of dry material.

* * * * *

Proposal H—Bromine in MC 310 and MC 312 Cargo Tanks

The Hazardous Materials Regulations Board is considering an amendment to § 173.252 of the Department's Hazardous Materials Regulations to change the quantity requirements for bromine authorized in MC 310 and MC 312 cargo tanks, to change the cladding and lining requirements for these cargo tanks, and to make editorial changes in Specification 105A300W tank car requirements.

This proposal is based, in part, on a petition from a holder of a special permit to amend the regulations applying to the amount of bromine which may be transported in MC 310 and MC 312 cargo tanks. The petitioner has proposed that the reference to product weight be deleted from the regulations and that the filling of bromine shipped in cargo tanks be controlled by a percentage of the water weight capacity of the tank. The regulations now permit up to 30,000 pounds of bromine to be transported in these tanks. Data reported to the Board in connection with a special permit allowing the transportation of 45,000 pounds of bromine in these cargo tanks indicates satisfactory shipping experience.

The quantity of bromine loaded into these tanks is controlled by the design of the cargo tank. Therefore, the Board is of the opinion that the quantity of bromine shipped in MC 310 and MC 312 cargo tanks need not be restricted by product weight and it is proper to restrict filling by a stated percentage of the water weight capacity of the tank. Accordingly, the Board proposes that § 173.252(a)(4) be amended so that the maximum quantity of bromine loaded into a tank must not exceed 300 percent of the water weight capacity of the tank.

Section 173.252(a)(3) requires a Specification 105A300W tank car used for bromine to be lined with lead at least 3/16-inch thick. Section 173.252(a)(4) currently requires Specification MC 310 and MC 312 cargo tanks used for bromine to be lined with lead at least 3/8-inch thick. The 3/8-inch lead lining appears overly restrictive in relation to the 3/16-inch requirement for rail tank cars. Therefore, the Board proposes to amend the present regulations applicable to Specification MC 310 and MC 312 cargo tanks in bromine service to authorize a minimum 3/16-inch lead lining which is similar to the rail tank car requirement in § 173.252(a)(3).

Section 173.252(a)(3) provides an alternative (either cladding or lead lining) on all authorized tank cars. Section 173.252(a)(4) provides only a lead lining for certain Specification MC 310 and MC 312 cargo tanks, and § 173.252(a)(5) provides only for cladding of Specification MC 310 and MC 312 cargo tanks. The Board proposes to include in one paragraph all the alternatives for Specification MC 310 and MC 312 cargo tanks in bromine service.

The Board also proposes minor editorial and format changes in § 173.252(a)(3) for Specification 105A300W tank cars.

In consideration of the foregoing, it is proposed to amend 49 CFR Part 173 as follows:

In § 173.252, paragraphs (a)(3) and (a)(4) would be amended; and paragraph (a)(5) would be canceled as follows:

§ 173.252 Bromine.

(a) * * *

(3) Spec. 105A300W (§§ 179.100, 179.101 of this subchapter). Tank car. Each tank must have a nickel cladding material on the inside surface comprising at least 20 percent of the total thickness, or be lined with lead no less than 3/16-inch thick. Openings in tank heads to facilitate application of lead lining are authorized and must be closed in an approved manner. All closures and appurtenances which are in contact with the lading must be lead lined or must be made of metal not subject to rapid deterioration by contact with the lading. All interior welds in nickel clad tanks must be protected by pure nickel butt straps. Except as otherwise provided herein, the water weight capacity of the tank must not be more than 20,400 pounds, and the maximum quantity of liquid bromine loaded into the tank must not be more than 60,000 pounds or 300 percent of the water weight capacity of the tank, whichever quantity is less. The total quantity loaded must not be less than 98 percent of the quantity the tank is authorized to carry.

(i) A tank constructed and maintained in full compliance with the requirements of a Specification DOT–105A500W is authorized for larger capacities of bromine. However, this tank may be marked DOT–105A300W and may be equipped with manway cover plates, safety valves, venting valves, loading valves, and unloading valves that are in compliance with the requirements of a Specification DOT–105A300W tank. The water weight capacity of this tank must not be more than 37,400 pounds, and the maximum quanity of liquid bromine loaded into the tank must not be more than 110,000 pounds or 300 percent of the water weight capacity of the tank, whichever quantity is less.

(4) Specification MC 310 or MC 312 (§ 178.343 of this subchapter). Tank motor vehicles. Each tank must have a shell and head thickness of at least three-eighths inch. Each tank must have a nickel cladding material on the inside surface comprising at least 20 percent of the total thickness or be lined with lead at least 3/16-inch thick. The cladding material must conform to requirements of ASTM Specification B–162–69. The composite plate must conform to requirements of ASTM Specification A–265–69. The maximum quantity of liquid bromine loaded into the tank must not exceed 300 percent of the water weight capacity of the tank. The total quantity loaded must not be less than 98 percent of the quantity the tank is authorized to carry.

(5) [Canceled]

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PROPOSAL I—FLUOSULFONIC ACID IN CARGO TANKS

The Hazardous Materials Regulations Board is considering an amendment to § 173.274 of the Department's Hazardous Materials Regulations to authorize the shipment of fluosulfonic acid in DOT specifications MC 310, MC 311, and MC 312 cargo tanks.

This proposal is based on several years of satisfactory shipping experience reported to the Board under special permit. These changes would provide alternate methods of packagings without affecting the safe transportation of this commodity.

On the basis of the satisfactory shipping experience the Board is proposing to incorporate the provisions of the special permit into the regulations.

In consideration of the foregoing, it is proposed to amend 49 CFR Part 173 as follows:

In § 173.274, paragraph (a) (4) would be added to read as follows:

§ 173.274 Fluosulfonic acid.

(a) * * *

(4) Specification MC 310, MC 311, or MC 312 (§ 178.343 of this subchapter). Tank motor vehicles.

PROPOSAL J—LIQUIFIED PETROLEUM GAS IN DOT SPECIFICATION 2P AND 2Q CONTAINERS

The Hazardous Materials Regulations Board is considering an amendment to § 173.304(d) (3) (ii) of the Departments hazardous materials regulations to provide for the transportation of liquefied petroleum gas in specification 2P and 2Q containers, without safety relief devices, with slightly increased charging pressures. Also, specification 2Q containers with safety relief devices are proposed as alternate shipping containers for the shipment of liquefied petroleum gas.

This proposal is based on a petition from the Chemical Specialties Manufacturers Association, Inc., and several special permit holders. Five years of satisfactory experience reported under special permits issued by the Department supports the position of the petitioners that liquefied petroleum gas may be shipped safely in specification 2P and 2Q containers, without safety relief devices, with maximum charging pressures of 35 p.s.i.g. at 70° F. and 100 p.s.i.g. at 130° F. The maximum charging pressures now authorized at 26 p.s.i.g. at 70° F. and 84 p.s.i.g. at 130° F.

In consideration of the foregoing, it is proposed to amend 49 CFR Part 173 as follows:

In § 173.304 paragraph (d) (3) (ii), the table would be amended to read as follows:

§ 173.304 Charging of cylinders with liquefied compressed gas.

* * * * *

(d) * * *

(3) * * *

(ii) * * *

Type of container	Maximum capacity		Maximum charging pressure—p.s.i.g.
	Cubic inches	Gallons	
DOT–2P or DOT–2Q (see Note 1)	31.83		45 p.s.i.g. at 70° F. and 105 p.s.i.g. at 130° F. (see Note 2).
DOT–2P or DOT–2Q (see Note 1)	31.83		35 p.s.i.g. at 70° F. and 100 p.s.i.g. at 130° F.
DOT–3C or DOT–4C	3,881	16+5% tolerance	145 p.s.i.g. at 130° F.

Notes 1 and 2 remain the same.

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PROPOSAL K—AUDIBLE FIRE ALARM SYSTEMS AND FIRE EXTINGUISHERS

The Hazardous Materials Regulations Board is considering amendments to § 173.306 of the Department's hazardous materials regulations to change the requirements for exemption from specification packaging, marking, and labeling for the shipment of audible fire alarm systems and fire extinguishers. The present exemption requirements for audible fire alarm systems and fire extinguishers are found in §§ 173.306(b)(6) and 173.306(c), respectively.

The part of this proposal which deals with changing the exemption requirements for audible fire alarm systems is based on a petition from a holder of a special permit. The special permit exempts audible fire alarm systems from specification packaging, marking, and labeling requirements when the alarm system complies with all of the requirements of § 173.306(b)(6) except the system must have a minimum burst pressure of 850 p.s.i.g. The reported experience under special permit which has been in effect for over 2 years without any incidents appears to justify a change in the regulations. However, the petitioner requested that the present regulations requiring a 1,000 p.s.i.g. burst pressure be amended to require the system to withstand a burst pressure of four times the charged pressure at 130° F. In essence, the petitioner is requesting that the burst pressure of the system be reduced from its present 1,000 p.s.i.g. requirement to 720 p.s.i.g. This request is a further reduction of requirements of the special permit which requires a minimum burst pressure of 850 p.s.i.g. After careful consideration of all the facts and a review of the cylinder used under the involved special permit, the Board has determined that the requirements for exempting cylinders used in audible fire alarm systems must include a burst pressure of not less than five times its charged pressure at 130° F. This requirement would preserve the integrity of the system at a level more similar to that presently maintained by the provisions of the special permit.

The portion of this proposal which changes the exemption requirements for fire extinguishers was developed by the Hazardous Materials Regulations Board on the basis of a need, as explained below, to improve the regulations covering cylinders used as fire extinguishers by making these requirements performance oriented.

It is proposed to amend § 173.306(c), which provides the requirements for exemption for fire extinguishers to permit an increase in the maximum charging pressure of the cylinder, to require that the cylinder be designed and fabricated to a burst pressure at 70° F., and to require the cylinder to be marked with a statement that it complies with the requirements of this section.

The proposed increase in the maximum charging pressure has been justified by the satisfactory experience reports received by the Board on these cylinders shipped under special permit.

The proposed requirement that the cylinder must have a burst pressure of six times its charged pressure at 70° F. is based on the premise that the prescribed test pressure of three times the service pressure may cause unsafe stressing of the fire extinguisher if the burst pressure is not specified. Therefore, a minimum ratio of burst pressure to service pressure at 70° F. is necessary. In keeping with well established design concepts, a ratio of six times the pressure at 70° F. is considered safe for all materials.

The proposed requirement that each cylinder be marked with a compliance statement is considered necessary by the Board to verify after the initial shipment that the nonspecification cylinder complies with the exemption requirements of § 173.306(c).

The Board believes that its regulations should be as compatible as possible with the regulations of other Federal agencies. In past rule making activities such as Docket No. HM–57 (37 FR 5946) and Docket No. HM–96 (37 FR 20554), the Board has adopted references to other Federal agency regulations. Likewise, in this proposed notice of rule making, the Board has referenced the Department of Labor's Occupational Safety and Health Administration regulations with respect to retesting requirements for fire extinguishers to reduce the number of duplications and to avoid nonessential variations in specifications between agencies.

In consideration of the foregoing, it is proposed to amend 49 CFR Part 173 as follows:

In § 173.306, paragraph (b)(6) and paragraph (c) would be amended to read as follows:

§ 173.306 Exemptions from compliance with regulations for shipping compressed gas.

* * * * *

(b) * * *

(6) Audible fire alarm systems powered by a compressed gas contained in an inside metal container when shipped under the following conditions:

(i) Each inside container must have contents which are not flammable, poisonous, or corrosive as defined under this part;

(ii) Each inside container may not have a capacity exceeding 35 cubic inches (19.3 fluid ounces);

(iii) Each inside container may not have a pressure exceeding 70 p.s.i.g. at 70° F. and the liquid portion of the gas may not completely fill the inside container at 130° F., and

(iv) Each inside container must be designed and fabricated with a burst pressure of not less than five times its charged pressure at 130° F.

(c) *Fire extinguishers.* Fire extinguishers charged with a compressed gas to not more than 240 p.s.i.g. at 70° F. are exempt from specification packaging, marking, and labeling requirements when shipped under the following conditions, except that marketing name of contents on outside packaging is required for shipments via carriers by water. In

addition to the above exemptions, shipments via highway carriers are exempt from Part 177 of this subchapter, except § 177.817.

(1) Each fire extinguisher must be shipped as an inside packaging;

(2) Each fire extinguisher must have contents which are not flammable, poisonous, or corrosive as defined under this part.

(3) Each fire extinguisher under stored pressure may not have an internal volume exceeding 1,100 cubic inches. For fire extinguishers not exceeding 35 cubic inches capacity, the liquid portion of the gas plus any additional liquid or solid must not completely fill the container at 130° F. Fire extinguishers exceeding 35 cubic inches capacity may not contain any liquified compressed gas;

(4) Each fire extinguisher must be designed and fabricated with a burst pressure of not less than six times its charged pressure at 70° F. when shipped;

(5) Each fire extinguisher must be tested, without evidence of failure or damage, to at least three times its charged pressure at 70° F. but not less than 120 p.s.i.g., before intial shipment. For any subsequent shipment. each fire extinguisher must be in compliance with the retest requirements of the Occupational Safety and Health Administration regulations of the Department of Labor, 29 CFR 1910.157(d), and

(6) Each fire extinguisher manufactured after (*effective date of amendment*) and filled and shipped under this paragraph must be legibly and durably marked "This extinguisher meets all requirements of 49 CFR 173.306(c)."

(7) When Specification 2P or 2Q packagings are used, subparagraphs (4) through (6) of this paragraph are not applicable provided each packaging meets the requirements of paragraph (a) of this section.

* * * * *

PROPOSAL L—HYDROGEN SULFIDE IN MULTI-UNIT TANK CAR TANKS

The Hazardous Materials Regulations Board is considering an amendment to §§ 173.314 and 179.302 of the Department's Hazardous Materials Regulations to require use of safety relief devices on multiunit tank car tanks transporting hydrogen sulfide.

This proposal is based on a petition by the Compressed Gas Association, Inc., to amend the regulations as described above. The present regulations prohibit the use of safety relief devices on multiunit tank car tanks containing hydrogen sulfide but they are required on cylinders transporting this same material. Also, tank cars and tank trucks transporting hydrogen sulfide are required to have safety relief devices. The petitioner stated that the regulations are inconsistent in their requirements concerning the transportation of hydrogen sulfide.

It must be noted that the safety relief device prohibition on multiunit tank car tanks was based on the belief that an important hazard for packaging considerations was the high toxicity of hydrogen sulfide even though this material has always been classed as a flammable gas. The Board's proposal continues to recognize this property but seeks to provide against any violent rupture in a fire. The overriding concern is considered to be a violent rupture in a fire because of a gas container having no relief devices. The Board is of the opinion that the adoption of this proposal would make the transportation of hydrogen sulfide in multiunit tank car tanks safer. The present regulation, although prohibiting use of a safety relief device, does require the multiunit tank car tanks to be equipped with solid steel plugs in the safety relief device openings. If a tank were subjected to a fire environment, the high temperature created by the fire would cause an increase in pressure within the tank which could result in its violent rupture. However, if the tank were equipped with adequate fusible plug type safety relief devices instead of the required solid steel plugs, in the same fire environment, the safety relief devices should permit controlled release of the material and prevent a rupture of the tank.

When reviewing this proposal it will be necessary to review Docket No. HM-97, Notice No. 72-1 (37 FR 4295) Proposal H for a complete understanding of these proposed changes.

In consideration of the foregoing, it is proposed to amend 49 CFR Parts 173 and 179 as follows:

I. Part 173—Shippers:

In § 173.314, paragraph (c), Table, Note 8 would be amended to read as follows:

§ 173.314 Requirements for compressed gases in tank cars.

* * * * *

(c) * * *

NOTE 8: Each tank must be equipped with adequate safety relief devices of the fusible plug type having a yield temperature not over 170° F., nor less than 157° F. Each device must be resistant to extrusion of the fusible alloy and leak tight at 130° F. Each valve outlet must be sealed by a threaded cap or a threaded solid plug. In addition, all valves must be protected by a metal cover.

* * * * *

II. Part 179—Specifications for Tank Cars:

In § 179.302 paragraph (a), the table would be amended; footnote 7 would be added to read as follows:

§ 179.302 Special commodity requirements for multiunit tank car tanks.

(a) * * *

Commodity	Safety relief device	Valve protective housing	Miscellaneous
(*Change*) Hydrogen sulfide	Fusible plugs required [7]	Required [6]	(5)

[7] Safety relief devices for hydrogen sulfide must be of the fusible plug type utilizing a fusible alloy with yield temperature not over 170° F., nor less than 157° F. Each device must be resistant to extrusion of the fusible alloy and leak tight at 130° F.

Proposal M—Deletion of Obsolete Specifications

The Hazardous Materials Regulations Board is considering amendments to Parts 173 and 178 of the Department's hazardous materials regulations affecting those sections that authorize use and construction of wooden barrels and kegs made under Specifications 10A, 10B, 10C, 11A, and 11B (§§ 178.155, 178.156, 178.157, 178.160, 178.161). The Board proposes to cancel these specifications and the many authorizations for their use.

The reasons for this proposal are:

1. The Board believes these specifications are no longer used for shipment of hazardous materials, or if so, for very limited purposes;

2. The testing requirements (if any) specified for these packages are considered incomplete and inconsistent with testing requirements currently prescribed; and

3. The Board wishes to continue its effect to remove obsolete specifications from the hazardous materials regulations.

Any person using one of the above-listed specification barrels or kegs who desires that it be continued in the regulations for either construction or use should provide the Board with information concerning its use, including the number being used and the type of use. Also, any commenter may supply the Board with information concerning performance criteria for these containers including criteria pertaining to their capability of withstanding a 4-foot drop test such as is specified in § 178.116–12.

In consideration of the foregoing, the above specifications and references thereto would be deleted from the following sections:

I. Part 173—Shippers

173.60	173.73	173.91
173.64	173.74	173.93
173.65	173.75	173.108
173.70	173.76	173.119
173.71	173.77	173.121
173.72	173.78	173.125
173.127	173.216	173.292
173.128	173.219	173.294
173.129	173.229	173.295
173.131	173.234	173.299a
173.132	173.235	173.346
173.144	173.239a	173.348
173.147	173.245	173.349
173.154	173.247	173.351
173.155	173.249	173.360
173.163	173.250	173.361
173.168	173.254	173.362a
173.178	173.257	173.365
173.184	173.262	173.366
173.187	173.263	173.367
173.188	173.265	173.368
173.191	173.266	173.369
173.194	173.268	173.370
173.195	173.270	173.371
173.201	173.271	173.372
173.204	173.287	173.373
173.205	173.289	173.374
173.214	173.291	173.376

II. Part 178—Shipping Container Specifications

178.155	178.157	178.161
178.156	178.160	

Interested persons are invited to give their views on these proposals. Communications should identify the docket number and the proposal and be submitted in duplicate to the Secretary, Hazardous Materials Board, Department of Transportation, 400 Sixth Street SW., Washington, DC 20590. Communications received on or before April 24, 1973, will be considered before final action is taken on these proposals. All comments received will be available for examination by interested persons at the Office of the Secretary, Hazardous Materials Regulations Board, both before and after the closing date for comments.

(Secs. 831–835, title 18, United States Code, sec. 9, Department of Transportation Act, 49 U.S.C. 1657, title VI; sec. 902(h), Federal Aviation Act of 1958, 49 U.S.C. 1421–1472(h), 1655(c))

Issued in Washington, D.C., on March 15, 1973.

W. J. Burns,
Director,
Office of Hazardous Materials.

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