U.S. Department
of Transportation

**Research and
Special Programs
Administration**

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

MAY 27 1998

Mr. Mike Lopez
Safety & Compliance Associates, Inc.
P.O. Box 334
Trussville, AL 35173

Dear Mr. Lopez:

This is in response to your letter requesting clarification of certain requirements for cylinders under the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180). Your questions are paraphrased and answered as follows:

Q1. In § 173.302(e), what is meant by "representative of that day's compression"?

A1. As used in § 173.302(e)(1), "representative of that day's compression" means that one cylinder taken from the population of cylinders filled each day must be checked for verification of container pressure.

Q2. May cylinders marked with a star be filled in a cluster, bank, group, rack or vehicle, provided such filling occurs within five years of the latest test date?

A2. No. Prior to refilling the cylinder, § 173.34(e)(16)(i) requires that it must be removed from the cluster, bank, group, rack, or vehicle. The cylinder also must be removed in order to perform the hammer test that is prescribed in paragraph (e)(16)(i)(C).

Q3. May a retest facility accept the cylinder owner's written or verbal assurance that provisions in § 173.34(e)(16) have been met?

A3. Yes, unless the retest facility has reason to believe non-compliance has occurred.

Q4. May a cargo tank transporting "Oxygen, refrigerated liquid, Class 2.2, UN1073" display a UN number on the OXYGEN placard or must the ID number appear on a separate orange panel?

A4. Either may be used. Section 172.334(a) provides for the display of identification numbers on placards other than on a RADIOACTIVE, EXPLOSIVES 1.1, 1.2, 1.3, 1.4, 1.5 or 1.6,

DANGEROUS, or subsidiary hazard placard. Section 172.519(b)(3) does not permit non-text placards, which display the symbol and class or division number only, for the OXYGEN placard. Therefore, either the identification number "1073" or the text "OXYGEN" must be displayed on the placard shown in § 172.520.

Q5. May a non-bulk shipment of Class 2.1 or 2.2 material display ID numbers on placards?

A5. Yes, transport vehicles transporting non-bulk packages of Class 2.1 or 2.2 materials may display ID numbers on the FLAMMABLE GAS or NON-FLAMMABLE GAS placards in accordance with §§ 172.332 and 172.334.

Q6. A carrier has on the same vehicle a bulk package of "Carbon dioxide, refrigerated-liquid," UN2187 and non-bulk packages under 1,001 pounds aggregate gross weight of "Carbon dioxide," UN1013. May a NON-FLAMMABLE GAS placard with the ID number UN2187 be used with a NON-FLAMMABLE GAS placard with no ID number, or must the orange panel with the ID number be used?

A6. Both placarding scenarios are acceptable. Placards and ID markings are required to be displayed for bulk packages as provided by § 172.514(a) (see §§ 172.302, 172.504); however, they are not required for the non-bulk packages. For non-bulk packages, § 172.504(c)(1) provides a placarding exception for a transport vehicle carrying an aggregate gross weight of less than 454 kg (1,001 lbs.) of hazardous materials covered by Table 2 of paragraph (e) of that section. The weight of the bulk package is excluded in determining the aggregate gross weight for this placarding exception.

I hope this information is helpful. If we can be of further assistance, please do not hesitate to contact this office.

Sincerely,

Edward T. Mazzullo

Edward T. Mazzullo
Director, Office of Hazardous
Materials Standards

U.S. Department of Transportation

Research and Special Programs Administration

Memorandum

Date: DEC 14 1982 Reply to Attn. of:

Subject: Hazard Class Number on OXYGEN Placard

From: Lee Metcalfe 172.519(d)

To Files

Question: What is the hazard class number that should appear in the lower corner of the diamond on an OXYGEN placard displaying the identification number "1073"?

Answer: The hazard class number should be "2" or "2.2" representing the primary hazard class of nonflammable gas. The hazard class number of the subsidiary risk of "5.1" must not be used in place of the primary class number on the placard.

#

File: 195/172.519 ; 225.2
SC: 278 ; 162

172.519

Safety & Compliance Associates, Inc.
P.O. Box 334, Trussville, AL 35173
Phone: 205/853-9874 Fax: 205/853-2067
Email: scalopez@wwisp.com

mc Intype
file: 173.302
SC: 334,396

November 13, 1996

U S Department of Transportation
Office of Hazardous Materials Standards
400 7th Street SW, DHM-18
Washington, DC

Attention: Mr. Ed Mazzullo, Director of Hazardous Materials Standards

Dear Mr. Mazzullo,

I would appreciate help with the following questions:

1. 49 CFR, §173.302(e) requires the following:

   "Each day, the pressure in a container representative of that day's compression must be checked by the charging plant after the container has cooled to a settled temperature and a record of this test kept for at least 30 days."

   Hochman

   What is meant by "representative of that day's compression"? Compressed gas charging plants typically fill several different gases in different size cylinders at different pressures. In addition, mixtures of these gases are often filled on a single, one-of-a-kind basis.

   If all cylinders are charged according to similar procedures, such as pressure/temperature charts appropriate for the particular gases, would any individual cylinder charged during the day be considered "representative of that day's compression?" If not, what is required for compliance?

2. 173.34(e)(15) allows some compressed gas cylinders to be hydrostatically tested every 10 years instead of 5 years, provided the stated conditions are adhered to. May cylinders marked with a "star" be filled in a cluster, bank, group, rack, or vehicle provided such filling occurs within five years of the latest test date? NO. must be removed before cylinder see interp.

3. In qualifying a compressed gas cylinder for 10-year hydrostatic retest, a testing facility not operated by the cylinders' owner has no way of knowing whether §173.34(e)(15) [regarding filling in clusters, banks, groups, etc], (ii), (iii), (v), or (vii) has been or will be adhered to. May such retest facility accept the cylinder owner's written or verbal assurance that these conditions will or have been met as required? yes, may accept verbal unless has reason to believe noncompliance

If not, what is the minimum acceptable assurance a retest facility should acquire in order to authorize cylinders for 10-year retest periods, in accordance with §173.34(e)(15)? Some retest facilities a "star" marking from the previous test. However, the Code neither requires a previous "star", nor does the "star" marking provide any more assurances of compliance than the cylinder owner's verbal assurances.

4. May a bulk shipment of oxygen, refrigerated liquid, class 2.2, UN 1073, display a UN number on the OXYGEN placard or must the ID number appear on a separate, orange panel? §172.519 (b)(3) seems to indicate that ID numbers are not allowed on OXYGEN placards but the issue is causing much confusion within our industry.

5. May a nonbulk shipment of a single class 2.2 or 2.1 material display ID numbers on placards? yes

6. A carrier has a bulk shipment of carbon dioxide (UN 2187). The same vehicle contains nonbulk packages of carbon dioxide (UN 1013) less than 1001 pounds gross. May a NONFLAMMABLE GAS placarded numbered UN 2187 be used in conjunction with an unnumbered NONFLAMMABLE GAS placard, or must the numbered orange panel be used? (Ref: §172.334(d)) either

I would appreciate an expeditious handling of these important questions as phone inquiries to DOT have yielded several possible interpretations. Thank you for your help.

Sincerely,

Mike Lopez

2nd Request McIntyre

Safety & Compliance Associates, Inc.
P.O. Box 334, Trussville, AL 35173
Phone: 205/853-9874 Fax: 205/853-2067
Email: scalopez@wwisp.com

Nov. 8, 1996

U S Department of Transportation
Office of Hazardous Materials Standards
400 7th Street SW, DHM-18
Washington, DC 20210

Attention: Mr. Ed Mazzullo, Director of Hazardous Materials Standards

Dear Mr. Mazzullo,

My clients need help in interpreting the following requirements:

1. 49 CFR, §173.302(e) requires the following:

> *"Each day, the pressure in a container representative of that day's compression must be checked by the charging plant after the container has cooled to a settled temperature and a record of this test kept for at least 30 days."*

Our question involves what is meant by "representative of that day's compression." Compressed gas charging plants typically fill several different gases in different size cylinders at different pressures. In addition, mixtures of these gases are often filled on a single, one-of-a-kind basis.

If all cylinders are charged according to similar procedures, such as pressure/temperature charts appropriate for the particular gases, would <u>any</u> cylinder charged during the day be considered "representative of that day's compression?" If not, what is required for compliance?

2. 173.34(e)(15) allows compressed gas cylinders to be hydrostatically retested every 10 years instead of 5 years, provided they are not filled in a cluster, bank, group, rack, or vehicle (and other conditions are met). The rule prohibits extending the retest period for cylinders filled in clusters to ten years. If a cylinder marked with a star is filled in a cluster within the first five years of the most recent retest and subsequently removed from the cluster for individual filling, will the retest period continue for the remaining five years or must the cylinder be retested?

3. In qualifying a compressed gas cylinder for 10-year hydrostatic retest, a testing facility not operated by the cylinders' owner has no way of knowing whether some requirements of §173.34(e)(16) has been or will be adhered to. In particular, the retester does not know whether cylinders will be filled in clusters, banks, etc. as prohibited in (e)(16)(i), whether cylinders have been or will be in the exclusive service(s) listed in (e)(16)(i)(B), or whether cylinders undergo hammer testing as required in (e)(16)(i)(C).

   What is the minimum acceptable assurance, if any, a retest facility should acquire in order to authorize non-owned cylinders for 10-year retest periods, in accordance with these provisions? (Some retest facilities require a "star" marking from the previous test. However, the Code neither requires a previous "star", nor does the "star" marking provide any more assurances of compliance than the cylinder owner's verbal assurances).

4. Placards on bulk delivery vehicles often display the hazardous materials ID number in the placard rather than on a separate orange panel. §172.519(b)(3) implies that an ID number (UN1073) must not be displayed within an 'oxygen' placard for bulk deliveries. Is this interpretation correct?

Thank you.

Sincerely,

Mike Lopez
President, Safety & Compliance Associates, Inc.

Ed--
This response is noteworthy because it states that ID numbers may be displayed on an OXYGEN placard; whereas, there is belief that this is prohibited by § 172.519(b)(3). Attached is the background on the rule change.

Hattie 2/3/98

Hattie 3/3

Do we know that Tech & J. Jones agree w Qs 1-3? We have their concurrence Hattie

Ed

of § 171.19, the Associate Administrator for Hazardous Materials Safety will also assign an EX-number to that material. For further discussion of the reclassification of Class 1 (explosive) materials, the reader is referred to the discussion of subpart C of part 173.

RSPA also has modified §§ 171.11, 171.12 and 171.12a to require that packages shipped in accordance with these sections be marked in accordance with § 172.320. RSPA did not intend to allow conformance with other regulations (e.g., ICAO Technical Instructions) in lieu of the HMR and not subject these materials to § 172.320. Accordingly, RSPA has modified the aforementioned sections.

Section 172.301. Package marking requirements found in subpart D of part 172 are changed essentially as proposed in Notice 87–4, to reflect the features of the U.N. Recommendations. Section 172.301 contains general marking requirements for non-bulk packagings. Paragraph (a) specifies requirements for marking proper shipping names and identification numbers. The requirement to mark exemption numbers on packagings used under the terms of exemption is relocated from part 107 to § 172.301(c). As in the case of shipping papers, when an "n.o.s." proper shipping name is selected to describe a hazardous material, the technical name of the hazardous constituent or constituents (at least two) is required by § 172.301(b) to be marked on non-bulk packagings. Paragraph (d) contains requirements, proposed at § 172.306 in Notice 87–4, for marking the name of either the consignee or consignor on packages. This represents a relaxation of requirements for bulk packagings other than portable tanks, cargo tanks, and tank cars which previously were subject to this marking requirement. Paragraph (e) addresses previously marked packages, and paragraph (f) sets forth exceptions from marking requirements.

Section 172.302. Package marking requirements for bulk packagings are changed to reflect the features of the U.N. Recommendations. Section 172.302 contains general marking requirements for bulk packagings. The requirements for marking exemption numbers on bulk packagings used under the terms of exemption are relocated from part 107 to § 172.302. In § 172.302, minimum size requirements for markings on bulk packagings are added to include minimum height requirements of 100 mm (3.9 inches) on rail cars, 75 mm (3 inches) on cargo tanks and 50 mm (2 inches) on other bulk packagings. The proposal (Notice 87–4) for marking technical names for n.o.s. descriptions on bulk packagings is withdrawn for consistency with the requirements under Docket HM–126C.

Section 172.303. A new § 172.303 is added, essentially as proposed in Notice 87–4, containing a prohibition against offering or transporting a package marked with a proper shipping name or identification number unless the package actually contains the identified material or its residue. These provisions parallel existing provisions in § 173.29(d). Paragraphs (b)(1) and (b)(2) are added to include an exception when a marking on a package is not visible and when packages are securely covered in transportation.

Section 172.306. The requirements of this section are relocated to § 172.301, and the section is removed and reserved.

Section 172.308. This section is revised, essentially as proposed in Notice 87–4, to add a new paragraph (a)(3) to allow the use of abbreviations which appear as authorized descriptions in the § 172.101 Table.

Section 172.312. This section is revised for clarity and to require arrows for orientation markings, instead of "THIS SIDE UP" or "THIS END UP". These text statements cause confusion, such as when "THIS SIDE UP" appears on an end or "THIS END UP" appears on a side.

Section 172.313. A new 172.313 entitled "Poisonous hazardous materials", is added to subpart D. The requirement for permanently marking "POISON" on plastic packagings used for poisonous materials is relocated to this new section from § 173.24. The requirement for marking "Inhalation Hazard" on packages containing materials poisonous by inhalation is relocated from § 172.301 and is made applicable to both non-bulk and bulk packagings.

Section 172.316. This section is revised editorially for clarity and to delete references to the hazard classes ORM–A, B, C, and E.

Section 172.320. A new § 172.320, proposed in Docket HM–181A, entitled "Explosive hazardous materials", is added to subpart D. The new provision requires that packages be marked with the approval number (i.e., the EX-number) for the explosive. This will communicate to carriers that packages of explosives have been approved for transportation. Exceptions are provided for packages marked with a stock number or product code through which the EX- number can be determined.

Section 172.324. In § 172.324, the title and the introductory text preceding paragraph (a) are revised to clarify that the provisions are applicable only to non-bulk packagings.

Section 172.326. This section is revised to consolidate many of the existing provisions and relocate them to § 172.302. The remaining provisions in this section are revised editorially.

Section 172.328. This section is revised to consolidate many of the existing provisions and relocate them to § 172.302. The remaining provisions in this section are revised editorially.

Section 172.330. This section is revised to consolidate many of the existing provisions and relocate them to § 172.302. The remaining provisions in this section are revised editorially.

Section 172.331. This section is revised to consolidate many of the existing provisions and relocate them to § 172.302.

Section 172.332. In § 172.332, paragraph (c)(3) is revised as proposed in Notice 87–4 to prohibit the display of identification numbers on placards corresponding to the subsidiary, rather than the primary, hazard of a material. This is necessary to avoid confusion that may result from the display of identification numbers on subsidiary placards. The remaining provisions are revised to include metric measurements.

Section 172.334. This section is revised to permit display of identification numbers on POISON GAS placards, and to delete the phrase "§ 172.102."

Section 172.336. This section is revised to delete references to the hazard classes ORM–A, B, C, D or E and to include metric measurements.

7. Subpart E: Labeling

Package labeling requirements found in subpart E of part 172 are changed to reflect the features of the U.N. Recommendations. Numerous editorial and format changes are made for clarity and ease of use. Label graphics are revised to permit display of hazard class or division numbers in the lower corners of square-on-point labels. Size requirements on labels are changed slightly with regard to overall label size and inner border size to accommodate labels conforming to the U.N. Recommendations without rendering obsolete many labels which conform to existing HMR requirements. Use of text on labels, for other than Class 7, is optional. The EXPLOSIVE A, B and C, BLASTING AGENT, AND IRRITANT labels are removed. EXPLOSIVE 1.1, 1.2, 1.3, 1.4, 1.5, 1.6 labels, an EXPLOSIVE subsidiary hazard label, and KEEP AWAY FROM FOOD and INFECTIOUS SUBSTANCE labels are added. Specific

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shown in §§ 172.521 through 172.558 of this subpart, as appropriate.

(2) The dotted line border shown on each placard is not part of the placard specification. However, a dotted or solid line outer border may be used when needed to indicate the full size of a placard that is part of a larger format or is on a background of a non-contrasting color.

(3) For other than Class 7, text indicating a hazard (for example, "FLAMMABLE") is not required.

(4) For a placard corresponding to the primary hazard class of a material, the hazard class or division number must be displayed in the lower corner of the placard. However, no hazard class or division number may be displayed on a placard corresponding to a subsidiary hazard of the material.

(c) *Size.* (1) Each placard prescribed in this subpart must measure at least 273 mm (10.8 inches) on each side and must have a solid line inner border approximately 12.7 mm (0.5 inches) from each edge.

(2) Except as otherwise provided in this subpart, the hazard class or division number, as appropriate, must be shown in numerals measuring at least 41 mm (1.6 inches) in height.

(3) Except as otherwise provided in this subpart, when text indicating a hazard is displayed on a placard, the printing must be in letters measuring at least 41 mm (1.6 inches) in height.

(d) *Color.* (1) The background color, symbol, text, numerals and inner border on a placard must be as specified in §§ 172.521 through 172.558 of this subpart, as appropriate.

(2) Black and any color on a placard must be able to withstand, without substantial change—

(i) A 72-hour fadeometer test (for a description of equipment designed for this purpose, see ASTM G 23–69 or ASTM G 26–70); and

(ii) A 30-day exposure to open weather.

(3) Upon visual examination, a color on a placard must fall within the color tolerances displayed on the appropriate Hazardous Materials Label and Placard Color Tolerance Chart (see § 172.407(d)(4)).

(4) The placard color must extend to the inner border and may extend to the edge of the placard in the area designated on each placard except the color on the CORROSIVE and RADIOACTIVE placards (black and yellow, respectively) must extend only to the inner border.

(e) *Form identification.* A placard may contain form identification information, including the name of its maker, provided that information is printed outside of the solid line inner border in no larger than 10-point type.

(f) *Exceptions.* A placard conforming to specifications in the UN Recommendations or the TDG Regulations may be used in place of a corresponding placard which conforms to the requirements of this subpart.

75. Section 172.522 is revised to read as follows:

§ 172.522 EXPLOSIVES 1.1, EXPLOSIVES 1.2 and EXPLOSIVES 1.3 placards.

(a) Except for size and color, the EXPLOSIVES 1.1, EXPLOSIVES 1.2 and EXPLOSIVES 1.3 placards must be as follows:

(b) In addition to complying with § 172.519 of this subpart, the background color on the EXPLOSIVES 1.1, EXPLOSIVES 1.2 and EXPLOSIVES 1.3 placards must be orange. The "*" shall be replaced with the appropriate division number. The symbol, text, numerals and inner border must be black.

76. Section 172.523 is revised to read as follows:

§ 172.523 EXPLOSIVES 1.4 placard.

(a) Except for size and color, the EXPLOSIVES 1.4 placard must be as follows:

(b) In addition to complying with § 172.519 of this subpart, the background color on the EXPLOSIVES 1.4 placard must be orange. The division numeral, 1.4, must measure at least 64 mm (2.5 inches) in height. The text, numerals and inner border must be black.

77. Section 172.524 is revised to read as follows:

§ 172.524 EXPLOSIVES 1.5 placard.

(a) Except for size and color, the EXPLOSIVES 1.5 placard must be as follows:

(b) In addition to complying with § 172.519 of this subpart, the background color on the EXPLOSIVES 1.5 placard must be orange. The division numeral, 1.5, must measure at least 64 mm (2.5 inches) in height. The text, numerals and inner border must be black.

78. Section 172.525 is redesignated as § 172.526 and a new § 172.525 is added to read as follows:

material which meets the definition of Division 6.1 (poisonous) material and which conforms to the limited quantity provisions of § 173.153(b). COSTHA believes shippers should not be required to apply POISON or KEEP AWAY FROM FOOD labels for Division 6.1 poisons when packaged in UN combination packagings meeting § 178.601(g)(2).

RSPA disagrees. Limited quantity shipments of poisonous materials are required to be labeled under the HMR. This provision is also extended to limited quantity shipments of Division 6.1 (poisonous) materials under the UN classification system. Exceptions are permitted only under the provisions of exemptions from the regulations. Currently, there are long-standing exemptions authorizing the transportation of limited quantities of poisonous liquids and solids in packagings which are excepted from bearing the POISON label (e.g., DOT-E-7909). RSPA notes that provision is made in § 177.841 for transporting packages bearing POISON or KEEP AWAY FROM FOOD labels with foodstuffs, subject to certain conditions.

Section 172.402. For regulatory clarity, RSPA is reorganizing paragraph (a). In response to a petition, RSPA is relocating § 172.405(b) to § 172.402(b). Existing paragraphs (b) and (c) are redesignated as paragraphs (c) and (d).

Paragraph (d) is revised to require each packaging containing a radioactive material that also meets the definition of one or more additional hazards, except Class 9, to be labeled as a radioactive material as required by § 172.403, and labeled for each additional hazard.

Section 172.405. One petitioner objected to the provision in paragraph (a) to permit, as an option, inclusion of text indicating a hazard on a label, as provided in paragraph (a) for classes 1, 2, 3, 4, 5, 6, and 8. The petitioner stated that there is no safety benefit to eliminating this descriptive language and that the written description is helpful, particularly to casual or temporary dock employees who may not be familiar with the significance of hazard class numbers or pictorial symbols. RSPA disagrees. Section 172.401(c), which is not changed by this final rule, allows packages of hazardous materials bearing labels which are in conformance with the UN Recommendations, ICAO Technical Instructions, IMDG Code, and Canadian TDG Regulations, to be shipped in the U.S. These labels do not have text indicating the hazard, but display pictorial hazard warning symbols, which are internationally recognized. Paragraph (a) provides shippers with the option to use "text," such as used under the HMR, or "symbols," such as used on international labels, to indicate the hazard. Therefore, the provisions in paragraph (a), providing the option to use text or only symbols on labels to indicate the hazard, will remain unchanged in this final rule.

Paragraph (b) is revised to clarify that if an OXIDIZER label is modified to an OXYGEN label, the word "OXYGEN" must appear on the label.

Section 172.406. RSPA is revising paragraph (a)(1)(ii) to require labels to be placed near the proper shipping name, as previously required under § 172.406(a). Several petitioners recommended adding a new paragraph (a)(1)(iii) to clarify that the orientation of labels on a package may be shown either square-on-point or in other orientations dictated by package size. RSPA disagrees. Although it is intended that labels be shown square-on-point, it is often impractical or inadvisable to do so. Other orientations are often necessary, not just because of package size limitations, but also because of package shape. For example, placement of a label on the top head of a drum does not conform to a square-on-point orientation, but is acceptable. Therefore, RSPA denies these petitions. The introductory text of paragraph (e) is revised for clarity.

Section 172.407. Paragraph (d)(4) is revised to delete references to Office of Hazardous Materials Color Charts which are no longer available for public sale. RSPA is reviewing alternative color standards and future rulemaking activity is anticipated.

Section 172.411. A petitioner stated that there was no mention of the use of the EXPLOSIVE subsidiary label, as prescribed in § 172.411. The petitioner suggests that some mention of the EXPLOSIVE subsidiary label be included in § 172.402.

RSPA believes there is no need to include an explanation of the use of the EXPLOSIVE subsidiary label because a material which may have a subsidiary explosive hazard, but is not classed as such, is identified in the § 172.101 Table. Therefore, no further explanation is necessary.

Sections 172.411 through 172.448. Because some of the labels shown in the Docket HM-181 final rule were not correctly displayed, all labels are republished for clarity.

5. Subpart F; Placarding

Section 172.502. In § 172.502, paragraph (b) is reorganized and the exception in paragraph (c) allowing the display of an identification number on a white square-on-point configuration is added as a new paragraph (b)(2).

Section 172.504. Paragraph (c) is revised to exclude all bulk packagings from the "1000 pound exception." This is consistent with requirements in § 172.514(b) that bulk packagings containing residues remain placarded.

Paragraph (f)(4) is revised to include "EXPLOSIVES 1.3" materials. Paragraph (f)(9) is added requiring vehicles transporting combustible liquids in non-bulk packagings that also meet the definition of a Class 9 material to display either the COMBUSTIBLE or Class 9 placard. The COMBUSTIBLE placard need not be applied to vehicles transporting combustible liquids in non-bulk packagings. A new paragraph (g) is added requiring the applicable compatibility group letter to be displayed on placards for shipments of Class 1 explosives by aircraft or vessel.

Several petitioners expressed their concerns regarding placarding for Class 9 materials. They stated that the Class 9 placard should not be required for use in this country due to the fact that the vast majority of these commodities are presently shipped domestically as either ORMs or Consumer commodities, which are excepted from placarding.

The petitioners stated that intrastate motor carriers of materials in the ORM class, other than hazardous wastes, have not been subject to 49 CFR parts 390–397, the Federal Motor Carrier Safety Regulations (FMCSR), because these materials were not subject to placarding. They are concerned with the impact the "Class 9" reclassification and placarding requirements may have on intrastate motor carriers because they may now be subject to the FMCSR. RSPA believes it is necessary to require placards for Class 9 materials both to communicate appropriate information to emergency response personnel, and for uniformity with the international regulations. RSPA notes that intrastate motor carriers transporting hazardous substances in bulk are currently subject to the FMCSR; for example, financial responsibility and commercial driver's license requirements. Since many states have adopted the FMCSR and apply those requirements to intrastate motor carriers, the display of the Class 9 placard will have minimal impact.

One petitioner recommended providing an exception from the placarding requirements, identical to the exception in § 172.504(f)(3), *not* to require display of a NON-FLAMMABLE GAS placard on a motor vehicle if the vehicle is also required to display a POISON GAS placard. RSPA disagrees, and notes that the petitioner provided

material covered in Table 2 other than those materials which are poisonous by inhalation. This will eliminate the requirement to placard for other Table 2 hazardous materials which are on a transport vehicle, but have an aggregate gross weight of less than 454 kg (1,001 pounds). For example, as prescribed in § 172.505(a), any material which is poisonous by inhalation and also meets another hazard class must be placarded in accordance with § 172.504, regardless of the aggregate gross weight. This revision modifies the legal interpretation to the Illinois Department of Transportation issued by RSPA's office of the Chief Counsel, Int. No. 88–1–RSPA issued on February 2, 1987 and published in the Federal Register on February 26, 1990 [55 FR 6758].

Paragraph (f)(1) is revised to require only the placard having the lowest division number on a transport vehicle, rail car, freight container or unit load device that contains more than one explosives division. Paragraph (f)(4) is revised to except OXIDIZER placards on transport equipment which are placarded for Division 1.1 and 1.2 explosives. A new paragraph (f)(10) is added to permit the use of a POISON placard in place of a KEEP AWAY FROM FOOD placard.

Comments received from shippers and carriers and their representatives following publication of the final rule and during the regulatory review stated that the Class 9 placard is unnecessary and unduly burdensome in domestic transportation. RSPA agrees with these comments and a domestic exception from the Class 9 placarding requirements is added as paragraph (f)(9). Under this exception, Class 9 placards are not required for domestic transportation. Bulk packages must be marked on both sides and both ends with the appropriate identification number displayed on orange panels or white-square-on-point display configurations, as specified in § 172.336(b). This permits continued use of a method of communication that has been required for ORM materials since 1980.

Section 172.505. The revision to paragraph (a) is the December 20, 1991 revised final rule was intended to mean that duplication of the POISON or POISON GAS placards to indicate a subsidiary poisonous-by-inhalation hazard was not necessary if POISON or POISON GAS placards were already displayed. The wording of the revision intentionally raised the question of whether the exception in § 172.504(c)(1) might apply to a material meeting another hazard class definition in addition to poisonous by inhalation. Paragraph (a) is revised to clarify that the placarding exception in § 172.504(c)(1) is not applicable to dual hazard materials which are subject to § 172.505 (e.g., a material poisonous by inhalation).

Section 172.510. Paragraph (e) is revised for consistency with new terminology and a section reference is corrected in paragraph (c).

Section 172.519. Paragraph (b)(3) is revised to require the use of the text "OXYGEN" on OXYGEN placards, for consistency with the OXYGEN labeling requirement.

Section 172.526. In paragraph (a)(4), the section reference "§ 172.540", which was inadvertently omitted from the list of placard specification sections, is added in appropriate numerical sequence.

Section 172.560. Paragraph (b) is revised to clarify requirements for the Class 9 placard.

Part 173: Shippers, General Requirements for Shipments and Packagings

Section 173.2 The section reference for the entry "Oxidizer" is corrected to read "§ 173.127".

Section 173.22. In paragraph (a)(4), a section reference "§ 178.2(d)" is corrected to read "§ 178.2(c)".

Section 173.23. paragraph (c) is corrected by removing "i.e." and replacing it with "e.g."

Section 173.24a. Paragraph (c)(1)(iii) is revised to provide an exception to the requirement for corrosive materials in bottles to be further packed in inner receptacles and outer packagings if the corrosive materials have been reclassed as ORM–D.

Section 173.28. Provisions for the reuse of non-reusable containers (NRC) are reinstated as a new paragraph (e).

Section 173.31. Two references are editorially revised in Notes I and N following Retest Table I in paragraph (c).

Section 173.32. Paragraphs (a)(1), (a)(3), (a)(5) and (c) are editorially revised to correct section references and to provide clarity.

Section 173.32c. A section reference in paragraph (f) is revised to correct a printing error. A new paragraph (r) is added to correct a previous oversight. The December 21, 1990 final rule relocated the provisions contained in the IM Tank Table, which was a separate publication, into the HMR. In the IM Tank Table, hazardous materials authorized for transport in a tank having bottom outlets with serial mounted closures also were permitted to be transported in a tank having no bottom outlets or having bottom outlets with serial mounted closures of a comparable configuration. This authorization was inadvertently omitted in the final rule. This oversight is corrected herein; the provision is added in new paragraph (r).

Section 173.33. Paragraph (c)(1)(iii) is revised to correct a section reference and the phrase "Poison B" in paragraphs (c)(5) and (e) is replaced with UN hazard class terminology.

Section 173.115. The definition for a Division 2.2 (nonflammable) gas is revised to clarify that the definition includes absolute pressure greater than 280 kPa (41 psia) at 20°C (68°F).

Section 173.120. Paragraphs (b)(1) and (b)(2) are editorially revised by removing the phrase "except Class 9". This amendment is consistent with the revision of the Class 9 definition in this document, which clarifies that a material which meets the definition of another hazard class, but also falls within one of the Class 9 criteria (e.g., hazardous substance), does not meet the definition of Class 9. Therefore, a Class 3 liquid which also meets the definition of a hazardous substance may be reclassed as a combustible liquid or shipped as a limited quantity.

Section 173.124. Paragraph (a)(3)(ii) is revised to correctly reference the burning rate test contained in appendix E to part 173.

Section 173.133. The second entry in Column 4 of the paragraph (a)(1) table is corrected to indicate the correct toxicity limits, and the table in paragraph (a)(2)(i) is revised to include Packing Group II and III materials. In addition, in paragraph (a)(2)(ii), the figure 1 Inhalation Toxicity chart is republished because the Figure 1 appearing in the 1991 CFR is not the correct Figure 1 published in the December 20, 1991 revised final rule.

Section 173.140. The definition of Class 9 is editorially corrected and reprinted in its entirety, including the amendments issued under Docket HM–198A, for convenience of the reader.

Section 173.150. Paragraph (a) is editorially revised for the same reasons as discussed under the review of § 173.120 and to provide clarity.

Section 173.154. Several commenters suggested that the provisions of § 173.154(d) be revised to except from the HMR certain materials corrosive only to steel or aluminum when packaged in containers constructed of materials compatible with lading. RSPA agrees, and the provisions of paragraph (d) have been revised to make it clear that (1) materials corrosive only to aluminum are not regulated when transported by rail or highway in bulk or

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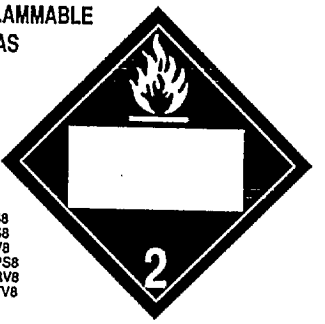
FLAMMABLE GAS



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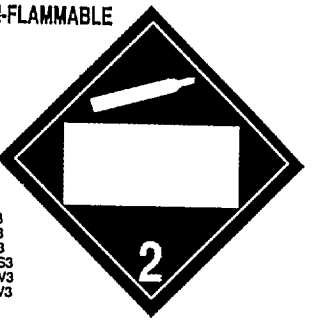
TS8
PS8
RV8
RPS8
RRV8
RTV8

NON-FLAMMABLE GAS



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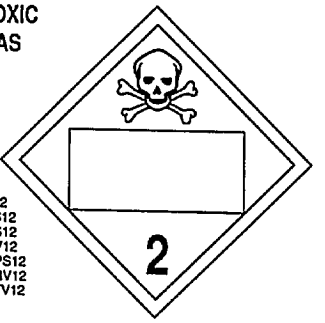
PS3
RV3
RPS3
RRV3
RTV3

TOXIC GAS



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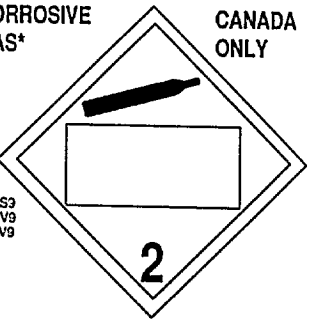
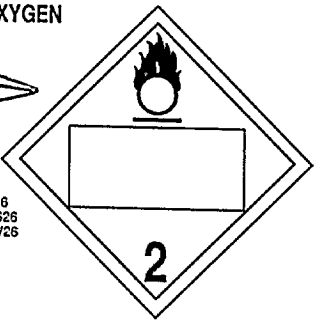
PS12
RV12
RPS12
RRV12
RTV12

CORROSIVE GAS* CANADA ONLY



RPS9
RRV9
RTV9

OXYGEN



T26
PS26
RV26

FLAMMABLE

T2
TS2
PS2
RV2
RPS2
RRV2
RTV2

COMBUSTIBLE US ONLY

T10
PS10
RV10

PACKAGING	
Tagboard	100s
Pressure Sensitive	100s
Rigid Vinyl	50s
Reflective	50s
BOXED	
Tagboard	800
Pressure Sensitive	1000
Rigid Vinyl	500
Reflective 2/s	500
Reflective 1/s	500

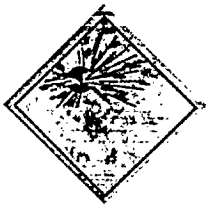
Correct color is shown in catalogue
HCMitchell

* NOTE
* To order UN#'s simply request the part number and the UN number

EXPLANATION OF CODES

T	Series Tagboard Blank 1 Side	RV	*Series Rigid Vinyl Plastic .020 Preprinted 1 Side
T	*Series Tagboard Preprinted Number 1 Side	RPS	Series Reflective Pressure Sensitive Blank
TS	Series Tagboard Blank 2 Sides	RPS	*Series Reflective Pressure Sensitive Preprinted Number
TS	* Series Tagboard Preprinted Number 2 Sides	RRV	Series Reflective Rigid Vinyl Blank 1 Side
PS	Series Pressure Sensitive Vinyl Blank	RRV	* Series Reflective Rigid Vinyl Preprinted 1 Side
PS	*Series Pressure Sensitive Vinyl Preprinted Number	RTV	Series Reflective Rigid Vinyl Blank 2 Sides
RV	Series Rigid Vinyl Plastic .020 Blank 1 Side	RTV	*Series Reflective Rigid Vinyl Preprinted Number 2 Sides

5 of 6



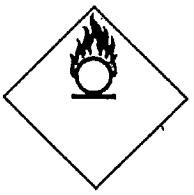
(No. 01)

(No. 03)

(No.04.1)

(No.04.2)

(No.04.3)



(No.05)

(No.06.1)

(No.08)

Oxidizer

13.5.3 Examples of display of UN Numbers on Placards

Figure 13.1

Figure 13.2

* location of class or division number
** location of UN number

Figure 13.3
Placard for radioactive material of class 7

(No. 7D)
Symbol (trefoil) : black ; Background : upper half yellow with white border, lower half white ;
The lower half should show the appropriate UN number (see 13.7.5)
and/or the word 'RADIOACTIVE' ; and the Figure '7' in the bottom corner

IMDG Code