

The answer is yes. Under § 173.24(d)(2) of the HMR, a UN standard packaging, including a UN portable tank, manufactured outside of the United States in conformance with national or international regulations based on the UN Recommendations on the Transportation of Dangerous Goods (Recommendations) is an authorized packaging, as this term is defined under § 173.24(c)(1), when: 1) the packaging fully conforms to applicable provisions in the UN Recommendations and the requirements of 49 CFR Part 173, Subpart B, including reuse provisions; 2) the packaging is capable of passing the prescribed tests in 49 CFR Part 178 applicable to that standard; and 3) the competent authority of the country of manufacture provides reciprocal treatment for UN standard packagings manufactured in the United States.

In addition, when transported to, from, or within the United States, § 171.25(c) requires UN portable tanks used to transport gases to comply with the HMR. Further, UN, and other types of portable tanks transported to, from, or within the United States must comply with the following requirements prescribed in § 171.25(c)(1)-(c)(4):

- (1) UN portable tanks must conform to the requirements in Special Provisions TP37, TP38, TP44, and TP45 when applicable, and any pertinent bulk special provisions assigned to the hazardous material in the § 172.101 Hazardous Materials Table;
- (2) International Maritime Organization (IMO) Type 5 portable tanks must conform to Department of Transportation (DOT) Specification 51 or UN portable tank requirements, unless specifically authorized in the HMR or approved by the Associate Administrator;
- (3) Except as specified in 49 CFR Part 171, Subpart C, for a material poisonous (toxic) by inhalation, the T Codes specified in Column 13 of the Dangerous Goods List in the International Maritime Dangerous Goods Code may be applied to the transportation of those materials in intermodal (IM), IMO and DOT Specification 51 portable tanks, when these portable tanks are authorized in accordance with the requirements of the HMR; and
- (4) No person may offer an IM or UN portable tank containing liquid hazardous materials of Class 3, Packing Group (PG) I or II, or III with a flash point less than 100 °F (38 °C); Division 5.1, PG I or II; or Division 6.1, PG I or II, for unloading while the portable tank remains on a transport vehicle with the motive power unit attached unless that person ensures the conditions prescribed in § 177.834(o) are met.

Please note that under 49 CFR Part 107, the HMR does not require foreign facilities that manufacture UN portable tanks to be inspected by a designated approval agency or approved by PHMSA's Associate Administrator for Hazardous Materials Safety.

Further, please be advised that PHMSA issued a notice of proposed rulemaking (NPRM) on December 30, 2013, under Docket No. PHMSA-2010-0019 (HM-241; 78 FR 79363; that can be downloaded from this website location: <http://www.gpo.gov/fdsys/pkg/FR-2013-12-30/pdf/2013-31046.pdf>). One of the changes we proposed in this NPRM is to authorize use of

the 2013 edition of the National Board of Boiler and Pressure Vessel Inspectors' National Board Inspection Code as it applies to existing cargo tank motor vehicles and portable tanks constructed to the ASME's Section VIII, Division 1 standard.

I hope this response satisfies your request.

Sincerely,

A handwritten signature in cursive script that reads "T. Glenn Foster". The signature is written in black ink and is positioned above the typed name.

T. Glenn Foster
Chief, Regulatory Review and Reinvention Branch
Standards and Rulemaking Division

Enclosure



APRAGAZ

V.Z.W.

Uw Controle Organisme

Member of
CEOC
INTERNATIONAL

Vilvoordsesteenweg 156 B-1120 Brussel
Tel. 32/2/264 03 60 – Fax 32/2/268 89 58
E-mail : info@apragaz.com - B.T.W. BE 407.199.070

Edmonson
3173.24 (d)
3171.7 Portable Tanks
13-0151

U.S. DOT
PHMSA Office of Hazardous Materials Standard
Attn: PHH-10
East Building
1200 New Jersey Avenue, SE.
Washington, DC 20590-0001
USA

Brussels, October 26, 2012

Dear Sir,

This letter is to request interpretation of the CFR concerning the approval of UN Portable tanks.

Given 49CFR173.24(d):

(d) *Specification packagings and UN standard packagings manufactured outside the U.S.*

(2) UN standard packagings manufactured outside the United States. A UN standard packaging manufactured outside the United States, in accordance with national or international regulations based on the UN Recommendations (IBR, see § 171.7 of this subchapter), may be imported and used and is considered to be an authorized packaging under the provisions of paragraph (c)(1) of this section, subject to the following conditions and limitations:

- (i) The packaging fully conforms to applicable provisions in the UN Recommendations and the requirements of this subpart, including reuse provisions;
- (ii) The packaging is capable of passing the prescribed tests in part 178 of this subchapter applicable to that standard; and
- (iii) The competent authority of the country of manufacture provides reciprocal treatment for UN standard packagings manufactured in the U.S.

We ask your confirmation of our interpretation:

That a UN portable tank built and tested according to the IMDG and ADR/RID-regulations outside the United States and certified according to the IMDG and ADR/RID-regulations by a foreign Approval Agency, designated by his national competent authority may be imported and used and is considered to be an authorized packaging. Please note that the Approval Agency is NOT designated by the PHMSA.

Your response will be appreciated

Best Regards,


Chris Vleugels
Design Approval Department
APRAGAZ vzw
Vilvoordsesteenweg 156
B – 1120 Brussels
c.vleugels@apragaz.com

A 105-Rev. 2

To: Italmatch File
From: Chester J. Hosch and Anna H. Browning
Date: May 2, 2017

I. Introduction

We are in receipt of Mr. Boneham's memorandum, *Transport of Phosphorous Oxychloride and Phosphorous Trichloride in Portable Tanks (Tank Containers)*, in which Mr. Boneham comments on the issue of U stamp requirements and their applicability to UN specification portable tanks carrying Phosphorous Trichloride and Phosphorous Oxychloride (the "**Products**").

In reviewing Mr. Boneham's memorandum, we note that he provides extensive insight into the regulatory history behind the ASME U stamp requirement. If such regulatory history has been previously reduced to writing, complete with citations to supporting research, we would like the opportunity to review. Nonetheless, while we appreciate Mr. Boneham's historical knowledge of the subject, we believe his memorandum provides a flawed conclusion of Subchapter C of Title 39, Subtitle B, Chapter I, Parts 171-180 as those pertinent Parts apply to the Products and the particular, foreign-made UN portable tanks at hand (the "**Tanks**"), as well as several misstatements relating to the legal analysis provided in our Internal Memorandum dated March 22, 2017. We previously updated that Internal Memorandum on March 24, 2017 and provide it as further support of our position in advising our client at Addendum 1.

II. Analysis

a. Misquotation of Burr and Forman's Internal Memorandum and Mischaracterization of 49 CFR 171.22(b).

Mr. Boneham, in analyzing our Internal Memorandum, has misquoted us and has provided a mischaracterization of Title 49 of the CFR and its applicability to the issue at hand. Mr. Boneham misquotes Burr, on page 6 of his memorandum. The pertinent passage, in its entirety, reads: "In short, Italmatch must transport its good in compliance with and conformity to only the IMDG **and Subpart C of Section 171 of Subchapter C**. This includes the requirements applicable to Italmatch and its Products as set forth in 49 CFR §§171.22-171.27." Mr. Boneham omits the language following "IMDG" entirely and misstates our position. Burr does not state the IMDG code solely controls the marking requirements for the Tanks. Rather, the Tanks at hand, according to Burr's analysis, are subject to the IMDG requirements, as well as those requirements under Subpart C of Part 171 of Subchapter C and certain applicable Sections of Subchapter C.

This distinction further belies Mr. Boneham's conclusion the Tanks must conform to "Subpart C, §171-189" according to §171.22(b)(2). §171.22(b) provides "limitations on the use of international standards and regulations" for hazardous materials transported in accordance with approved international regulations under §171.22(a)—authorizing use of the IMDG for transportation of hazardous materials done, at least in part, by vessel. These limitations subject such shipments "to the requirements of the applicable international standard or regulation" and require they "conform to all applicable requirements of this **subpart**." *Subpart*, as used in this section, refers to Subpart C of Part 171, which includes §§171.22-171.27. It does not refer more broadly to **Subchapter** C, the Hazardous Materials Regulations ("HMR").

Mr. Boneham incorrectly asserts **subpart** as used in §171.22(b)(2) refers to Parts 171-189. Rather, Parts 171-189 are contained in **Subchapter** C of Title 49. If §171.22(b)(2) imposed all applicable requirements contained in Parts 171-189, the language would provide such shipments conform the applicable requirements of this *subchapter*, not this *subpart*. Burr does not deny the Tanks are subject to additional requirements under the Title 49 in addition to the IMDG requirements. However, a strict and accurate reading of the language shows, definitively, those additional requirements referenced in §171.22(b)(2) are limited to Subpart C of Part 171 of Title 49, Subtitle B, Chapter I.

b. Response regarding the applicability of 49 CFR 171.23.

Mr. Boneham states Burr is mistaken in its assertion the language of §171.25 excepts the Tanks from the requirements of §171.23. Section 171.25 expressly states that shipments of hazardous materials, provided such movement is all **or in part by vessel**, may be conducted in accordance with the requirements of the IMDG, provided that the shipments “conform to the requirements in §171.22, as applicable, and this section (i.e., §171.25).” This language expressly omits any reference to §171.23. Therefore, Burr believes the legislature intended to except such shipments performed **at least in part by vessel** from the requirements of §171.23.

Even if Burr's conclusion is overstated, application of §171.23 still does not require the Tanks to be U stamped in accordance with the ASME requirements. §171.23(b)(10) provides that poisonous by inhalation materials—to which category the Products belong—must, among other requirements not relevant to the issue at hand, “be packaged in accordance with the requirements of this subchapter.” The referenced subchapter, Subchapter C, provides packaging requirements for hazardous materials in Part 173. Section 173.24 provides the general requirements for packages and packagings, and §173.24(d) specifically excepts UN standard

packagings **manufactured outside of the United States** where those UN standard packagings are manufactured “in accordance with national or international regulations based on the UN Recommendations” as these are “considered to be an **authorized packaging** under the provisions of [§173.24(c)(1)]” [emphasis added] so long as the following conditions and limitations are met:

- (i) The packaging fully conforms to applicable provisions in the UN Recommendations and the requirements of this subpart, including reuse provisions;
- (ii) The packaging is capable of passing the prescribed tests in part 178 of this subchapter applicable to that standard; and
- (iii) The competent authority of the country of manufacture provides reciprocal treatment for UN standard packagings manufactured in the U.S.

Therefore, even if 171.23 applies to the Tanks, 173.24(d) authorizes them and subjects them to a different standard, dependent upon the three limitations listed above.

This conclusion is supported by the Pipeline and Hazardous Materials Safety Administration ("PHMSA") of Department of Transportation in PHMSA Interpretation #13-0151, dated April 8, 2014, and which letter is attached hereto as Exhibit B, in which the distributor requested clarification of the HMR applicable to UN portable tanks. The distributor provided extensive information about the UN portable tanks and the specification related thereto.

These UN portable tanks:

- Meet the European Standard (EN) 14025 metallic pressure tank design specification, the American Society of Mechanical Engineers (ASME) VIII, Division 1 design specification, or both;
- Meet the T1 and T22 codes under §172.102(c)(7) of the HMR, and have a minimum wall thickness according to the pressure vessel code that is 5 or 6 mm of reference steel or equivalent in conformance with §178.274(d);
- Are designed to transport hazardous materials meeting the following hazard classes: 3 (flammable liquid), 4 (flammable solid), 5 (oxidizer or organic peroxide), 6 (poisonous), 8 (corrosive), or 9 (miscellaneous); and
- Are manufactured by companies that have not been inspected by a representative of the United States government.

The distributor specifically asked if these UN portable tanks may be loaded and unloaded with a hazardous material authorized for that container before and after transportation into, from, or within the United States. The PHMSA concluded definitively the UN portable tanks may be loaded and unloaded with a hazardous material authorized for that container before and after transportation into, from, or within the United States:

UN standard packaging, including a UN portable tank, manufactured outside of the United States in conformance with national or international regulations based on the UN Recommendations on the Transportation of Dangerous Goods (Recommendations) is an authorized packaging, as this term is defined under §173.24(c)(1), when: 1) the packaging fully conforms to applicable provisions in the UN Recommendations and the requirements of 49 CFR Part 173, Subpart B, including reuse provisions; 2) the packaging is capable of passing the prescribed tests in 49 CFR Part 178 applicable to that standard; and 3) the competent authority of the country of manufacture provides reciprocal treatment for UN standard packagings manufactured in the United States.

Italmatch has confirmed its UN portable tanks transporting the Products are in compliance with the IMDG and further fully conform to applicable provisions in the UN Recommendations and the requirements of 49 CFR Part 173, Subpart B, and are capable of passing the prescribed tests in 49 CFR Part 178 applicable to that standard. Italmatch will upon request share that information with Suttons International and its advisors. Finally, Burr representatives confirmed with the PHMSA that the PHMSA has no list of countries failing to provide reciprocal treatment for UN standard packagings manufactured in the United States. Burr did find evidence both China and South Africa, the countries in which the subject Tanks were manufactured, maintain Competent Authorities lists with both China and South Africa. Italmatch will upon request share that information with Suttons International and its advisors.

c. Response regarding the applicability of 49 CFR 171.25(c).

This same PHMSA Interpretation #13-0151 confirms the conclusion Burr reached in its Internal Memorandum regarding the limitation of §171.25(c) to gases. Section 171.25(c) plainly

states “[e]xcept for IBCs and UN portable tanks used for the transportation of **liquids or solids**, bulk packagings must conform to the requirements of this subchapter.” [Emphasis added.] The PHMSA Interpretation concluded, upon the distributor’s request for clarification of the HMR’s applicability to UN portable tanks under this §171.25, that “when transported to, from or within the United States, §171.25(c) requires UN portable tanks used to transport **gases** to comply with the HMR.” [Emphasis added.] In fact, while §171.25 liberally references numerous Parts of Subchapter C, including Part 176, Part 174, Part 177 and Part 172, at no point does §171.25 reference Part 178 and its U stamp requirement at all.

III. Conclusion

Mr. Boneham has provided extensive anecdotal history regarding the application of ASME U stamp requirements to UN portable tanks manufactured in accordance with accepted international standards and being used to transport the Products to, from, and within the United States. However, he has failed to provide any citations for these conclusions. We would appreciate him sharing any research he has on the subject. Mr. Boneham has also misquoted our Internal Memorandum and repeatedly misstates application of **Subchapter** C of 49 CFR to provisions limited to application of **Subpart** C of Part 171 of Subchapter C of 49 CFR, as analyzed herein. We respectfully assert these misquotes and mischaracterizations of the law have led him to a flawed conclusion that Italmatch’s Tanks are subject to the U stamp requirement of ASME when Subpart C of 49 CFR Part 171, Subpart B of 49 CFR Part 173, and the PHMSA itself, state otherwise.

CJH/ahb

cc: Roy Boneham

Exhibit A

PHMSA Interpretation #13-0151



U.S. Department
of Transportation

**Pipeline and Hazardous
Materials Safety
Administration**

1200 New Jersey Avenue, SE
Washington, D.C. 20590

APR 08 2014

Mr. Chris Vleugels
Design Approval Department
Apragaz V.Z.W. Uw Controle Organisme
Vilvoordsesteenweg 156
B-1120 Brussels
BELGIUM

Reference No. 13-0151

Dear Mr. Vleugels:

This is in response to your October 26, 2012 letter forwarded to the Pipeline and Hazardous Materials Safety Administration (PHMSA) on July 19, 2013, by Mr. Richard Hagemeyer, Agmark Corporation, and subsequent e-mails, additional documentation, and telephone calls between you, Mr. Hagemeyer, and members of my staff in which you requested clarification of the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180) applicable to foreign-made United Nations (UN) standard portable tanks, herein referred to as UN portable tanks. We have no record of receiving your original October 2012 letter, and apologize for the delay in responding and any inconvenience this may have caused.

In addition to the correspondence noted above, you and Mr. Hagemeyer also provided the following information. The foreign-made UN portable tanks:

- Meet the European Standard (EN) 14025 metallic pressure tank design specification, the American Society of Mechanical Engineers (ASME) VIII, Division 1 design specification, or both;
- Meet the T1 and T22 codes under § 172.102(c)(7) of the HMR, and have a minimum wall thickness according to the pressure vessel code that is 5 or 6 mm of reference steel or equivalent in conformance with § 178.274(d);
- Are designed to transport hazardous materials meeting the following hazard classes: 3 (flammable liquid), 4 (flammable solid), 5 (oxidizer or organic peroxide), 6 (poisonous), 8 (corrosive), or 9 (miscellaneous); and
- Are manufactured by companies that have not been inspected by a representative of the United States government.

Specifically, you ask if these portable tanks may be loaded and unloaded with a hazardous material authorized for that container before and after transportation into, from, or within the United States.

The answer is yes. Under § 173.24(d)(2) of the HMR, a UN standard packaging, including a UN portable tank, manufactured outside of the United States in conformance with national or international regulations based on the UN Recommendations on the Transportation of Dangerous Goods (Recommendations) is an authorized packaging, as this term is defined under § 173.24(c)(1), when: 1) the packaging fully conforms to applicable provisions in the UN Recommendations and the requirements of 49 CFR Part 173, Subpart B, including reuse provisions; 2) the packaging is capable of passing the prescribed tests in 49 CFR Part 178 applicable to that standard; and 3) the competent authority of the country of manufacture provides reciprocal treatment for UN standard packagings manufactured in the United States.

In addition, when transported to, from, or within the United States, § 171.25(c) requires UN portable tanks used to transport gases to comply with the HMR. Further, UN, and other types of portable tanks transported to, from, or within the United States must comply with the following requirements prescribed in § 171.25(c)(1)-(c)(4):

- (1) UN portable tanks must conform to the requirements in Special Provisions TP37, TP38, TP44, and TP45 when applicable, and any pertinent bulk special provisions assigned to the hazardous material in the § 172.101 Hazardous Materials Table;
- (2) International Maritime Organization (IMO) Type 5 portable tanks must conform to Department of Transportation (DOT) Specification 51 or UN portable tank requirements, unless specifically authorized in the HMR or approved by the Associate Administrator;
- (3) Except as specified in 49 CFR Part 171, Subpart C, for a material poisonous (toxic) by inhalation, the T Codes specified in Column 13 of the Dangerous Goods List in the International Maritime Dangerous Goods Code may be applied to the transportation of those materials in intermodal (IM), IMO and DOT Specification 51 portable tanks, when these portable tanks are authorized in accordance with the requirements of the HMR; and
- (4) No person may offer an IM or UN portable tank containing liquid hazardous materials of Class 3, Packing Group (PG) I or II, or III with a flash point less than 100 °F (38 °C); Division 5.1, PG I or II; or Division 6.1, PG I or II, for unloading while the portable tank remains on a transport vehicle with the motive power unit attached unless that person ensures the conditions prescribed in § 177.834(o) are met.

Please note that under 49 CFR Part 107, the HMR does not require foreign facilities that manufacture UN portable tanks to be inspected by a designated approval agency or approved by PHMSA's Associate Administrator for Hazardous Materials Safety.

Further, please be advised that PHMSA issued a notice of proposed rulemaking (NPRM) on December 30, 2013, under Docket No. PHMSA-2010-0019 (HM-241; 78 FR 79363; that can be downloaded from this website location: <http://www.gpo.gov/fdsys/pkg/FR-2013-12-30/pdf/2013-31046.pdf>). One of the changes we proposed in this NPRM is to authorize use of

the 2013 edition of the National Board of Boiler and Pressure Vessel Inspectors' National Board Inspection Code as it applies to existing cargo tank motor vehicles and portable tanks constructed to the ASME's Section VIII, Division 1 standard.

I hope this response satisfies your request.

Sincerely,

A handwritten signature in cursive script that reads "T. Glenn Foster". The signature is written in black ink and is positioned above the typed name.

T. Glenn Foster
Chief, Regulatory Review and Reinvention Branch
Standards and Rulemaking Division

Enclosure



APRAGAZ

V.Z.W.

Uw Controle Organisme

Vilvoordsesteenweg 156 B-1120 Brussel
Tel. 32/2/264 03 60 – Fax 32/2/268 89 58
E-mail : info@apragaz.com - B.T.W. BE 407.199.070

Member of
CEOC
INTERNATIONAL

Edmonsop
§ 173.24 (d)
§ 171.7 Portable Tanks 13-0151
U.S. DOT
PHMSA Office of Hazardous Materials Standard
Attn: PHH-10
East Building
1200 New Jersey Avenue, SE.
Washington, DC 20590-0001
USA

Brussels, October 26, 2012

Dear Sir,

This letter is to request interpretation of the CFR concerning the approval of UN Portable tanks.

Given 49CFR173.24(d):

(d) *Specification packagings and UN standard packagings manufactured outside the U.S.*

(2) UN standard packagings manufactured outside the United States. A UN standard packaging manufactured outside the United States, in accordance with national or international regulations based on the UN Recommendations (IBR, see § 171.7 of this subchapter), may be imported and used and is considered to be an authorized packaging under the provisions of paragraph (c)(1) of this section, subject to the following conditions and limitations:

- (i) The packaging fully conforms to applicable provisions in the UN Recommendations and the requirements of this subpart, including reuse provisions;
- (ii) The packaging is capable of passing the prescribed tests in part 178 of this subchapter applicable to that standard; and
- (iii) The competent authority of the country of manufacture provides reciprocal treatment for UN standard packagings manufactured in the U.S.

We ask your confirmation of our interpretation:

That a UN portable tank built and tested according to the IMDG and ADR/RID-regulations outside the United States and certified according to the IMDG and ADR/RID-regulations by a foreign Approval Agency, designated by his national competent authority may be imported and used and is considered to be an authorized packaging. Please note that the Approval Agency is NOT designated by the PHMSA.

Your response will be appreciated

Best Regards,


Chris Vleugels
Design Approval Department
APRAGAZ vzw
Vilvoordsesteenweg 156
B – 1120 Brussels
c.vleugels@apragaz.com

A 105-Rev. 2

Addendum 1

March 24, 2017 Internal Memorandum

To: Italmatch File
From: Chester J. Hosch and Anna H. Browning
Date: May 2, 2017

FACTS

A manufacturer is transporting multiple foreign-made United Nations (UN) standard portable tanks ("UN portable tanks") of phosphorus trichloride (PCL3) and phosphorus oxichloride (POCL3) (collectively, the "Products") in shipment from Europe by vessel to the United States. The Products are in liquid state and are a material poisonous by inhalation as defined in 49 CFR §171.8. The Products in T20 portable tanks, after being held in freight at a United States port pending delivery to the customer, are then transported by motor carrier across public highway to a nearby state to the customer.

49 CFR §178.273(b)(6) addresses the need for owners and manufacturers of portable tanks to obtain approval of the appropriate agency, the process for that approval, recourse for denial, re-approval after modification and termination of approval. Part of this approval process is ensuring that packagings, such as UN portable tanks, are compliant with all engineering, marking, labeling, and placarding requirements under Title 49, Parts 171-180. However, certain of these requirements are excepted where UN portable tanks are manufactured according to the International Maritime Dangerous Goods Code (IMDG Code) and other accepted international standards.

ISSUES

The threshold question presented is whether a manufacturer, as lessee of UN portable tanks, must use U Stamp marked UN portable tanks to transport a qualifying Product to port in the United States and on to its customer by roadway carrier even if the Product has been transported by vessel in part in its passage pursuant to the IMDG Code and if the UN portable tanks fully conform to applicable provisions in the UN Recommendations and applicable requirements of Hazardous Materials Regulations at 49 CFR Parts 171-180, Subchapter C ("HMR") and are capable of passing the prescribed tests in applicable standards of the HMR.

CONCLUSION

We have reviewed Subchapter C of Title 49, Subtitle B, Chapter I, Parts 171 through 180, addressing authorization and requirements for the use of international transport standards and regulations for hazardous materials. **We conclude the Products described above are not required to be shipped by U Stamp marked UN portable tanks pursuant to 49 CFR §178.273 or 274, because the tanks meet those standards of the IMDG Code and because these UN portable tanks manufactured outside the United States in accordance with national or international regulations based on UN Recommendations are considered to be authorized packagings under the applicable provisions of the HMR.**

ANALYSIS

49 CFR §171.22. Section 171.22 authorizes, subject to certain conditions and limitations, the transportation in commerce of hazardous materials in accordance with the IMDG Code. In addition to compliance with and conformity to the requirements of the IMDG, a

hazardous material offered for transportation in the United States must conform to all applicable requirements of this subpart. In short, shipping companies must transport their goods in compliance with and conformity to only the IMDG and Subpart C of Section 171 of Subchapter C. This includes the requirements applicable to the Products at issue as set forth in 49 CFR §§171.22 through 171.27.

Section 171.22(e) expressly provides for transportation of forbidden materials. "Forbidden materials" generally include those designated as forbidden in column 3 of the Hazardous Material Table reproduced in Section 172.101 (the "Table"). They also include certain other materials: (i) designated explosives, (ii) materials in shared packaging, the mixing of which is likely to cause a dangerous evolution of heat, or flammable or poisonous gases or vapors, (iii) materials in packages which give off a flammable gas or vapor, (iv) materials in packages containing materials which will detonate in a fire, and (v) certain oxygen generators. The Table extract below confirms the Products offered are not forbidden materials.

Symbol	Hazardous materials descriptions and proper shipping names	Hazard class or Division	Identification Numbers	PG	Label Codes	Special Provisions (§ 172.102)	(8)			(9)		(10)	
							Packaging (§ 173.***)			Quantity Limitations (see §§ 173.27 and 175.75)		Vessel Stowage	
							Exceptions	Non-bulk	Bulk	Passenger aircraft/rail	Cargo aircraft only	Location	Other
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8A)	(8B)	(8C)	(9A)	(9B)	(10A)	(10B)
	Phosphorus trichloride	6.1	UN1809	I	6.1, 8	2, B9, B14, B15, B32, B77, N34, T20, TP2, TP13, TP38, TP45	None	227	244	Forbidden	Forbidden	C	40
+	Phosphorus oxychloride	6.1	UN1810	I	6.1, 8	2, B9, B14, B32, B77, N34, T20, TP2, TP13, TP38, TP45	None	227	244	Forbidden	Forbidden	D	40

Section 171.22(f) expressly provides for transportation of hazardous material with complete information and certifications regarding classification, packaging, marking and labeling/placarding in accordance with IMDG. Section 171.22(g) expressly provides for transportation of hazardous material with proper emergency response information, training requirements, security requirements, and incident reporting requirements under 49 CFR §§171 and 172. Thus, a company which transports hazardous material in compliance with the IMDG, as here described, will be compliance with Section 171.22(f) as well as Section 171.22(g), provided, the company complies with the training, security, and incident reporting requirements under 49 CFR §§171 and 172.

We could find no express provision for application of Hazardous Materials Regulations at 49 CFR Parts 171-180, Subchapter C ("HMR") generally to products in transport under the IMDG Code not classified as a forbidden material. In fact, it is only in such cases where a material is designated as a hazardous material under HMR, but excepted from or not subject to the IMDG or other international transport standards and regulations, that such hazardous material must expressly be transported in accordance with all applicable requirements of HMR pursuant to 49 CFR §171.22(c). Had Congress or the Department of Transportation intended otherwise, it could have plainly said so.

Section 171.25. We have examined the additional requirements for the use of the IMDG Code under 49 CFR §171.25 that hazardous materials may be offered for transportation within the United States by motor carrier in accordance with the IMDG Code provided at least part of the movement is by vessel provided such shipments conform to the requirements in 49 CFR §171.22 as applicable and 49 CFR §171.25, as applicable. It does not require such shipments conform to requirements under 49 CFR §171.23. Thus, we believe a hazardous material arriving

in the United States by vessel, falls outside of 49 CFR §171.23 entirely. Had Congress or the Department of Transportation intended otherwise, it could have plainly said so.

Any person who offers for transportation hazardous materials by highway subsequent to transportation by vessel pursuant to the IMDG Code, must ensure that the shipment conforms to the requirements of Part 177. Part 177 provides for general requirements for shipping by highway, including but not limited to unacceptable hazardous materials, inspection requirements, certain Federal Motor Carrier Safety Regulations, tunnel use regulations, training requirements for portable tanks, shipping papers, and emergency movement rules. We could find no provision in Part 177 requiring the "U Stamp" marking or marking requirements for portable tanks.

Any person who offers for transportation of hazardous materials by highway in accordance with the IMDG Code, must comply with placard rules in accordance with Subpart F of Part 172. This Subpart F of Part 172 does not provide any guidance or requirements regarding "U-Stamps". Finally, when a hazardous material is transported by motor vehicle on a public highway the segregation requirements of Part 7, Chapter 7.2 of the IMDG Code are authorized.

Any person who offers for transportation of hazardous materials by vessel in accordance with the IMDG Code must conform to the requirements in Part 176 of HMR. For transportation by rail subsequent to transportation by vessel in accordance with the IMDG Code, a shipment must conform to the requirements of Part 174.

Section 171.25(c) plainly states "[e]xcept for IBCs and UN portable tanks used for the transportation of liquids or solids, bulk packagings must conform to the requirements of this subchapter." We do not believe, therefore, that the Products, a liquid, to be shipped by UN portable tank, are otherwise subject to the bulk packaging requirements of the HMR. If

Congress or the Department of Transportation sought otherwise, it would not have expressly provided to the contrary.

Section 171.25(c) further states "[a]dditionally, the following requirements apply. We believe a plain reading of the provision means the exception for UN portable tanks used for the transportation of liquids or solids still falls outside the bulk packaging requirements of 49 CFR §171.25(c). We do not believe the requirements that follow the Products; these requirements apply to gases offered for transport by UN portable tanks, not liquids.

Our conclusions have been confirmed by the Pipeline and Hazardous Materials Safety Administration ("PHMSA") of Department of Transportation in PHMSA Interpretation #13-0151 dated April 8, 2014. The letter is attached at Exhibit A. There, the distributor requested clarification of the HMR applicable to UN portable tanks. The PHMSA states with finality "**when transported to, from or within the United States**, §171.25(c) requires UN portable tanks used to transport gases to comply with the HMR."

A contradictory, but flawed position to this is that a manufacturer and distributor of the Products described is subject to 49 CFR §178.273(b)(6). Such position stands as follows:

§ 178.273 Approval of Specification UN portable tanks.

(a) Application for approval.

(1) An owner or manufacturer of a portable tank shall apply for approval to a designated approval agency authorized to approve the portable tank in accordance with the procedures in subpart E, part 107 of this subchapter.

(b) Action by approval agency. The approval agency must perform the following activities:

(6) For UN portable tanks intended for non-refrigerated and refrigerated liquefied gases and Division 6.1 liquids which meet the inhalation toxicity criteria (Zone A or B) as defined in § 173.132 of this subchapter, or that are designated as toxic by inhalation materials in the § 172.101 Table of this subchapter, the approval agency must ensure that:

(i) The portable tank has been designed, constructed, certified, and stamped in accordance with the requirements in Division 1 of Section VIII of the ASME Code (IBR, see § 171.7 of this subchapter). Other design codes may be used if approved by the Associate Administrator (see § 178.274(b)(1));

(ii) All applicable provisions of the design and construction have been met to the satisfaction of the designated approval agency in accordance with the rules established in the ASME Code and that the portable tank meets the requirements of the ASME Code and all the applicable requirements specified in this subchapter;

(iii) The inspector has carried out all the inspections specified by the rules established in the ASME Code; and

(iv) The portable tank is marked with a U stamp code symbol under the authority of the authorized independent inspector.

Section 273 is made applicable to UN portable tanks used for Division 6.1 liquids, Hazard Zone A and B, pursuant to 49 CFR §173.244(c). Section 173.244 states, in relevant part:

§ 173.244 Bulk packaging for certain pyrophoric liquids (Division 4.2), dangerous when wet (Division 4.3) materials, and poisonous liquids with inhalation hazards (Division 6.1).

When § 172.101 of this subchapter specifies that a hazardous material be packaged under this section, only the following bulk packagings are authorized, **subject to the requirements of subparts A and B of part 173 of this subchapter** and the special provisions specified in column 7 of the § 172.101 table. [Emphasis added.]

(c) Portable tanks: DOT 51 portable tanks and UN portable tanks that meet the requirements of this subchapter, when a T code is specified in Column (7) of the § 172.101 Table of this subchapter for the specific hazardous material, are authorized. Additionally, a DOT 51 or UN portable tank used for Division 6.1 liquids, Hazard Zone A or B, must be certified and stamped to the ASME Code as specified in § 178.273(b)(6) of this subchapter.

As previously stated, though, this position is flawed. Subparagraph (c) does not apply to the issue at hand because the authorized bulk packagings referenced in subparagraph (c) are **expressly qualified by the applicable provisions of subpart B of Part 173.**

Subpart B of Section 173 includes 49 CFR 173.24. This section expressly addresses the UN portable tanks used to transport the Products; UN standard packagings **manufactured outside of the United States.** It says:

(d) Specification packagings and UN standard packagings manufactured outside the U.S. -

(2) UN standard packagings **manufactured outside the United States.** A UN standard packaging manufactured outside the United States, in accordance with national or international regulations based on the UN Recommendations (IBR, see § 171.7 of this subchapter), may be imported and used and **is considered to be an authorized packaging** under the provisions of paragraph (c)(1) of this section, subject to the following conditions and limitations: **[Emphasis added.]**

(i) The packaging fully conforms to applicable provisions in the UN Recommendations and the requirements of this subpart, including reuse provisions;

(ii) The packaging is capable of passing the prescribed tests in part 178 of this subchapter applicable to that standard; and

(iii) The competent authority of the country of manufacture provides reciprocal treatment for UN standard packagings manufactured in the U.S.

These requirements applicable to UN portable tanks used transporting the Products **deliberately omits the U stamp requirement** of 49 CFR 273.244(c).

Again, this issue was definitively addressed in Interpretation #13-0151 in which the distributor requested clarification of the HMR applicable to UN portable tanks. The distributor provided extensive information about the UN portable tanks and the specification related thereto.

These UN portable tanks:

- Meet the European Standard (EN) 14025 metallic pressure tank design specification, the American Society of Mechanical Engineers (ASME) VIII, Division 1 design specification, or both;
- Meet the T1 and T22 codes under § 172.102(c)(7) of the HMR, and have a minimum wall thickness according to the pressure vessel code that is 5 or 6 mm of reference steel or equivalent in conformance with § 178.274(d);
- Are designed to transport hazardous materials meeting the following hazard classes: 3 (flammable liquid), 4 (flammable solid), 5 (oxidizer or organic peroxide), 6 (poisonous), 8 (corrosive), or 9 (miscellaneous); and
- Are manufactured by companies that have not been inspected by a representative of the United States government.

The distributor specifically asked if these UN portable tanks may be loaded and unloaded with a hazardous material authorized for that container **before and after transportation into, from, or within the United States**. The PHMSA concluded **definitively** the UN portable tanks may be loaded and unloaded with a hazardous material authorized for that container before and after transportation into, from, or within the United States.

UN standard packaging, including a UN portable tank, manufactured outside of the United States in conformance with national or international regulations based on the UN Recommendations on the Transportation of Dangerous Goods (Recommendations) is an authorized packaging, as this term is defined under § 173.24(c)(1), when: 1) the packaging fully conforms to applicable provisions in the UN Recommendations and the requirements of 49 CFR Part 173, Subpart B, including reuse provisions; 2) the packaging is capable of passing the prescribed tests in 49 CFR Part 178 applicable to that standard; and 3) the competent authority of the country of manufacture provides reciprocal treatment for UN standard packagings manufactured in the United States.

UN portable tanks transporting the Products that are in compliance and with those requirements of the IMDG, then (i) fully conform to applicable provisions in the UN Recommendations and the requirements of 49 CFR Part 173, Subpart B, including reuse provisions; (ii) are capable of passing the prescribed tests in 49 CFR Part 178 applicable to that standard; and (iii) meet the reciprocity standard if the competent authority of the country of manufacture provides reciprocal treatment for UN standard packagings manufactured in the United States.

After conducting its own due diligence, the manufacturer concludes the UN portable tanks fully conform to applicable provisions in the UN Recommendations and the applicable requirements of 49 CFR Part 173, Subpart B, including reuse provisions, and are capable of passing the prescribed tests in 49 CFR Part 178 applicable to that standard. After consultation with Michelle, a representatives of the PHMSA, the manufacturer has been advised by Michelle that there are no countries that do not provide reciprocal treatment for UN portable tanks manufactured in the United States. Both China and South Africa are included in the International List of Competent Authorities and/or Contacts for the Transport of Dangerous Goods. Appropriate representatives of these countries can be contacted at the addresses and telephone numbers provided therein.

49 CFR §171.23. We believe the interpretation provided by the PHMSA in Interpretation #13-0151 is equally relevant to our conclusion that a hazardous material arriving in the United States by vessel, falls outside of 49 CFR §171.23 entirely. Section 173.24(d)(2) clearly provides for the packaging requirements of UN portable tanks manufactured outside of the United States to transport the Products to and within the United States.

If it was intended that 49 CFR 171.23 apply to liquid materials shipped at least in part by vessel into the United States and otherwise subject to the IMDG, then Section 171.23(b) governs the requirements for specific materials and packagings transported under the IMDG. Section 171.23(b)(10) addresses materials poisonous by inhalation. Those materials, which by our understanding include the Products, must conform to requirements regarding shipping paper descriptions, material packaging, and package markings. The key question is raised by the requirement that "the material must be packaged in accordance with the requirements of this [Subchapter C]."

"Package" is defined in 171.8 as "a packaging plus its contents." "Packaging" means a receptacle and any other components or materials necessary for the receptacle to perform its containment function in conformance with the minimum packing requirements of HMR. "Receptacle" means a containment vessel for receiving and holding materials, including any means of closing. "Vessel" includes every description of watercraft, used or capable of being used as a means of transportation on the water.

"Portable tank" means a bulk packaging (except a cylinder having a water capacity of 1000 pounds or less) designed primarily to be loaded onto, or on, or temporarily attached to a transport vehicle or ship and equipped with skids, mountings, or accessories to facilitate handling of the tank by mechanical means but does not include a cargo tank, tank car, multi-unit tank car tank, or trailer carrying cylinders. "Bulk packaging" means a packaging, other than a vessel, including a transport vehicle or freight container, in which hazardous materials are loaded with no intermediate form of containment. Additionally, a bulk packaging has a maximum capacity greater than 450 L (119 gallons) as a receptacle for a liquid.

49 CFR §173.24(d)(2), then, precludes the need for the U stamp marking. So long as the UN portable tanks were manufactured outside the United States, and these UN portable tanks (i) otherwise conform to applicable provisions in the UN Recommendations and the requirements of this subpart, including reuse provisions, (ii) are capable of passing the **prescribed tests** in part 178 of this subchapter applicable to that standard, and (iii) enjoy reciprocal treatment for UN standard packagings manufactured in the U.S. by the country of manufacture, then the U stamp mark requirement of 49 CFR 178.274(d) is not required.

CJH/bmc



U.S. Department
of Transportation

**Pipeline and Hazardous
Materials Safety
Administration**

1200 New Jersey Avenue, SE
Washington, D.C. 20590

MAR 29 2016

Mr. Nigel Tijou
Global Technical Manager – Containers
Technical and Quality Management
Inspection Services – Energy
Lloyd's Register EMEA
1 Trinity Park, Bickenhill Lane
Birmingham B377ES
United Kingdom

Reference No. 15-0223

Dear Mr. Tijou:

This letter is in response to your November 13, 2015 email to Mr. Duane Cassidy, Chief, Pressure Vessels, Approvals and Permits Division, Pipeline and Hazardous Materials Safety Administration (PHMSA). Your letter was forwarded to the Standards and Rulemaking Division for a response. Specifically, you ask if a United Nations (UN) portable tank that transports "UN1689, Sodium cyanide, solid, 6.1, Packing Group (PG) I" is required to bear an American Society of Mechanical Engineers (ASME) Code stamp in accordance with the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180).

The HMR do not require UN1689 Sodium cyanide to be placed in an ASME Code-stamped UN standard portable tank. As you noted in your original email, § 178.273(b)(6) requires UN portable tanks to be marked with an ASME Code only when they are intended for Division 6.1 liquids that meet inhalation toxicity for Hazard Zones A and B as defined in § 173.132, or materials that are designated as toxic (poisonous) by inhalation in the § 172.101 Table.

Under the HMR, UN1689 Sodium cyanide is a solid material, and this material is not designated as poisonous-by-inhalation in its entry on the § 172.101 Table, neither through use of a special provision entry nor through additional classification in §§ 173.211 or 173.242.

I hope this information is helpful. If you have any more questions, please do not hesitate to contact this Office.

Sincerely,

T. Glenn Foster
Chief, Regulatory Review and Reinvention Branch
Standards and Rulemaking Division



U.S. Department
of Transportation

Pipeline and Hazardous Materials
Safety Administration

1200 New Jersey Ave., SE
Washington, DC 20590

NOV 20 2009

Mr. Jim Silver
Silver/Cims LLC
1304 First Street
Seabrook, TX 77586

Ref. No. 08-0197

Dear Mr. Silver:

This is in response to your electronic transmission requesting clarification of the Hazardous Materials Regulations (HMR: 49 CFR Parts 171-180) regarding the import of Dimethyl sulphate or Dimethyl sulfate, UN1595, 6.1, 8, PG I, Hazard Zone B in a UN portable tank that was manufactured outside the United States. You state that the portable tank is manufactured to the ASME Code, Section VIII, but is not "U" stamped. You ask whether the shipment, which is being transported in accordance with the International Maritime Dangerous Goods (IMDG) Code, may be imported into the United States without the "U" stamp.

The answer is no. A UN portable tank used to import Dimethyl sulfate, UN1595, 6.1, 8, PG I, Hazard Zone B into the United States is required to be certified and stamped to the ASME Code as specified in §§ 171.23(b)(10)(ii), 173.244, 178.273(b)(6) and 178.274(b)(1). The U.S. Department of Transportation requires the shipment of toxic-inhalation-hazard liquids to be transported in ASME Code "U" stamped portable tanks regardless of what other regulatory standards may allow. The "U" stamp can only be applied at the time of manufacture and is the only recognized form of certification that verifies the ASME quality system has been properly implemented. Additionally, the UN portable tank must conform to any applicable special provisions, such as Codes TP 38 and TP 45, listed in Column 7 of the § 172.101 Hazardous Materials Table.

I hope this information is helpful. Please contact this office should you have additional questions.

Sincerely,

Hattie L. Mitchell
Chief, Regulatory Review and Reinvention
Office of Hazardous Materials Standards