U.S. Department of Transportation
Pipeline and Hazardous Materials Safety Administration

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

APR 27 2010

Mr. James McManus
ATMI
7 Commerce Drive
Danbury, CT 06810

Ref. No. 10-0024

Dear Mr. McManus:

This responds to your February 1, 2010 request for clarification of the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180). Specifically, you ask for clarification of the term "inappropriate" as used in § 172.101(c)(10)(A) and "significant change" as used in § 172.101(c)(10)(D).

Section 172.101(c)(10) specifies requirements for a mixture or solution not identified specifically by name in the Hazardous Materials Table (HMT) that consists of a hazardous material identified in the HMT by technical name and a non-hazardous material. In accordance with paragraph (c)(10)(A) of this section, such a material must be described using the proper shipping name of the hazardous material and the qualifying word "mixture" or "solution", as appropriate, unless the packaging specified for the named hazardous material in column 8 of the HMR is inappropriate to the physical state of the material. In this context, the term "inappropriate" means the packaging specified in column 8 authorized for the hazardous material in the mixture or solution is no longer appropriate for transportation because the characteristics of the material in solution differ from the characteristics of the pure hazardous material. For example, the pure hazardous material may be a solid, but the mixture or solution containing the material is a liquid. You are correct that § 172.101(c)(10)(A) would apply to a material for which the vapor pressure is dramatically reduced from the pure hazardous material, allowing the use of a lower pressure-rated receptacle.

In accordance with § 172.101(c)(10)(D), a mixture or solution consisting of a hazardous material identified in the HMT by technical name and a non-hazardous material may not be described using the proper shipping name of the hazardous material and the qualifying word "mixture" or "solution" if there is a significant change in the measures to be taken in the event of an emergency. In this context, the term "significant change" means that the hazard characteristics of the mixture or solution dictate emergency response measures that differ from measures that would be taken in the event of an emergency involving the pure hazardous

material. You are correct that § 172.101(c)(10)(D) would apply where the properties of the mixture or solution are such that the initial isolation and protective action distances could be significantly reduced from those required for the pure hazardous material based on emission rate and dispersion model release data.

I hope this answers your inquiry. If you require additional assistance, do not hesitate to contact this Office at 202-366-8553.

Sincerely,

Charles. E. Betts
Chief, Standards Development
Office of Hazardous Materials Standards

Boothe
§172.101
Applicability
10-0024

Drakeford, Carolyn (PHMSA)

From: INFOCNTR (PHMSA)
Sent: Monday, February 01, 2010 8:41 AM
To: Drakeford, Carolyn (PHMSA)
Subject: FW: CFR 49 172.101 (c) (10)

From: Jim McManus [mailto:jmcmanus@atmi.com]
Sent: Saturday, January 30, 2010 10:54 AM
To: INFOCNTR (PHMSA)
Cc: kolander@tampabay.rr.com; Michael Wodjenski
Subject: CFR 49 172.101 (c) (10)

To Whom it May Concern:

In accordance with CFR 49 105.20 (a) (2), I am requesting guidance and interpretation of the regulations as they pertain to a mixture of a hazardous material with a non-hazardous material.

The regulations that I am interested in having PHMSA's help with an interpretation is from CFR 49 172.101 (c) (10). I cite these regulations below for your reference followed immediately by my specific request for interpretation.

Regulations Pertaining to Requested Interpretation:

(10) *Mixtures and solutions.* (i) A mixture or solution not identified specifically by name, comprised of a hazardous material identified in the Table by technical name and non-hazardous material, shall be described using the proper shipping name of the hazardous material and the qualifying word "mixture" or "solution", as appropriate, unless—

(A) Except as provided in §172.101(i)(4) the packaging specified in Column 8 is **inappropriate** to the physical state of the material;

(B) The shipping description indicates that the proper shipping name applies only to the pure or technically pure hazardous material;

(C) The hazard class, packing group, or subsidiary hazard of the mixture or solution is different from that specified for the entry;

(D) There is a **significant change** in the measures to be taken in emergencies;

(E) The material is identified by special provision in Column 7 of the §172.101 Table as a material poisonous by inhalation; however, it no longer meets the definition of poisonous by inhalation or it falls within a different hazard zone than that specified in the special provision; or

(F) The material can be appropriately described by a shipping name that describes its intended application, such as "Coating solution", "Extracts, flavoring" or "Compound, cleaning liquid".

Requested Interpretations:

I am interested in how I can properly interpret the meaning of the words ***"inappropriate"*** and ***"significant change"*** as used within the context of 172.101 (c) (10) [as highlighted above].

Interpretation Request 1:

First, I would like to know what is meant by the word **"inappropriate"** as written in **172.101 (c) (10) (A)** *"the packaging specified in Column 8 is **inappropriate** to the physical state of the material"*

Specifically I would like to know if the word "inappropriate" would apply to the following examples:

If the properties of the mixture are such that the performance level of the packaging prescribed for the pure hazardous material is no longer necessary as the physical properties of the mixture have changed so dramatically that a different performance level packaging can be justified, would the word "inappropriate" apply to this situation?

More specifically, the vapor pressure of the mixture is reduced 100-1000 fold from the pure hazardous material, allowing use of a lower pressure rating receptacle. Would the word "inappropriate" apply to this situation?

Interpretation Request 2:

Secondly, I would like to know what is meant by **"significant change" in 172.101 (c) (10) (D)** *"There is a **significant change** in the measures to be taken in emergencies"*

Again by example, if the properties of the mixture are such that the initial isolation and protective action distances could be significantly reduced from the pure hazardous material based on emission rate and dispersion model release data would the term significant change apply in this situation?

If you require further information to support an interpretation please contact me by e-mail or per the contact information listed below:

Kind regards,

Jim

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