U.S. Department
of Transportation
**Research and
Special Programs
Administration**

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

JAN 18 2005

Mr. David E. Blair
Heritage Environmental Services, LLC-ETS
9730 Lathrop Industrial Drive
Suite E1
Olympia, WA 98512

Ref. No. 03-0203

Dear Mr. Blair:

This responds to your letter regarding the classification and packaging requirements for compressed gas samples under the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180). Specifically, you request clarification of the shipping description and packaging requirements for cylinders containing unknown liquefied and compressed gas samples in DOT 3E cylinders. In addition, you ask if a previously issued letter from this Office on this subject, dated April 10, 1993, remains valid. We apologize for the delay in responding and any inconvenience it may have caused.

Our previously issued letter on this subject remains valid. Under § 172.101(c)(11), a sample of a material for which the hazard class is uncertain and must be determined by testing may be assigned a tentative proper shipping name, hazard class, identification number, and packing group, if applicable, based on the conditions specified in § 172.101(c)(11)(i) through (iv). A sample must be transported in the most appropriate packaging based on the tentative description assigned and the physical state of the material.

The general packaging requirements for compressed gases in cylinders are found in § 173.301. DOT 3E cylinders must be shipped in strong outer packagings, as required by § 173.301(a)(9). The packaging method described in your letter satisfies this requirement if a tentative non-toxic classification is assigned to the gas sample. However, a packaging containing a cylinder filled with a suspected toxic gas or mixture (see §§ 173.115(c) and 173.116) must conform to the additional requirements of § 173.40 and CGA Pamphlets S-1.1 and S-7.

030203

173.301

I trust this satisfies your inquiry. Please contact us if we can be of further assistance.

Sincerely,

Hattie L. Mitchell

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

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8/13/03

Stevens
§173.301
Cylinders
03-0203

August 5, 2003

Mr. Edward T. Mazzullo
Director, Office of Hazardous Materials Standards
U.S.DOT./RSPA (DHM-10)
400 7th. Street S. W.
Washington, D.C. 20590-0001

Dear Mr. Mazzullo:

I am writing to you with a question concerning the transportation of lecture bottle samples of compressed gases for analysis by a testing laboratory.

Please reference the attached USDOT interpretation found in the "Letters of Interpretation by section number" of the Office of Hazardous Materials Safety of the USDOT. The interpretation letter is dated "4/10/1993" and addressed to "Emergency Technical Services Corporation". A Mr. Irv Kraut is the one who submitted the inquiry in 1993, and the attached has both his original inquiry and the DOT's response at that time.

Specifically, Mr. Kraut inquired about the shipping of "Unknown Lecture Bottles: a small, 2" x 12" hand-held cylinder that contains less than one pound of liquid or gas". He states "the cylinder is thoroughly inspected utilizing CGA methods which include leak testing, valve integrity, and cylinder wall measurements to insure the vessel is in condition for ground transportation per DOT regulations". After being "given a tentative shipping description which results from the inspection and shipper knowledge", "the small cylinder is packaged according to DOT regulations and transported via ground transportation to a testing laboratory for analysis."

The company I am currently employed by, Heritage Environmental Services, wishes to ask the USDOT if this particular scenario given above by Mr. Kraut in his letter dated 4/10/1993 and the response by USDOT are still valid. The question is – Is the shipping by ground, as samples to a testing laboratory for analysis, of original lecture bottle samples that have passed the rigorous inspection process specified by Mr. Kraut and are being described, packaged, labeled, and marked per current USDOT regulations still allowed under the current USDOT regulations?

As the DOT interpretation (07313) states, "section 172.101 (c) (11) requires that a material for which the hazard class is to be determined by testing or a material that is a hazardous waste may be assigned a tentative shipping name, hazard class, and identification number. The required packaging is determined by the proper shipping name." Additionally, the interpretation letter further states "if an appropriate technical name is not shown in the Hazardous Materials Table, section 172.101, selection of a generic or n.o.s. shipping description responding to the specific hazard class, packing group, or subsidiary hazard, if any, for the material should be determined as specified in section 172.101 (c)(12). The name that most appropriately describes the material should be used. The additional technical names for materials described by n.o.s. shipping descriptions as specified in section 172.203 (k) do not apply to materials shipped under section 172.101 (c) (12)."

We have also found that section 172.101 (c) (11) (iv) now requires that "for a material other than a waste...the word "Sample" must appear as part of the proper shipping name or in association with the basic description on the shipping paper". And, 172.101 (c) (11) (iv) (C) states "A sample must be transported in a combination packaging which conforms to the requirements of this subchapter that are applicable to the tentative packing group assigned, and may not exceed a net mass of 2.5 kg. (5.5 pounds) per package."

In the instance where the sample is a lecture bottle of a compressed gas, a generic n.o.s. shipping description is chosen based on the the inspection process and the "shippers knowledge of the material". "The name that most appropriately describes the material" is used.

However, the generic n.o.s shipping descriptions for compressed gases in the 172.101 Hazardous Materials Table do not have packing groups assigned as is also specified in section 172.101 (f) for hazard class 2 materials. The guidelines we are currently using for DOT packaging selection are as follows. In section 173.301(k) of the regulations, certain compressed gas cylinders, specifically lecture bottles that are DOT specification 3E, "must be shipped in strong outside packagings...(1) Outside packaging must provide protection for the cylinder. Unless the cylinder has a protective collar or neck ring, the outside packaging must provide protection to the valve against accidental functioning and damage."

The current thought is that company policy specify any samples of compressed gases in DOT specification cylinders shipped by ground to the testing laboratory for analysis are packaged in properly closed DOT specification pails or drums cushioned in an inert packing material such as vermiculite for protection to the valve during shipment. Does this method of packaging meet the requirement of "combination packaging" as specified in 172.101(c)(11)(iv)(C) for compressed gas cylinder samples being shipped to the testing laboratory for analysis?

Thanking you in advance for your time,

David E. Blair

David E. Blair
Heritage ETS Laboratory
Olympia, WA. Office