U.S. Department of Transportation

Pipeline and Hazardous Materials Safety Administration

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

OCT 30 2009

Ms. Lisa Fotheringham
Director, Clinical Trials Support Operations
ACM Global Central Laboratory
160 Elmgrove Park
Rochester, NY 14624

Reference No. 09-0065

Dear Ms. Fotheringham:

This is in response to your March 15, 2009 letter concerning how to class and mark patient medical specimens under the Hazardous Materials Regulations (HMR; 49 CFR Part 171-180). According to your letter, some of the samples are analyzed as part of a clinical study and some will be offered for transportation by aircraft. We have paraphrased your questions and answered them in the order you provided.

Q1. In a clinical study for diabetes, human immunodeficiency virus (HIV) testing is needed at the screening visit only to determine inclusion/exclusion criteria for a patient prior to entry into the study. Screening specimens obtained from this study's patients are being sent by aircraft for HIV testing. Should these specimens be classed and marked as a Category B infectious substance, utilize packaging prescribed in § 173.199, and be marked with the "UN 3373" identification number as prescribed in § 173.199(a)(5)?

A1. Yes. A human or animal specimen transported for routine testing to determine whether or not the sample contains an infectious substance is subject to the HMR and must be transported as a "UN 3373, Biological substance, Category B" infectious substance in accordance with the requirements prescribed in § 173.199. Please note, for liquid Category B shipments by aircraft, (1) the primary receptacle or the secondary packaging must be capable of withstanding without leakage an internal pressure producing a pressure differential of not less than 95 kPa (0.95 bar, 14 psi); (2) the maximum quantity contained in each primary receptacle, including any material used to stabilize or prevent degradation of the sample, may not exceed 1 L (34 ounces); and (3) the maximum quantity contained in each outer packaging, including any material used to stabilize or prevent degradation of the samples, may not exceed 4 L (1 gallon). This outer packaging limitation does not include the weight of ice, dry ice, or liquid nitrogen when used to maintain the integrity of the material. See § 173.199(b)(4) and (b)(5). Most domestic air carriers prefer shippers use the international requirements for transporting hazardous materials by aircraft that are prescribed in the International Civil Aviation Organization (ICAO) Technical Instructions for the Safe Transport of Dangerous Goods by Air, so your company should be aware of these requirements as well. Under the

provisions of §§ 171.22-171.24, the HMR give shippers and carriers the option of preparing shipments of hazardous materials offered or intended for transportation by aircraft in conformance with these instructions.

Q2. For specimens obtained from patients in a clinical study where the required patients are from a high-risk patient population (i.e., history of HIV or hepatitis), should specimens being sent by aircraft for testing always be sent as a Category B infectious substance in packagings prescribed in § 173.199 and marked with the "UN 3373" identification number as prescribed in § 173.199(a)(5), or would this be a violation of § 172.303(a), which prohibits marking a package as containing a hazardous material unless it contains the identified material or its residue?

A2. See answer A1. Human or animal specimens transported for routine testing to determine whether or not the samples contain an infectious substance are subject to the HMR. Note that the definition for a Division 6.2 material is a material that is known or reasonably expected to contain a pathogen. Therefore, marking a package containing a specimen that you reasonably expect contains a pathogen with the UN 3373 identification number would not be a violation of the prohibited marking requirements prescribed in § 172.303(a). In addition, the HMR permit materials for which the hazard class is uncertain and must be determined by testing to be assigned a tentative proper shipping name, hazard class, identification number, and packing group, if applicable, by the shipper based on his or her tentative determination, and transported for testing in conformance with § 172.101(c)(11). Thus, marking the package as meeting the Division 6.2 hazardous class in this instance would not violate § 173.199 or § 172.303(a).

Q3. In accordance with § 173.134(a)(3) and (a)(4), do diagnostic cultures for Herpes B need to be treated as a Category A infectious substance?

A3. No. Under § 173.134(a)(3), a "culture," defined as an infectious substance containing a pathogen that has been intentionally propagated, does not include a "patient specimen," as defined in § 173.134(a)(3), that is collected directly from humans or animals and transported for research, diagnosis, investigational activities, or disease treatment or prevention.

Q4. For batched shipments containing numerous different patient specimens shipped from a storage laboratory facility to another laboratory facility with no knowledge of the patients from whom the specimens were obtained, is it a violation of § 172.303(a) to mark these packages as a UN 3373 Category B infectious substance?

A4. See answer A2. If you tentatively determine that the patient specimens meet the definition in § 173.134(a)(1)(ii) for a Category B infectious substance, the specimens must be packaged in conformance with the requirements prescribed in § 173.199, and the proper shipping name "Biological substances, Category B" must be marked on the outside of the package along with the "UN 3373" diamond-shaped mark in letters that are at least 6 mm (0.24 inches) high. See § 173.199(a)(5).

Q5. If the personnel shipping the package from a clinical site have no direct knowledge of whether or not the specimens contain pathogens, is it a violation of § 172.303(a) to mark these packages as a UN 3373 Category B infectious substance?

A5. No. See answers A2 and A4.

Q6. Does the decision to mark a package as a Category B infectious substance or as an exempt human specimen need to be made on an individual specimen or shipment basis, or may it be made for a clinical study where the study sponsor medical personnel provide the professional judgment based on the included patient population?

A6. The classification decision for these samples may be made on an individual specimen, shipment, or study-wide basis with the professional medical judgment of the person determining the hazard classification and his or her knowledge of the hazards contained in the specimens. It is the shipper's responsibility to class and describe a hazardous material (see § 173.22). The employees determining the hazard class of these specimens are considered hazmat employees, as defined in § 171.8, and must be trained and tested by their hazmat employers in accordance with Subpart H of Part 172, and receive in-depth security training, if applicable, in accordance with Subpart I of Part 172.

I hope this satisfies your request.

Sincerely,

Edward T. Mazzullo

Edward T. Mazzullo
Director, Office of Hazardous
Materials Standards

Edmonson
§172.303
§173.134
Marking
09-0065

March 15, 2009

U.S. Department of Transportation
Pipeline and Hazardous Materials Safety Administration
1200 New Jersey Avenue, SE, PHH-50
Washington, DC 0590-0001

To Whom It May Concern:

I am writing to request written clarification regarding the following shipping situations:

1. In a clinical study for Diabetes, HIV testing is needed at the Screening Visit only to determine inclusion/exclusion criteria for a patient prior to entry into the study. Screening specimens obtained from this study's patients are being sent via air for HIV testing. Should these specimens be marked as Category B utilizing packaging marked UN 3373, or is this a violation of 49 CFR, 172.303 (a)?
2. For specimens obtained from patients in a clinical study where the required patients are from a high risk patient population (i.e. history of HIV or Hepatitis), should specimens being sent via air always be sent as Category B utilizing the packaging marked UN 3373, or is this a violation of 49 CFR, 172.303 (a)?
3. In accordance with 49 CFR 173.134(a)(3 and 4), do diagnostic cultures for Herpes B need to be treated as Category A Biologicals?
4. For batched shipments containing numerous different patients' specimens shipped from a storage laboratory facility to another laboratory facility with no knowledge of the patients from whom the specimens were obtained, is it in violation of 49 CFR, 172.303 (a) to mark these Category B, UN 3373?
5. If the personnel shipping the package from a clinical site have no direct knowledge of whether or not the specimens contain pathogens, is it in violation of 49 CFR, 172.303 (a) to mark these Category B, UN 3373?
6. Does the decision to mark a package as a Category B biological or an Exempt human specimen need to be made on an individual specimen or shipment basis, or can it be made for a clinical study where the study sponsor medical personnel provides the professional judgment based on the included patient population?

Thank you for the opportunity to submit this request for interpretation and I look forward to your response. I can be reached at 585-429-1961.

Regards,

Lisa Fotheringham
Director, Clinical Trials Support Operations
ACM Global Central Laboratory