



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

1200 New Jersey Ave., S.E.
Washington, DC 20590

DEC 11 2008

Ms. Tanya Jones
Alcor Life Extension Foundation
7895 E. Acoma Drive, #110
Scottsdale, AZ 85260

Ref. No. 08-0274

Dear Ms. Jones:

This responds to your October 20, 2008 email and subsequent telephone conversations with a member of my staff requesting clarification of the transport of corpses on dry ice under the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180).

You indicate that occasionally due to time constraints, morticians will ship by aircraft corpses on dry ice in quantities of less than five pounds in accordance with § 173.217. You point out this quantity of dry ice is not satisfactory for something the size of a human body. You request guidance for air shipment of corpses using adequate amounts of dry ice in specially designed containers (i.e., a Ziegler container) not exceeding 200 kg capacity.

When transported by aircraft, non-bulk quantities of dry ice used as a refrigerant must be transported in accordance with § 173.217. Dry ice in quantities greater than 5.5 pounds per package must be shipped as follows:

- Dry ice must be packed in packagings designed and constructed to permit the release of gas to prevent a buildup of pressure that could rupture the packagings.
- Packagings must conform to the general packaging requirements of Subpart B of Part 173 but are not required to conform to specification packaging requirements in Part 178.
- In addition to the proper shipping name and ID number marking requirements (e.g., "Dry ice," UN1845), the net mass of the dry ice must be marked on the package.
- The shipper must make arrangements with the operator of the air carrier for each shipment.
- The shipper must comply with shipping paper requirements; or must provide an alternative written document containing the following information: proper shipping name (Dry ice or Carbon dioxide, solid); Class 9; UN1845; the number of packages; and the net quantity of dry ice in each package. A shipper providing an

alternative written document with the above information is not subject to the emergency response information requirements in Subpart G of Part 172.

In addition to the listed requirements, the packaging must be labeled with a Class 9 label and employees performing a hazmat function associated with the transport of the dry ice are subject to the HMR and must be trained in accordance with Subpart H of Part 172.

I hope this information is helpful. Please contact us if you require additional assistance.

Sincerely,

A handwritten signature in black ink, appearing to read "Charles Betts". The signature is written in a cursive style with a large, looped initial "C".

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

Drakeford, Carolyn <PHMSA>

From: INFOCNTR <PHMSA>
Sent: Monday, October 20, 2008 4:04 PM
To: Drakeford, Carolyn <PHMSA>
Subject: FW: Shipment for human remains with dry ice

Der Kinderen
\$173.217
Dry Ice
08-0274

Carolyn,
A request for written interpretation.
Thanks,
Rob

-----Original Message-----

From: Hugh Hixon [mailto:hugh@alcor.org]
Sent: Monday, October 20, 2008 3:18 PM
To: INFOCNTR <PHMSA>; hugh@alcor.org
Cc: tanya@alcor.org
Subject: Shipment for human remains with dry ice

Mr. Edward T. Mazzullo
Director, Office of Hazardous Materials Standards U.S. DOT/PHMSA (PHH-10) 1200 New Jersey Avenue, SE East Building, 2nd Floor Washington, DC 20590

The Alcor Life Extension Foundation freezes people on the anticipation of the possibility of later revival <http://www.alcor.org/>

If the cryonic suspension patient dies away from the facility in Scottsdale, AZ, they are typically shipped on water ice to Scottsdale through normal mortuary channels for cryoprotective treatment prior to freezing.

Occasionally, time constraints require that the body be frozen on the spot to dry ice temperature and shipped to Scottsdale on dry ice. This is not normal mortuary practice, and we have had bodies shipped to us with no more than 5 lbs of dry ice, per \$173.217 Carbon dioxide, solid (dry ice), which is not satisfactory for something the size of a human body.

We would like a Hazmat Interpretation explaining best practices for shipping human remains on adequate amounts of dry ice which we can send to our cooperating mortician

Please address the Interpretation to:

Ms. Tanya Jones
CEO, Alcor Life Extension Foundation
7895 E. Acoma Dr., #110
Scottsdale, AZ 85260

Please telephone me if you have questions.

Sincerely,
Hugh Hixon
tel: 602-740-7022