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

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

FEB 18 2005

Mr. Samuel S. Elkind
Corporate Hazardous Materials
Compliance Manager
United Parcel Service
Corporate Compliance
55 Glenlake Parkway, NE
Atlanta, GA 30328

Ref. No. 04-0148

Dear Mr. Elkind:

This responds to your letter requesting clarification of the requirements for offering carbon dioxide, solid (dry ice) for transportation by aircraft under § 173.217(d) of the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180). Specifically, you ask whether a cargo compartment or bin that is loaded with a dry ice shipment exceeding 200 kg (440 pounds) may contain additional dry ice shipments, provided specific and special written arrangements are made between the shipper and the aircraft operator. I apologize for the delay in responding and any inconvenience that may have resulted.

The answer to your question is yes, provided certain conditions are met. The intent of the requirements in § 173.217(a) and (d) is that the initial air carrier must be made aware, through advance shipper-carrier arrangements, of the quantities of dry ice aboard the aircraft. Responsibility for stowage of dry ice is left up to the aircraft operator and is based on the specific aircraft type, the number of air changes per hour in the cargo compartment, the method of packing and stowing, whether animals are carried in the compartment and other factors. Current regulations do not prohibit an aircraft operator, based on the aircraft capability, from stowing additional dry ice shipments in the cargo compartment or bin.

Also you requested that we consider your letter as a petition for rulemaking. We earlier acknowledged receipt of your letter and assigned the number, P-1439. Please contact us if we can be of further assistance.

Sincerely,

Edward T. Mazzullo

Edward T. Mazzullo
Director
Office of Hazardous Materials Standards

173.217(d)

040148

Stevens
§173.217 (d)
Carbon Dioxide/Air
04-0148

Corporate Compliance
55 Glenlake Parkway, NE
Atlanta, GA 30328

March 31, 2004

By UPS Next Day Air

Mr. Edward Mazzullo
Director
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Research & Special Programs Administration
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Washington, DC 20590

Dockets Management System
U.S. Department of Transportation
Room PL 401
400 Seventh Street, SW
Washington, DC 20590
ATTN: Docket No. RSPA-02-11654 (HM-228)

Re: Dry Ice - 49 CFR 173.217(d) and Docket HM-228

Dear Mr. Mazzullo:

The purpose of this letter is to seek clarification, amendment, or deletion of a current DOT requirement applicable to certain shipments of dry ice. As one means of accomplishing this goal, please treat this letter as a late-filed comment regarding those requirements in the Advance Notice of Proposed Rulemaking in Docket HM-228. Copies of this letter have been sent directly to the Docket.

Background

UPS offers domestic hazardous materials transportation services for both ground and air customers in accordance with the U.S. DOT Hazardous Materials Regulations (HMR). It is in that context that we have encountered a need for clarification of existing requirements for dry ice that are addressed simultaneously to shippers and aircraft operators. As those requirements are contained within Part 173, they were not included in the questions raised by the Advance Notice of Proposed Rulemaking in Docket HM-228, which was devoted to the contents of Part 175.

Our concern is with 49 CFR 173.217(d), a requirement that has applicability to both shippers and aircraft operators:

> Not more that 200 kg (441 pounds) of solid carbon dioxide may be transported in any one cargo compartment or bin in any aircraft except by specific and special written arrangement between the shipper and the aircraft operator. [49 CFR 173.217(d)]

Concerns and Comments Related to the Current Regulation

We believe that the current requirement at 49 CFR 173.217(d) may no longer be relevant for three reasons.

(1) Air commerce has changed significantly in character since this section was first implemented in the HMR.

While the air carrier industry once featured a regulated route structure of trunk lines and smaller networks feeding the trunk-line carriers, many air carriers, including UPS, now deliver services through a hub-and-spoke network that dilutes the ability to specifically track dry ice loads in the way that may have been envisioned when § 173.217(d) was first promulgated. With a hub-and-spoke network, aircraft operators, including UPS, serve numerous airports by a network of flights that connect at one or more hub airports. While it is possible to apply the specificity implied in this section to the dry ice loads created at their point of first departure, matters become significantly more complex once those shipments have been sorted at an air hub and are reloaded for the next flight.

In seeking a clarification of § 173.217(d), we appeal to RSPA to advise whether, once a shipper has made specific arrangements to exceed the 200 kg limit, is there a compelling reason beyond the origin flight leg, to continue to maintain only those dry ice shipments from such customers in compartments or ULDs in which the limit is to be exceeded. We point out that the result of this requirement is more of an operational burden than a benefit to safety, since our procedures relate to FAA-approved aircraft dry ice capacity far above the 200 kg established by the section in question.

The lack of value from this 200 kg loading limit can be demonstrated if RSPA considers that beyond the initial flight, a customer's "approved-excessive" dry ice shipments (i.e., those for which specific written arrangements have been made) may be mingled with numerous other customers' dry ice shipments (see discussion below). Some of those other customers will also have made arrangements for exceeding the 200 kg limit per compartment, while others have not. As a result, the effort to control outbound loads from an air hub becomes extremely challenging, and perhaps, unnecessary.

(2) The current dry ice requirement has no parallel in the ICAO Technical Instructions.

Several years ago, ICAO removed the 200 kg limit to the loading of dry ice. We may infer from this deletion a recognition of limited relative safety impacts associated with the strict 200 kg limitation. In fact, we find that the Technical Instructions refer only to planning required according to the type of aircraft and cargo involved, a further recognition that capacity should vary based on aircraft type and other factors:

> Dry ice (carbon dioxide, solid) when shipped by itself or when used as a refrigerant for other commodities, may be carried provided the operator has made suitable arrangements dependent on the aircraft type, the aircraft ventilation rates, the method of packing and stowing, whether animals will be carried on the same flight and other factors. The operator must ensure that ground staff are informed that the dry ice is being loaded or is on board the aircraft. [ICAO 7; 2.11]

A reference in ICAO Packing Instruction 904 to arrangements between shipper and the aircraft operator is much less specific than § 173.217(d) and need not be written:

> Arrangements between shipper and operator(s) must be made for each shipment, to ensure that ventilation safety procedures are followed. [ICAO PI 904]

As a result, an unfair advantage exists for an aircraft operator who, for its own business reasons, opts to follow ICAO by exercising § 171.11, rather than accepting shipments prepared in accordance with the Part 172 and 173 requirements of the HMR. Were this shipper and carrier alternative unsafe, we assume that RSPA would have acted through amendments to § 171.11 or by filing appropriate U.S. State Variations -- or both. But the fact remains that RSPA has accepted the ICAO action and, while UPS has business reasons for continuing to adhere to the HMR for its domestic hazardous materials services, this provision stands out as needing explanation or clarification and eventual amendment.

(3) The current dry ice requirement may preclude the mixing of other customers' shipments.

In cases when a shipper may need to offer sufficiently large quantities of dry ice, such that quantities in excess of 200 kg per compartment would be required, advance written arrangements between the shipper and the accepting air carrier are needed in order to allow the quantity of dry ice to exceed 200 kg in a cargo compartment. UPS has interpreted this requirement also to apply to loads of dry ice in excess of 200 kg per aircraft ULD.

The language of the regulation implies a direct correlation between the shipper with whom those advance arrangements have been established and the packages loaded to a level in excess of 200 kg of dry ice per compartment or ULD. The words "except by specific and special written arrangement" seem to specify that no other customers' dry ice shipments are to be mingled with those for which arrangements have been made to exceed the dry ice limit of 200 kg. As a result of this specificity, it appears to us that when the dry ice in any one compartment or ULD exceeds 200 kg, it must be dry ice from a shipper with whom the aircraft operator has established the "specific and special written arrangement." In other words, when a compartment or ULD is loaded in excess of the 200 kg limit on dry ice, the requirement seems to preclude the mixing of other customers' dry ice shipments with those from a customer with whom the aircraft operator has established the written arrangements identified in this section.

Interim Guidance Request

UPS recognizes the current compliance requirement imposed by § 173.217(d). While this letter serves as a request to revise or delete this requirement as part of the ANPRM in Docket HM-228, UPS also seeks interim guidance on the application of the current requirement to the operations of UPS Airlines (UPSCO), to the extent it is affected by this rule

For these reasons, please advise whether RSPA intends to treat waivers from the 200 kg such that they must be treated with integrity, or whether UPS may create mixed loads in excess of 200 kg once we have made written arrangements with some of our customers. If it is RSPA's view that § 173.217(d) must be followed throughout an air carrier's system, in spite of the lack of safety benefit or parallel requirements elsewhere in the globe, we then ask whether UPS should seek an exemption from this regulation for the flight operations of UPSCO.

Conclusion

For the reasons stated above, we believe the requirements of § 173.217(d) are impractical for aircraft operators and yield no tangible safety benefit. Therefore, this section should be deleted through the process begun with Docket HM-228. In addition, we await RSPA's guidance as how to proceed with this requirement today.

Thank you for your prompt consideration to this matter. We look forward to your guidance.

Sincerely,

Samuel S. Elkind
Corporate Hazardous Materials
Compliance Manager