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**FIRE EQUIPMENT
MANUFACTURERS' ASSOCIATION, INC.**

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Executive Director:
THOMAS ASSOCIATES, INC.

January 17, 1994

U.S. DEPT. OF TRANSPORTATION

Administrator, RSPA
400 - 7th Street SW
Washington, DC

SUBJECT: Rulemaking Petition

Dear Sir:

The Fire Equipment Manufacturer's Association, FEMA, requests a revision to 49CFR 173.309(a)(2) which will allow extinguishers to be transported as "Fire Extinguishers, UN-1044" after being removed from their shipping carton. This issue was discussed at great length at a joint FEMA/NAFED/NFPA/DOT meeting held in the RSPA offices in Washington, DC on December 15, 1993. Our proposed revision is as follows:

173.309(a)(2) Each fire extinguisher must be shipped as an inner packaging, or otherwise secured to protect their valve from damage or prevent their overturning. Cylinders may be securely lashed in an upright position, loaded in racks securely attached to the motor vehicle, or loaded in a horizontal position.

The proposed wording is paraphrased from subpart B of part 177 (specifically 177.840[a][1]), which describes the safe handling requirements for cylinders of class 2 (gases) materials. Also, the proposed wording reflects the common methods of transporting extinguishers by a fire extinguisher service agency who removes them from their location and takes them back to a fully equipped maintenance/service facility for recharging, internal inspection, or hydrostatic testing.

The proposed wording will allow these extinguishers to continue to be described on shipping papers as Fire extinguishers, rather than the name of the extinguishant contained, or the pressurizing gas. We believe the simplicity of continuing to use the proper shipping name of fire extinguisher will greatly facilitate compliance with the law.

Our discussions on this issue at our December 15 meeting centered on two issues, one was the thickness of the cylinders themselves, and two was the method of valve protection. It was noted that the inner packaging is not a requirement for specification cylinders used as fire extinguishers (reference 173.309 [b]). It is interesting to note, however, that non-specification cylinders actually have a thicker sidewall than specification cylinders, at least for those less than six inches in diameter, and almost all hand portable extinguishers using DOT specification cylinders are less than six inches in diameter. The non-specification cylinders are required to have a test pressure of three times service pressure and a minimum burst of six times operating pressure as opposed to the 2X and 4X requirements for the 4 series of cylinders, thus the thicker sidewall.

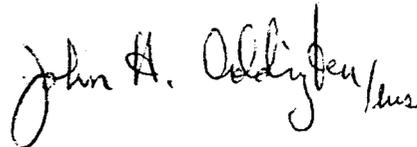
On the second issue, that of valve protection, there is no known requirement for valve protection on class 2 non-flammable gas cylinders. The only requirement known is that shown in 173.301(g) which refers only to "flammable, corrosive, or noxious gases." However, we do agree that proper consideration should always be given to valve protection of any compressed gas cylinder, but there are certainly more ways of accomplishing valve protection than shipping the cylinder (fire extinguisher) as an inside package. We believe our proposed wording adequately covers the alternative methods.

Also, it should be noted that the ANSI/UL requirements for fire extinguishers call for inverted drop tests on fire extinguisher valve bodies to ensure their safety. The requirement calls for a drop from a height of 3 feet onto the valve body. After the drop test the extinguisher and valve body are subjected to a hydrostatic test (reference section 34 of ANSI/UL-299). We believe that the design and safety standards for fire extinguisher valve bodies adequately address the levels of safety required for extreme rough usage of the equipment, even when they are not shipped as an inner package. In addition, all fire extinguishers have a safety pin mechanism which prevents accidental opening of the valve.

In summary, the proposed wording for 173.309(a)(2) will allow fire extinguishers with non-specification cylinders to be transported after being removed from their shipping carton as Fire extinguishers, UN-1044. This is consistent with the requirements for fire extinguishers using specification cylinders. Also, the exception for labeling and placarding for limited quantity fire extinguishers (those having operating pressures of less than 241 psig and a volume less than 1100 cubic inches) will continue for those being transported outside of a carton. We believe it was always the intent for the limited quantity waiver to be based on

pressure and volume, and not on the fact that an outside package is being used. The proposed wording allows the proper shipping name of fire extinguisher to be used after the extinguisher is removed from its shipping carton and is again transported for servicing, but still requires that adequate measures be taken to insure safe handling. We foresee no reduction in levels of safety by adopting the proposed wording for 173.309(a)(2).

Very truly yours,

A handwritten signature in cursive script that reads "John H. Addington".

JOHN H. ADDINGTON,
Executive Director

JHA/lms
fema