U.S. Department
of Transportation

**Pipeline and Hazardous
Materials Safety
Administration**

1200 New Jersey Avenue SE
Washington, DC 20590

FEB 1 6 2012

Mr. Frank Drayton
Fire Division Chief
650 Merchant Street
Vacaville, CA 95688

Ref. No. 11-0284

Dear Chief Drayton:

This responds to your November 15, 2011 and November 24, 2011 follow-up email concerning the requirements for cylinders under the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180). Specifically, you ask whether the HMR apply to DOT specification 3AA and 3AAX cylinders used by local fire departments for non-commercial purposes.

In accordance with Federal hazardous materials transportation law (49 U.S.C. 5101 et seq.), the HMR apply to the transportation of hazardous materials in commerce. Hazardous materials transported by a government entity in vehicles operated by government personnel for non-commercial purposes are not subject to the HMR. However, this provision may not fully except a government agency from the HMR. A cylinder manufactured and marked in accordance with the requirements established in the HMR must be maintained in accordance with applicable specification requirements whether or not it is in transportation in commerce at any particular time. If a government agency, such as a local fire department, uses cylinders marked in accordance with the HMR, the government agency is subject to the HMR relating to the maintenance and use of those cylinders.

I hope this information is helpful. If you have further questions, please contact this office.

Sincerely,

Ben Supko
Acting Chief, Standards Development
Standards and Rulemaking Division

Leary
§178.37
Cylinders
11-0284

N.C.F.M.A.

Northern California Fire Mechanics Association

Code of Federal Regulations
Code Compliance Section

Re: Cal-OSHA regulation negating DOT Regulation
California Fire Service Pressure Vessel compliance
DOT Inspection and Testing Standards

Petition for DOT regulations ruling

Sirs:

Historically, from the time the fire service first began the installation of pressurized breathing air cylinders on mobile fire apparatus, the fire service has utilized DOT classified pressure vessels (prior service was ICC certified pressure vessels). In some cases, where removal of cylinders was problematic, ASME bottles were utilized but created special mounting issues, substantial weight increases, and exorbitant costs. When legal issues arise and the fire service is subjected to court of law events, the fire service wins or loses cases predicated to whether the fire service complies with NFPA Standards, or not.

Recent issues in California have arisen revolving around whether pressurized mobile pressure vessels fall under Federal DOT/CFR regulations and compliance as is indicated in NFPA 1901, 2009 Edition, Section 24, et al, or not.

Cal-OSHA has stipulated that fines will be initiated if all mobile breathing air pressure vessels are not removed and replaced with ASME pressure vessels. They have taken this stance because they have a ruling from Federal DOT that DOT cylinders are not California compliant because Federal DOT is not responsible for DOT inspection, testing, and recertification requirements for DOT cylinders in non-commercial intrastate use. This determination is in direct conflict with the chapter and verse by which the fire service (both locally and nationally) designs and builds fire apparatus. The inference is that all DOT cylinders in use by the California fire service are not subject to DOT regulatory inspection, testing and recertification. This is completely contrary to the DOT Standard by which the California fire service has inspected, tested and recertified the extensive list of existing cylinders Statewide. To be able to purchase a fire apparatus that will meet mandates of the Laws, Regulations, and Standards, fire apparatus are designed and manufactured to meet NFPA 1901, 2009 Edition (current and past), Standard for Automotive Fire Apparatus. This is the Standard by which all members of the Fire Apparatus Manufacturers Association (FAMA) build fire apparatus. It is the litmus test by which court issues are decided.

To quote NFPA 1901, the following is the Standard by which we comply:
24.5.1 Transportable Air Tanks
24.5.1.1 Transportable air tanks shall comply with 49 CFR 178.37, "Specification 3AA and 3AAX seamless steel cylinders," or 29 CFR 1910.169, "Air Receivers."
24.5.1.2 The air tank manufacturer shall provide a copy of either the U.S. Department of Transportation (DOT) certificate Report of Inspection of Gas Cylinders or the ASME certificate Manufacturers Data Report for Pressure Vessels, and the certificate shall be delivered with the apparatus.

Because of this Standard, both ASME and DOT bottles are used in the fire service across the country.

By the CFR (Code of Federal Regulations)

(a) General qualification for use of cylinders. (See §§173.1 through 173.30 for requirements apply.)

(b) Grandfather clause. **A cylinder in domestic use previous to the date upon which the specification therefore was first made effective in these regulations may be used if the cylinder has been properly tested and otherwise complies with the requirements applicable for the gas with which it is charged.**

However, under NFPA 1901, a change since previous editions, in the Addenda section for mobile breathing air supply, it reads as follows:

A.24.5: In some states in the United States, the regulations of the Occupational Safety and Health Administration (OSHA) of the Department of Labor have been interpreted to require that DOT cylinders be used for mobile air tanks to transport air on state highways. If DOT cylinders are not required by state regulations, ASME cylinders should be utilized as air tanks if the design of the apparatus presents a severe difficulty in the removal of the cylinders for testing. (It is not a difficult task to remove the DOT bottles every 5 years for hydrostatic testing) The bottles are firmly attached to the vehicles with brackets manufactured by the apparatus builder and certified to perform the function as required.

Then, the question becomes.....What authorization or exemption has been given to Cal OSHA to transport charged ASME cylinders on the highways? I do not find any reference to ASME bottles listed as the approved cylinders for highway transportation while charged. The fire service MUST arrive on scene, fully prepared to fight fire and activate breathing air systems.

CCR: Subchapter 7. General Industry Safety Orders
Group 2. Safe Practices and Personal Protection
Article 10.1. Personal Protective Clothing and Equipment for Fire Fighters
§3409. Respiratory Protection.
(6) Air Cylinders. Approved self-contained compressed air breathing apparatus may be used with approved cylinders from other approved self-contained compressed air breathing apparatus provided that such cylinders are of the same capacity and pressure rating. **All compressed air cylinders used with self-contained breathing apparatus (SCBA) shall meet United States Department of Transportation (DOT) and NIOSH criteria.** The DOT standard for DOT cylinder hydrostatic testing eliminates the 10 year rule and mandates a 5 year hydro.

Please note that on aerial fire apparatus, when at the tip of an elevated ladder and when a firefighter's SCBA breathing air cylinder on his back (30, 45 or 60 minute cylinders) is depleted, the firefighter then connects his umbilical line to the on-board apparatus SCBA supply cylinders (244cf air capacity typical) which then becomes the SCBA life support breathing air supply.

A local fire department has complied with the Cal-OSHA ruling and changed out their 8 (eight) DOT rated bottles at their fire department at a cost of $28,000. Can you see the issue of the cost statewide? It will be in the $M's. In this single case it did result in a substantial weight increase for the associated mobile chassis. Luckily for this agency, it did not result in the need for a complete chassis replacement to meet CA Gross Vehicle Weight Ratings (GVWR). In many cases, it will result in not simply replacing the pressure vessels, but the mobile chassis as well or substantially reduce the quantity of live saving air due to the decrease in the numbers of pressurized vessels.

The best case scenario, especially in these times of critical monetary shortfalls, is to rule that all DOT classified pressure vessels/cylinders continue to be inspected, maintained, tested and re-certified to existing DOT standards and falls under the authority of Federal DOT. Following a yet to be determined date, all pressurized breathing air cylinders in use by California emergency services agencies will conform to Cal-OSHA Regulations, i.e. ASME pressure vessels.

Respectfully submitted,

Anthony D. Bulygo
California Fire Chief's Association
Safety Committee Member/Consultant

N.C.F.M.A.

Northern California Fire Mechanics Association

Code of Federal Regulations
Code Compliance Section

Re: Cal-OSHA regulation negating DOT Regulation
California Fire Service Pressure Vessel compliance
DOT Inspection and Testing Standards

Supplemental to White Letter of November 04, 2011

Sirs:

Cal-OSHA states that a safety issue exists whereby the absence of regulations in place for DOT pressure vessels in use by non-commercial end users is not acceptable. The absence of regulations for DOT pressure vessels requires that Cal-OSHA mandate the removal of DOT pressure vessels from use by the fire and emergency service agencies in California. Cal-OSHA states it has come to this conclusion following contact with Fed DOT which has stated to Cal-OSHA that Fed CFR mandates do not apply to non-commercial users. The end result of the Fed DOT statement is that Cal-OSHA has ruled that DOT pressure vessels in use by the Fire/Emergency services sector in California are unregulated and must be removed from service and replaced with ASME pressure vessels which are under the regulatory control of Cal-OSHA.

The California fire service does, in fact, stipulate that all pressure vessels must be maintained and tested regularly to regulatory standards.

In a recent meeting with Cal-OSHA officials, Mr. Don Cook, Principal Engineer, stated very plainly: If Fed DOT were to issue a letter to Cal-OPSHA stating that DOT pressure vessels in use by the Fire/Emergency Service services in California fall under the same guidelines and regulations as commercial users for inspection, maintenance and testing/recertification, the issue would go away. All of which leads to a single question to Fed DOT: Why would Fed DOT not mandate regulation of DOT pressure vessels in CA and why would Fed DOT not issue a letter stating that the appropriate CFR pertains to those DOT cylinders in use in this vocation?

California Fire Service desires to comply with any and all Laws, Regulations, and Standards in place for any safety issue. The fire service believes we have been doing the right thing and complying for the past 40 years. A letter to Cal-OSHA, assuring them that the DOT pressure vessels in use by the California Fire/Emergency services are, in fact, covered by CFR regulations.

Respectfully submitted,

Anthony D. Bulygo
California Fire Chief's Association
Safety Committee Member/Consultant

November 21, 2011