



U.S. Department  
of Transportation

**Pipeline and Hazardous  
Materials Safety  
Administration**

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

**JUN 25 2012**

Daniel H. Graves  
Fire Chief  
St. Pete Beach Fire Department  
7301 Gulf Boulevard  
St. Pete Beach, FL 33706

Ref. No.: 12-0091

Dear Chief Graves:

This responds to your March 14, 2012 letter regarding the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180) as they pertain to carbon fiber wrapped cylinders marked with Department of Transportation Exemption (DOT-E) 10915 (renamed special permit (SP) 10915). Cylinders manufactured under this special permit are limited to a fifteen (15) year service life.

Composite cylinders older than their authorized service life may have reduced strength without any visual indication of damage. At this time, there is no effective non-destructive method of detecting the degree of strength loss for a composite cylinder. We are aware of, and concerned about, the financial burden associated with limiting the service life of composite cylinders, but PHMSA must weigh this burden against the safety risk of a cylinder failure to firefighters and other users.

A service life extension approval may only be accommodated by modification of the special permit authorizing cylinder construction. Accordingly, no service life extension is authorized for cylinders manufactured in accordance with DOT-SP 10915. Therefore, once a cylinder marked DOT-E 10915 or DOT-SP 10915 has reached the end of its authorized service life, it must be condemned in accordance with § 180.205.

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

Sincerely,

Robert Benedict  
Chief, Standards Development  
Standards and Rulemaking Division



**FIRE DEPARTMENT**

7301 Gulf Boulevard, St. Pete Beach, Florida 33706  
727-363-9206 • Fax: 727-360-6744

March 14, 2012

Leary  
\$ 173,301  
Cylinders  
12-0091

T. Glen Foster  
Chief, Regulatory Review and Reinvention  
U.S. Department of Transportation  
East Building, Second Floor  
Mail Stop: E21-317  
1200 New Jersey Avenue, SE  
Washington, DC 20590

Dear Chief Foster:

The City of St. Pete Beach Fire Department purchased several MSA Stealth Self Contained Breathing Apparatus (SCBA) cylinders, which are carbon-wrapped cylinders that received all approvals in March of 1997. The cylinders were certified with a fifteen year life. However, during the certification process (according to the attached letter from MSA) "... the DOT wrote in their standard that in twelve (12) years the DOT would revisit the total service life issued and possibly increase the carbon-wrapped cylinders to another fifteen (15) years".

Because the City purchased cylinders manufactured in late 1997 and early 1998, they will come to the end of their certified life in the very near future. The City of St. Pete Beach like most US cities is suffering from significant revenue shortfalls and the \$55,000 needed to replace the bottles will be a hardship to the department and the citizens of St. Pete Beach.

With the aforementioned in mind I have a couple questions:

1. Has the DOT made a determination on extending the life of the carbon-wrapped cylinders? If so, please forward your determination.
2. If not, do you intend to do so?
3. What is the time frame for a decision?

An expedient response to this request is important as many of our cylinders will expire during this calendar year. You may contact me at 727-363-9206, at the address above or via email at [firechief@stpetebeach.org](mailto:firechief@stpetebeach.org). Thank you for your consideration.

Sincerely,

Daniel H. Graves,  
Fire Chief

**Mine Safety Appliances Company**  
**Safety Products Division**  
PO Box 426, Pittsburgh, PA 15230  
Phone: 1-888-421-8324 Fax: (412) 967-3059

May 18, 2000

Dear Valued Customer,

RE: Life of Composite and Carbon-Wrapped Cylinders

The Fiberglass-Wrapped and Kevlar-Wrapped Cylinders only have a 15-year life per the Department of Transportation (DOT). These cylinders need to be hydrotested every 3-years. If you have cylinders that will be expiring, you can purchase the cylinder kit less valve and reuse the valve that you have.

The MSA Stealth cylinders, which are carbon-wrapped cylinders, received all approvals in March of 1997. They currently have a 15-year life but the DOT wrote in their standards that in 12 years they would revisit the total service life issue and possibly increase the carbon-wrapped cylinders to another 15 years. The carbon cylinders previously had a 3-year hydrotest and they were recently extended to 5 years. Please see the enclosed letter that addresses the new hydrotesting requirements of the carbon cylinders

The Associate Administrator for Hazardous Materials (AAHMS) is the organization that would review the approval of the service life extension to a possible total of 30 years. This statement is found in the DOT-CFFC Basic Requirements (second revision).

For additional information on the DOT Regulations for all cylinders, a web site has been established by DOT. See <http://HAZMAT.DOT.GOV/EXSYS.HTM>, scroll to available Documents and Files, then to the exemptions for the cylinder in question.

Steel (3AA) and Aluminum (3AL) cylinders still have a 5-year hydrotest and unlimited shelf life as long as it passes the hydrotest and visual inspections.

Please call Customer Service at 1-800-672-2222 or our Technical Group Line at 1-888-421-8324 if you have any questions. If you are a Fire Department or Fire Service Distributor and have questions you can call toll free at 1-877-672-3473. Thank you for calling MSA!

Sincerely,

Lori L. Barsic  
Senior Customer Service Rep.