U.S. Department
of Transportation

**Pipeline and Hazardous
Materials Safety
Administration**

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

SEP 18 2014

Mr. Tom Sauta
Hydro-Test Products, Inc.
85 Hudson Road
Stow, MA 01775

Ref. No. 14-0112

Dear Mr. Sauta:

This responds to your April 15, 2014 letter requesting clarification of the cylinder pressure testing requirements under § 180.205(g) of the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180). Specifically, you request clarification of the required accuracy for the pressure gauges used with retest equipment in relation to § 180.205(g)(3)(i).

According to your letter, a representative of an approved Independent Inspection Agency has questioned the accuracy of the pressure gauges used with your retest equipment and whether it conforms to § 180.205(g)(3)(i). The representative claims the gauges cannot be used in the ranges you specify for purposes of HMR requalification because they do not meet the requirements of section 5.3.22 of Compressed Gas Association (CGA) Pamplet C-1, *Methods for Pressure Testing Compressed Gas Cylinders*, 10th Ed., July 2009. You disagree with the claim because you believe this section confuses readability and accuracy requirements and also because CGA Pamphlet C-1 is not specifically referenced for use under the HMR. You request confirmation that the calibration data for your equipment that is provided in your letter conforms to § 180.205(g)(3)(i) for the pressure gauges used in the pressure test under § 180.205(g); and that CGA Pamphlet C-1 is not an enforceable reference document under the HMR.

Based on the information provided in your letter, it is the opinion of this Office that the accuracy of the pressure gauges used with your retest equipment conforms to § 180.205(g), specifically, § 180.205(g)(3)(i). This provision requires that each day before retesting, the retester must confirm that the pressure-indicating device (i.e., the pressure gauge), as part of the retest equipment, is accurate within ±1.0% of the prescribed test pressure of any cylinder tested that day. The pressure gauge, itself, must be certified as having an accuracy of ±0.5%, or better, of its full range, and must permit readings of pressure from 90%-110% of the minimum prescribed test pressure of the cylinder to be tested. The accuracy of the pressure indicating device within the test system can be demonstrated at any point within 500 psig of the actual test pressure for test pressures at or above 3,000 psig, or 10% of the actual test pressure for test pressures below 3,000 psig.

Furthermore, your understanding regarding CGA Pamphlet C-1 is correct. The document is not incorporated by reference and, therefore, is not a material made part of the regulations

under the HMR and not enforceable. However, note that we have received and approved a petiton [P-1626] to incorporate by reference CGA Pamphlet C-1 in a future rulemaking.

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

Sincerely,

Dirk Der Kinderen
Acting Chief, Standards Development Branch
Standards and Rulemaking Division

Der Kinderen
3180.205(g)(3)(i)
Cylinders
14-0112

April 15, 2014

Mr. Charles E. Betts
Director, Standards and Rulemaking Division
U.S. DOT/PHMSA (PHH-10)
1200 New Jersey Avenue, SE East Building, 2nd Floor
Washington, DC 20590

Re: Request for written interpretation and clarification

Hydro-Test Products is a leading manufacturer of compressed gas cylinder re-qualification equipment since 1972. We have recently been questioned by one of your licensed Independent Inspectors about the accuracy of the pressure gauges that we currently utilize in our cylinder retest equipment and whether they confirm to CFR Title49 §180.205(g)(3)(i). The pressure gauges in question are dial gauges with the following attributes:

Ref#	Range (psi)	Increments(psi)	Manufactured Full range accuracy	Specific points (psi) calibrated to 0.5% accuracy(*)
A	0-1100	2.0	0.5%	100,200,350,400,500,600,700,800,900,1000
B	0-1500	2.0	0.25%	100,200,350,400,500,600,700,800,900,1000,1200,1400
C	0-5000	10.0	0.25%	500,1000,2000,3000,4000,5000
D	0-10,000	20.0	0.25%	1000,2000,3000,4000,5000,6000,7000,8000,9000,10,000

(*) We supply a calibration certificate showing the specific psi points of calibration and the accuracy at those points. The calibration is performed utilizing a digital gauge with an accuracy of 0.05% traceable to N.I.S.T. standards.

We utilize the pressure gauges for the following test range(s):

Gauge Ref#	Usable Test Range (incorporating the requirement to permit reading of 90-110% of test pressure)
A	111-1000 psi
B	111-1350 psi
C	550-4500 psi
D	1120-10,000 psi

The inspector in question is stating that these gauges cannot be used in the range that we specify because of the 2009 edition of the Compressed Gas Association pamphlet C-1 section 5.3.22. This section is inaccurate because it is confusing the readability and accuracy requirements and does not take into account the calibration at specific psi points. Furthermore, the CGA pamphlet C-1 is not cited as a required document under CFR Title49 §171.7 and should not be used as reference by an independent inspector or an enforcement inspector during an audit of a retest facility.

I am requesting that you review the above and confirm that our pressure gauges are in conformance with CFR Title49 §180.205(g)(3)(i) and that you are not condoning the use or reference of the C-1 pamphlet.

Thank you for your attention to this inquiry and I would appreciate an expedited reply.

Best regards,

Tom Sauta

Tom Sauta
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