



U.S. Department  
of Transportation

Pipeline and Hazardous  
Materials Safety  
Administration

1200 New Jersey Avenue S.E.  
Washington, DC 20590

APR 23 2012

Mr. Bradley D. Krantz  
V.P. of Laboratory Services  
Corrosion Testing Laboratories, Inc.  
60 Blue Hen Drive  
Newark, DE 19713

Ref. No. 11-0158

Dear Mr. Krantz:

This responds to your June 28, 2011 request for clarification on § 173.137(c)(2) of the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180). Specifically, you ask if you are to use only the corrosion rate criterion stated in § 173.137 for determining metal corrosivity or are you to use both the corrosion rate and the localized corrosion rate criteria of the UN Method.

You may use the UN Manual of Tests and Criteria or other equivalent methods. In a final rule published December 20, 2004 under Docket HM-215G (69 FR 76155), we revised the language in § 173.137 (c)(2) mandating the corrosion test in the UN Manual of Tests and Criteria as the only acceptable test method for determining the corrosivity of a material. That was not our intent. In a final rule published December 29, 2006 under Docket HM-215I (71 FR 78596), we revised the language in § 173.137(c)(2) to specify that corrosivity may be determined in accordance with methods described in the UN Manual of Tests and Criteria, as well as other equivalent methods, such as those described in ASTM G 31-72.

I hope this answers your inquiry. If you need additional assistance, please contact this office at (202) 366-8553.

Sincerely,

Ben Supko  
Acting Chief, Standards Development Branch  
Standards and Rulemaking Division



## Corrosion Testing Laboratories, Inc.

---

June 28, 2011

Charles Betts  
Division Director, Office of Hazardous Materials Standards  
U.S. DOT/PHMSA (PHH-10)  
East Building  
1200 New Jersey Avenue, SE  
Washington, DC 20590-0001

Boothe  
§173.137(c)(2)  
Packing Group  
11-0158

Dear Mr. Betts

I am writing to obtain your assistance with respect to the testing requirements described in 49 CFR 173.137 (c) (2), Class 8 – Assignment of packing group.


My request concerns the criteria to be used for the metal corrosion test. The CFR states a corrosion rate criterion (6.25 mm per year based on mass loss) but the referenced protocol, UN Manual of Tests and Criteria Part 37, states a corrosion rate (general, based on mass loss) *and* a localized corrosion (depth of pitting) criteria.

As an independent testing laboratory we have had the opportunity to perform a number of these tests. In 2005, when there was a change in the recommended test protocol from ASTM 31 to the UN Method, the CFR stated that the UN Method “must” be used. As such, we understood this to mean that the criteria of the UN Method (both general corrosion rate and pitting depth) were to be used as well. In 2007, one of my colleagues had an informal discussion with a representative of the DOT and he confirmed our interpretation that the localized corrosion criterion of the UN method is to be included along with the corrosion rate criterion when evaluating the test results.

Since then, the wording of paragraph (2) was changed to “The corrosion *may* be determined in accordance with the UN Manual of Tests and Criteria or other equivalent test methods” Are we to use only the corrosion rate criterion stated in 49 CFR 173.137 for determining metal corrosivity or are we to use both the corrosion rate *and* the localized corrosion rate criteria of the UN Method?

Any clarification you can provide will be greatly appreciated.

Sincerely,

  
Bradley D. Krantz  
V.P. of Laboratory Services

---

60 Blue Hen Drive, Newark, DE 19713 USA  
(302) 454-8200 • fax (302) 454-8204 • e-mail [ctl@corrosionlab.com](mailto:ctl@corrosionlab.com)  
a Subsidiary of **Corrosion Probe, Inc.**  
12 INDUSTRIAL PARK ROAD • P.O. BOX 178 • CENTERBROOK, CT 06409-0178  
PHONE: (860) 767-4402 • FAX: (860) 767-4407 [www.cpiengineering.com](http://www.cpiengineering.com)