



U.S. Department  
of Transportation

**Pipeline and Hazardous  
Materials Safety  
Administration**

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

**MAY 24 2011**

Mr. David W. Merte, P.E.  
Central Hudson Gas & Electric Corp.  
284 South Avenue  
Poughkeepsie, NY 12601

Dear Mr. Merte:

In a letter to the Pipeline and Hazardous Materials Safety Administration (PHMSA) dated September 27, 2010, you stated that the technical note you provided to PHMSA in support of your initial March 22, 2010, interpretation request concerning the exposure of polyethylene (PE) pipe to ultraviolet light did not specify a reference to the 1999 version of the American Society for Testing of Materials (ASTM) D-2513. You provided supplementary information from the manufacturer to show that the technical note does refer to the 1999 version of ASTM D-2513 and you expressed the view that there is no measureable change in pipe performance properties after over four years of outdoor exposure. Therefore, you believe storage of Driscopipe 8100 series pipe for up to four years of outdoor exposure would comply with the 49 CFR Part 192 requirements.

After examining your latest information, we still believe that you have not demonstrated that this specific PE pipe meets the ASTM D-2513-99 requirements after stored outdoors unprotected for over two years. Section A1.5.7 of ASTM D-2513-99 states:

*Outdoor Storage Stability*—PE pipe stored outdoors and unprotected for at least two years from date of manufacture shall meet **all** the requirements of this specification. PE pipe stored outdoors for over two years from date of manufacture is suitable for use if it meets the requirements of this specification.

We acknowledge that Technical Note PP839-TN contains three graphs of manufacturer's test data on pages 2 and 3. In order to use PE pipe that has been stored outdoors and unprotected for over two years from date of manufacture, however, you must go beyond providing general test data from the manufacturer. You must test the actual pipe that you have been storing for **all** of ASTM D-2513-99 requirements and provide the full results of this testing to PHMSA. In the absence of test results from testing of the actual pipe that you have stored, the use of your PE pipe that has been stored outdoors unprotected in excess of the two-year limit would not comply with the 49 CFR Part 192 requirements.

I hope that this information is helpful to you. If I can be of further assistance, please contact me at (202) 366-4046.

Sincerely,

A handwritten signature in black ink, appearing to read "John A. Gale", is written over the typed name and title.

John A. Gale  
Director, Division of  
Standards and Rulemaking

OCT 12 2010



Mr. John A. Gale  
Director – Office of Regulations  
U.S. Department of Transportation  
Pipeline and Hazardous Materials Safety Administration  
1200 New Jersey Avenue, S.E.  
Washington, D.C. 20590

Dear Mr. Gale:

I would like to thank you for your recent response to my letter of March 22, 2010, with reference to the outdoor storage of Driscopipe 8100 series plastic pipe.

The technical note I provided to you (Technical Note PP 839-TN attached) did not specify a reference to the 1999 version of ASTM D-2513. I have enclosed supplementary information provided by the manufacturer (Performance Pipe) indicating that this technical note does refer to the 1999 version of ASTM D2513 and that there is no measurable change in pipe performance properties after over four years of outdoor exposure.

In lieu of this additional information, I believe storage of Driscopipe 8100 series pipe for up to four years of outdoor exposure would comply with 49 CFR Part 192 requirements. Please advise me if your original interpretation is altered based on this new information. Thanking you in advance for your time and consideration with respect to this matter.



David W. Merte, P.E.  
Section Leader –Gas System Safety & Pipeline Integrity

Attachments-Performance Pipe Letter & Technical Note PP 839-TN  
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September 27, 2010

**David W. Merte, P.E.**

Section Leader - Gas System Safety and Pipeline Integrity  
Central Hudson Gas & Electric Corporation  
Poughkeepsie, New York, 12601

RE: Outdoor Storage of Polyethylene Pipe

Dear Mr. Merte:

This letter is to clarify Performance Pipe Technical Note PP839, "Outdoor Storage Limits of Performance Pipe Gas Distribution Pipe Products". The first paragraph is in fact referring to ASTM D2513-99 and may be read as follows:

"Performance Pipe polyethylene gas distribution piping products are protected from UV effects and outdoor exposure to ensure pipe performance requirements are maintained. ASTM D2513-99 requires that all polyethylene gas pipes produced to the standard must be able to withstand a minimum of 2 years outdoor storage without affecting the pipe's ability to meet the requirements of the standard. ASTM D2513-99 allows outdoor storage times in excess of 2 years where the manufacturer has shown that the pipe performance properties are not affected by the extended outdoor storage time."

Technical Note PP839 reports on accelerated laboratory weathering tests of yellow polyethylene pipe materials. The testing confirms that there is no measurable change in pipe performance properties after over four years of outdoor exposure.

Thank you for your use of Performance Pipe products. If you would like further assistance, please call.

Sincerely,

Larry J. Petroff

**Technical Information.** By using any Technical Information contained herein, Recipient agrees that said Technical Information is given by Performance Pipe for convenience only, without any warranty or guarantee of any kind, and is accepted and used at your sole risk. Recipients are encouraged to verify independently any such information to their reasonable satisfaction. As used in this paragraph, "Technical Information" includes any technical advice, recommendations, testing, or analysis, including, without limitation, information as it may relate to the selection of a product for a specific use and application.

## Technical Note PP 839-TN

### Weatherability

### Outdoor Storage Limits of Performance Pipe

### Gas Distribution Pipe Products

Performance Pipe polyethylene gas distribution piping products are protected from UV effects and outdoor exposure to ensure pipe performance requirements are maintained. ASTM D2513 requires that all polyethylene gas pipes produced to the standard must be able to withstand a minimum of 2 years outdoor storage without affecting the pipe's ability to meet the requirements of the standard. ASTM D2513 allows outdoor storage times in excess of 2 years where the manufacturer has shown that the pipe performance properties are not affected by the extended outdoor storage time.<sup>1</sup>

#### Yellow Pipes

Yellow pipes, such as Driscopipe® 8100 and DriscoPlex® 6500, are protected against outdoor exposure through additive formulations. Accelerated laboratory weathering tests were conducted on the formulations that predict the yellow pipe materials are protected sufficiently to provide a service life of at least four years in outdoor exposure conditions. The accelerated tests measure changes in the tensile properties of the polyethylene materials after exposure to high levels of UV and humidity. Performance Pipe also conducts actual field pipe exposure tests to confirm the accelerated laboratory weathering test predictions. At periodic time intervals the field exposed pipe samples are tested for melt flow (ASTM D1238 condition 190/2.16), hoop stress/ring tensile (ASTM D1598/ASTM D2290), and ESCR (ASTM D1693, condition C). The test data confirm that there is no measurable change in pipe performance properties after over four years of outdoor exposure. A summary of the test data is attached.

NOTICE. This publication is for informational purposes and is intended for use as a reference guide. It should not be used in place of the advice of a professional engineer. This publication does not contain or confer any warranty or guarantee of any kind. Performance Pipe has made every reasonable effort towards the accuracy of the information contained in this publication, but it may not provide all necessary information, particularly with respect to special or unusual applications. This publication may be changed from time to time without notice. Contact Performance Pipe to ensure that you have the most current edition.

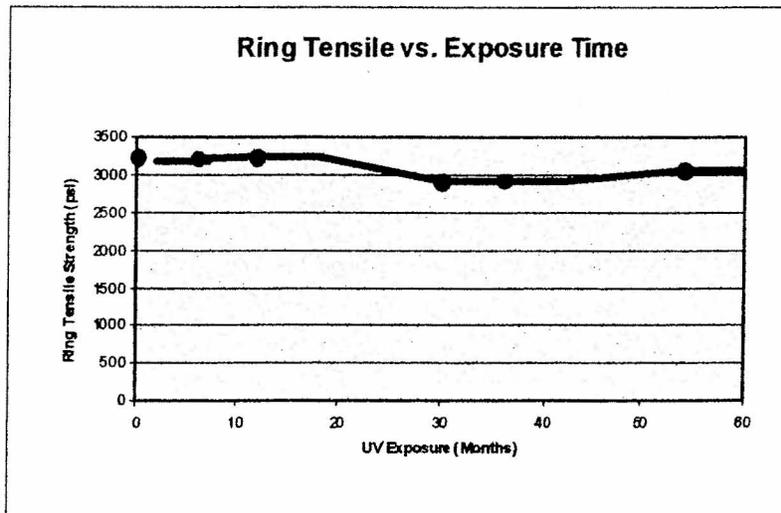
<sup>1</sup> ASTM D2513-04a Section A.1.5.7 Outdoor Storage Stability

## Black Pipes

For black pipes, such as Yellowstripe® 8300, the presence of a minimum of 2% carbon black properly dispersed in the polyethylene piping material provides long term protection from the potentially damaging affects of UV and outdoor exposure. 'Weathering studies have shown that pipe produced with a minimum 2.0% concentration of finely divided and evenly dispersed carbon black is protected from the harmful effects of UV radiation for indefinite periods of time.'<sup>2</sup> Field experience of piping materials containing a minimum of 2% carbon black confirms that pipe performance does not deteriorate after extended years of service in selected outdoor exposure.

Based on the tests conducted, Performance Pipe provides the following specific outdoor storage recommendations for the Performance Pipe gas distribution piping products.

- DriscoPlex® 6500                      4 years
- Driscopipe® 8100                      4 years
- Yellowstripe® 8300                    10 years



<sup>2</sup> Plastic Pipe Institute 'Handbook of Polyethylene Pipe' Chapter 8, *Above Ground Applications*

