



U.S. Department
of Transportation

**Pipeline and
Hazardous Materials
Safety Administration**

840 Bear Tavern Road, Suite 300
West Trenton, NJ 08628
609.771.7800

WARNING LETTER

OVERNIGHT EXPRESS DELIVERY

February 8, 2022

Mr. Paul Ruppert
President and Chief Executive Officer
Eastern Gas Transmission and Storage, Inc.
6603 West Broad Street
Richmond, Virginia 23200

CPF 1-2022-011-WL

Dear Mr. Ruppert:

From October 24, 2020 – October 28, 2021, a representative of the Pipeline and Hazardous Materials Safety Administration (PHMSA) pursuant to Chapter 601 of 49 United States Code (U.S.C.) inspected Eastern Gas Transmission and Storage, Inc.'s (EGTS) records and procedures for PHMSA inspection units located in Clinton County, PA to Center County, PA; Juniata County, PA to Loudoun County, VA; and Loudoun County, VA, to Calvert County, MD.

As a result of the inspection, it is alleged that you have committed a probable violation of the Pipeline Safety Regulations, Title 49, Code of Federal Regulations (CFR). The item inspected and the probable violation is:

1. **§ 192.461 External corrosion control: Protective coating.**
 - (a) **Each external protective coating, whether conductive or insulating, applied for the purpose of external corrosion control must –**
 - (1) ...
 - (2) **Have sufficient adhesion to the metal surface to effectively resist underfilm migration of moisture.**

ETGS failed to ensure the external coating on their PL-1x2 pipeline has sufficient adhesion to the metal surface to effectively resist under film migration of moisture in accordance with § 192.461(a)(2).

During the inspection, EGTS provided records that reflected that coating disbondments, in the form of osmotic blisters, are present on portions of their Fusion Bond Epoxy (FBE) coated PL-1x2 pipeline. PL-1x2 is a 24" diameter pipeline, approximately 80 miles in length, and installed in 2008. The Maximum Allowable Operating Pressure varies between 1454psig and 1250 psig. The PL-1x2 pipeline is located in classes 1 through 3, with portions in an HCA, and is non-odorized. The pipeline runs from Leidy Compressor Station in Clinton County, PA to the Centre Compressor Station in Centre County, PA. All 80 miles of PL-1x2 were under the same pipe specifications and procedures for the mill coating process.

The Association for Materials Protection and Performance (AMPP) (formerly NACE) website references a 2019 publication *Blister Initiation Mechanism of FBE Coatings* which states in part, "FBE coating blistering is a common failure mode" and "Osmotic pressure is from the residual soluble salts on steel surface".

EGTS stated that they have not conducted a root cause analysis for the osmotic blisters; however, they have reviewed industry documents on the subject and have revised their procedures to help prevent future FBE coating blisters from occurring. EGTS stated that they have made revisions to their *Mill Applied External Fusion Bond Coating* specifications and the *Quality Control Inspection Task for Fusion Bonded Epoxy* procedures.

Records reflected that EGTS has monitored the blistered pipeline and has replaced sections of the blistered pipe in an HCA area. However, with blisters present and possible future blisters developing on this pipe, timely and/or additional monitoring may be needed by EGTS to ensure conditions for corrosion are not present and appropriate mitigation is performed.

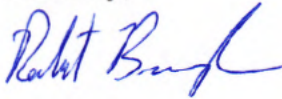
Based on the osmotic blisters appearing under the FBE on the PL-1x2 pipe, EGTS failed to ensure that coating applied to their PL-1x2 pipeline had sufficient adhesion to the metal surface to effectively resist under film migration of moisture in accordance with § 192.461(a)(2).

Under 49 U.S.C. § 60122 and 49 CFR § 190.223, you are subject to a civil penalty not to exceed \$225,134 per violation per day the violation persists, up to a maximum of \$2,251,334 for a related series of violations. For violation occurring on or after January 11, 2021 and before May 3, 2021, the maximum penalty may not exceed \$222,504 per violation per day the violation persists, up to a maximum of \$2,225,034 for a related series of violations. For violation occurring on or after July 31, 2019 and before January 11, 2021, the maximum penalty may not exceed \$218,647 per violation per day the violation persists, up to a maximum of \$2,186,465 for a related series of violations. For violation occurring on or after November 27, 2018 and before July 31, 2019, the maximum penalty may not exceed \$213,268 per violation per day, with a maximum penalty not to exceed \$2,132,679. For violation occurring on or after November 2, 2015 and before November 27, 2018, the maximum penalty may not exceed \$209,002 per violation per day, with a maximum penalty not to exceed \$2,090,022.

We have reviewed the circumstances and supporting documents involved in this case and have decided not to conduct additional enforcement action or penalty assessment proceedings at this time. We advise you to correct the item identified in this letter. Failure to do so will result in Eastern Gas Transmission and Storage, Inc. being subject to additional enforcement action.

No reply to this letter is required. If you choose to reply, in your correspondence please refer to **CPF 1-2022-011-WL**. Be advised that all material you submit in response to this enforcement action is subject to being made publicly available. If you believe that any portion of your responsive material qualifies for confidential treatment under 5 U.S.C. 552(b), along with the complete original document you must provide a second copy of the document with the portions you believe qualify for confidential treatment redacted and an explanation of why you believe the redacted information qualifies for confidential treatment under 5 U.S.C. 552(b).

Sincerely,

A handwritten signature in blue ink, appearing to read "Robert Burrough".

Robert Burrough
Director, Eastern Region, Office of Pipeline Safety
Pipeline and Hazardous Materials Safety Administration