



U.S. Department
of Transportation

**Pipeline and
Hazardous Materials
Safety Administration**

820 Bear Tavern Road, Suite 103
West Trenton, NJ 08628
609.771.7800

**NOTICE OF PROBABLE VIOLATION
and
PROPOSED COMPLIANCE ORDER**

OVERNIGHT EXPRESS DELIVERY

November 24, 2017

Mr. Mark Cluff
VP Safety & Operational Discipline
Transcontinental Gas Pipeline Company
One William Center
Tulsa, OK 74172

CPF 1-2017-1017

Dear Mr. Cluff:

On the following dates, July 11-15, 2016; September 6-9, 2016; September 26-30, 2016; October 11-14, 2016; representatives of the Pipeline and Hazardous Materials Safety Administration (PHMSA) pursuant to Chapter 601 of 49 United States Code (U.S.C.) inspected portions of Transcontinental Gas Pipeline Company's (Transco) facilities located in Virginia, Pennsylvania and New Jersey.

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

- 1. § 192.731 Compressor Stations: Inspection and testing of relief devices.**
 - (a) Except for rupture discs, each pressure relieving device in a compressor station must be inspected and tested in accordance with §§192.739 and 192.743, and must be operated periodically to determine that it opens at the correct set pressure.**

Transco failed to inspect and test each pressure relieving device in a compressor station in accordance with §192.743. Specifically, Transco failed to determine if 9 relief devices located in compressor stations were adequate from the standpoint of capacity, by not considering the magnitude of built-up backpressure in the capacity calculations required under §192.743.

Section 192.743 states in part:

“(a) Pressure relief devices at pressure limiting stations and pressure regulating stations must have sufficient capacity to protect the facilities to which they are connected. Except as provided in §192.739(b), the capacity must be consistent with the pressure limits of §192.201(a). This capacity must be determined at intervals not exceeding 15 months, but at least once each calendar year, by testing the devices in place or by review and calculations.

(b) If review and calculations are used to determine if a device has sufficient capacity, the calculated capacity must be compared with the rated or experimentally determined relieving capacity of the device for the conditions under which it operates. After the initial calculations, subsequent calculations need not be made if the annual review documents that parameters have not changed to cause the rated or experimentally determined relieving capacity to be insufficient.”

Williams WGP Design Manual, *Volume 849 – Measurement and Regulation, Specification for Flow Control, Pressure Regulation and Overpressure Protection*, Revision 5, includes API RP 520 Part 1, 7th Edition, January 2000 (RP 520 7th) as a Referenced standard. RP 520 7th, Section 3.3.1.3 states “Back pressure which develops in the discharge system after the pressure relief valve opens is defined as built-up back pressure. Built-up back pressure occurs due to pressure drop in the discharge system as a result of flow from the pressure relief valve. Short tailpipes that vent directly to the atmosphere typically result in lower built up backpressures than long discharge systems. However, choked flow can occur at the outlet of even short tailpipes vented directly to atmosphere, resulting in a high built-up back pressure. For this reason, the magnitude of the built-up back pressure should be evaluated for all systems, regardless of the outlet piping configuration.”

During the inspection, the PHMSA inspector requested records for capacity calculations of certain relief devices at compressor stations for 2013 through 2015. The PHMSA inspector reviewed capacity calculations for nine relief valves located at Stations 165, 200, 505 and 515. The records indicated that Transco utilized the relief valve capacity equations from RP 520 7th or the prior 6th Edition, March 1993, to determine the capacity of the relief devices, while assuming back pressure to be negligible. The PHMSA inspector also noted that the records all state “No” in response to the form question: “Is there a restriction downstream causing back pressure?”

The PHMSA inspector requested additional information from Transco on backpressure calculations in an email dated November 23, 2016. Transco responded via email on November 30, 2016, stating:

1. *In the past, the tail pipe calculation was not done.*
2. *More recently, again with no restriction, 10% backpressure was being used in the relief valve calculation. Now, the tailpipe will be modeled for backpressure and used in relief valve capacity calculation.*
3. *The short explanation – when there was no tailpipe restriction in the past, no additional evaluation was performed.*

Therefore, Transco failed to consider built-up back pressure in the capacity calculations on nine relief valves located at compressor stations, as RP 520 7th, Section 3.3.1.3 requires the magnitude of the built-up back pressure to be evaluated for all systems, regardless of outlet piping configurations.

Proposed Compliance Order

Under 49 U.S.C. § 60122 and 49 CFR § 190.223, you are subject to a civil penalty not to exceed \$209,002 per violation per day the violation persists up to a maximum of \$2,090,022 for a related series of violations.

We have reviewed the circumstances and supporting documents involved in this case, and have decided not to propose a civil penalty assessment at this time.

With respect to Item 1, pursuant to 49 U.S.C. § 60118, the Pipeline and Hazardous Materials Safety Administration proposes to issue a Compliance Order to Williams Transco. Please refer to the *Proposed Compliance Order*, which is enclosed and made a part of this Notice.

Response to this Notice

Enclosed as part of this Notice is a document entitled *Response Options for Pipeline Operators in Compliance Proceedings*. Please refer to this document and note the response options. 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).

Following the receipt of this Notice, you have 30 days to submit written comments, or request a hearing under 49 CFR § 190.211. If you do not respond within 30 days of receipt of this Notice, this constitutes a waiver of your right to contest the allegations in this Notice and authorizes the Associate Administrator for Pipeline Safety to find facts as alleged in this Notice without further notice to you and to issue a Final Order. If you are responding to this Notice, we propose that you submit your correspondence to my office within 30 days from receipt of this Notice. This period may be extended by written request for good cause.

Please submit all correspondence in this matter to Robert Burrough, Acting Director, PHMSA Eastern Region, 820 Bear Tavern Road, Suite 103, West Trenton, NJ 08628. Please refer to **CPF 1- 2017-1017** on each document you submit, and whenever possible provide a signed PDF copy in electronic format. Smaller files may be emailed to robert.burrough@dot.gov. Larger files should be sent on a CD accompanied by the original paper copy to the Eastern Region Office.

Additionally, if you choose to respond to this (or any other case), please ensure that any response letter pertains solely to one CPF case number.

Sincerely,



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

Enclosures: *Proposed Compliance Order*
Response Options for Pipeline Operators in Compliance Proceedings

PROPOSED COMPLIANCE ORDER

Pursuant to 49 U.S.C. § 60118, the Pipeline and Hazardous Materials Safety Administration (PHMSA) proposes to issue to Transcontinental Gas Pipeline Company (Transco) a Compliance Order incorporating the following remedial requirements to ensure the compliance of Transco with the pipeline safety regulations:

1. In regard to Item 1 of the Notice pertaining to Transco's failure to determine if each pressure relief device in a compressor station is adequate from the standpoint of capacity pursuant to §192.743(a), Transco must complete relief valve capacity calculations for all DOT relief devices in compressor stations within the "Williams North" inspection system (South Carolina to New York), with vent piping and the magnitude of built-up back pressure considered. This shall be accomplished within 120 days of receipt of the Final Order.
2. Transco must provide PHMSA a spreadsheet or report summarizing the data from the calculations performed in Item 1, and including identification of any relief devices that are determined to have inadequate capacity. This shall be provided within 120 days of receipt of the Final Order.
3. Transco must remediate or replace any devices that were determined to be inadequate by the calculations in Item 1 above within 180 days of receipt of the Final Order.
4. All documentation demonstrating compliance with PCO items above must be submitted to the Acting Director, Eastern Region, Pipeline and Hazardous Materials Safety Administration, 820 Bear Tavern Road, Suite 103, West Trenton, New Jersey 08628; for review within the time frames stated for each item.
5. It is requested (not mandated) that Transco maintain documentation of the safety improvement costs associated with fulfilling this Compliance Order and submit the total to Robert Burrough, Acting Director, Eastern Region, Pipeline and Hazardous Materials Safety Administration. It is requested that these costs be reported in two categories: 1) total cost associated with preparation/revision of plans, procedures, studies and analyses, and 2) total cost associated with replacements, additions and other changes to pipeline infrastructure.