Before the
U.S. Department of Transportation
Pipeline and Hazardous Materials Safety Administration
Office of Pipeline Safety

In the Matter of

Tennessee Gas Pipeline Company, L.L.C.

Respondent.

CPF No. 4-2016-1004
Notice of Probable Violation

RESPONDENT’S
POST-HEARING WRITTEN SUBMITTAL
I. Introduction

The Associate Administrator of the Pipeline and Hazardous Materials Safety Administration (PHMSA or the Agency), Office of Pipeline Safety (OPS), issued a Notice of Probable Violation (NOPV) dated June 13, 2016, which included a Proposed Civil Penalty and Proposed Compliance Order, to the Tennessee Gas Pipeline Company, LLC (TGP or the Company). The NOPV alleges nine (9) violations of the federal pipeline safety regulations, proposes a civil penalty of one hundred and twenty thousand and five hundred dollars ($120,500) for Items 1 and 7, and proposes a compliance order outlining four (4) mandatory actions.

TGP timely requested an administrative hearing on Item 9 of the NOPV, the proposed civil penalty, and portions of the associated compliance order. A Hearing was held on December 14, 2016. The Hearing Officer allowed TGP until January 23, 2017, to submit a post-hearing brief, thus this submittal is timely. The issues in this matter are limited to whether TGP complied with requirements under 49 C.F.R. § 192.937(b) to continually evaluate the pipeline for integrity risks, whether the proposed civil penalty should be reduced or withdrawn, and whether PHMSA’s Proposed Compliance Order Item 4 should be withdrawn and/or the entire Proposed Compliance Order closed out as satisfied.

II. The Agency’s Allegation under 192.937(b) is Misplaced and No Basis for a Violation Exists

TGP complied with the continual evaluation requirements at 49 C.F.R. § 192.937(b) by conducting annual reviews of its high consequence area (HCA) segments that considered, among other things, preventive and mitigative (P&M) measures, to assure the integrity of each covered segment. PHMSA alleges that TGP violated 49 C.F.R. § 192.937(b) by failing to reevaluate the need for remote controlled valves (RCVs) and automatic shut off valves (ASVs) in light of changes to HCAs that occurred after 2007.

A. Part 192.937(b) Does Not Require Reevaluation of One-time RCV and ASV Determinations

The regulation requires an operator to conduct a “periodic evaluation as frequently as needed to assure the integrity of each covered segment.” 49 C.F.R. § 192.937(b). In addition, operators are required to use the results to identify the threats to the covered segment and the risk represented by those threats, considering various factors. Id. These factors include the results of prior integrity assessments, data integration and risk assessment information, and “decisions about remediation and additional preventive and mitigative measures.” Id.

The integrity management rules are founded on the premise that every operator’s system is different and their IMP programs should allow for the application of the judgment of an operators’ subject matter experts to apply the risk analysis and determine the most appropriate and effective P&M measures. See e.g., PHMSA Final Rule, 68 Fed. Reg. 69778, 69790 (Dec. 15, 2003) (explaining that the Agency “recognizes that practices applicable at one operator might not be as useful or effective at another”); PHMSA Gas IM FAQ 168 (8/17/2004) (“The [risk assessment] approach that is appropriate for an individual operator will often be driven by
circumstances specific to that operator, including the size, complexity of their system, and the expertise/experience of their personnel."). In contrast to this philosophy, PHMSA’s position in this matter appears to be designed to drive operators to install RCVs and ASVs even where they do not provide an efficient means to add protection to an HCA in the event of a release. Not only is such a position contrary to the basic premise of the Agency’s IMP program, it is also nonsensical and conflicts with PHMSA regulations.

Part 192.937(b) does not require an operator to reevaluate its separate one-time determination regarding the need for RCVs and ASVs pursuant to 49 C.F.R. § 192.935(c), much less set forth a timeframe for doing so. Further, under 49 C.F.R. § 192.935(c) — notably not alleged in the NOPV — operators must determine whether ASVs and RCVs would be an efficient means of protecting an HCA and where they are not, they are not required and there is no requirement to update that determination.

PHMSA conflates two separate and independent regulatory requirements to allege a violation under NOPV Item 9, without support in the regulations, guidance, or prior enforcement.

B. TGP Complied with 192.937(b)

In compliance with § 192.937(b), TGP conducts annual reviews of every HCA segment to consider the identified threats, risk assessment information, and decisions about remediation and preventive and mitigative measures, including whether ASVs and RCVs have been installed. This review incorporates new information such as changes to HCAs, and makes recommendations where necessary to assure the integrity of the HCA. See e.g., Pre-Hearing Exhibit 4, Abbreviated TGP Annual P&M Review (2014). At the hearing, PHMSA was unable to articulate a clear reason why this annual review is insufficient under § 192.937(b), and there is no enforcement or guidance that supports PHMSA’s interpretation.

Pursuant to 192.935(c), TGP performed a study in 2007 which concluded that the application of ASVs and RCVs would not provide an efficient means to add protection to an HCA in the event of a gas release. See e.g., Pre-Hearing Exhibit 5, Automatic Shut-Off and Remote Controlled Valves Study and Conclusions (2007). No changes have since occurred to the TGP system that impacted the conclusion of that study. Although there is no requirement to update the study, TGP performed it again in November of 2016, including updating the industry studies and research performed since 2007, and the conclusion remained the same. See e.g., Pre-Hearing Exhibit 6, Automatic Shut-Off and Remote Controlled Valves Study and Conclusions (2016).

Industry studies have demonstrated that ASVs and RCVs do not provide swift enough response to minimize damage from a pipeline rupture no matter what the differences are in the following factors. See e.g., R. Eiber (Kiefner & Associates), Review of Safety Considerations for Natural Gas Pipeline Block Valve Spacing (2010) (“The most severe consequences to the public occur in the first moments after incident initiation, thus valve spacing, valve location and valve closure time (valve operator type) do not affect public safety”); Oak Ridge National Laboratory, Studies for the Requirements of Automatic and Remotely Controlled Shutoff Valves on Hazardous Liquid and Natural Gas Pipelines with Respect to Public and Environmental Safety (2012) (“block valves have no influence on the volume of natural gas released during the detection phase;”
“block valve closure has no effect on preventing pipeline failure or stopping the product that remains inside the isolated pipeline segments from escaping into the environment”).

Based on the conclusions of TGP study in 2007 (and again in 2016), there is no rationale supported by PHMSA’s regulatory factors or guidance that would justify updating the study when HCAs change on the TGP system. In addition, there is no logical justification to support the evaluation of individual HCAs for the TGP system. None of the seven regulatory risk factors stated in § 192.935(c) change for the TGP system based on changes to HCAs and the conclusions are applicable to all natural gas pipelines on the system (i.e., swiftness of leak detection and pipe shutdown capabilities; operating pressure; rate of potential release; potential for ignition; pipeline profile; products potential for ignition; and location of nearest response personnel).

Regardless of where ASVs or RCVs are installed, the most severe consequences to public safety occur in the first moments after release, long before activation of ASVs or RCVs affect the gas flow. See e.g., R. Eiber (Kiefner & Associates), Review of Safety Considerations for Natural Gas Pipeline Block Valve Spacing (2010)(“Valves are useful for maintenance and line modifications, but they do not control or affect public safety as the injuries and fatalities on natural gas transmission pipelines generally occur during the first 30 seconds after gas has been released from a pipeline.”). Because of line pack, activation and isolation of certain pipeline segments by ASVs/RCVs do not provide immediate protection to an HCA. Further, to the extent that PHMSA is questioning the sufficiency of TGP’s 2007 study, that is beyond the scope of the NOPV which alleges a violation of the continual evaluation requirements at § 192.937(b).

If PHMSA is now articulating a new interpretation of 49 C.F.R. § 192.937(b) to require periodic updating of an operator’s ASV and RCV determination under 49 C.F.R. § 192.935(c) in this enforcement proceeding — without support in the regulations, guidance, or prior enforcement — it violates the APA and fundamental considerations of fair notice and due process.

C. TGP Exceeds the Minimum ASV/ACV Regulations

Despite its conclusions regarding ASVs and RCVs under 49 C.F.R. § 192.935(c) and even though it is not required by PHMSA regulations, TGP voluntarily implements guidance from the Interstate Natural Gas Association (INGAA) regarding the installation of ASVs and RCVs. This has been incorporated to TGP’s IMP. Exhibit 1, Kinder Morgan IMP, P&M Measures (2016).

Consistent with that guidance, TGP has voluntarily undertaken a ten year program to install auto-close devices across its system, investing an estimated $1,700,000 to $2,000,000 annually and installing 20 to 25 auto-close devices each year. Exhibit 2, TGP ASV and RCV 10 Year Plan and Program (2012-2022). For the above reasons, TGP respectfully requests that Item 9 of the NOPV be withdrawn in its entirety.

III. The Proposed Civil Penalty Should be Reduced

TGP contests PHMSA’s analysis and application of the penalty factors as reflected in the proposed civil penalties associated with Items 1 and 7 of the NOPV in the amount of $120,500
These penalties are excessive and are not supported by the facts.

TGP was provided with a copy of PHMSA’s pipeline safety violation report (PSVR) and a “Proposed Civil Penalty Worksheet,” which outline PHMSA’s topical and numerical penalty calculations for NOPV Items 1 and 7, without detailed explanation or analysis. These items were discussed at the Hearing, but the Region claimed it had nothing to do with calculating the penalty while PHMSA Penalty Officer Rod Dyck claimed that he simply enters the items selected by the Region into the worksheet. In other words, no one from PHMSA took responsibility for calculating the penalty. Further, PHMSA was unable at the Hearing to provide adequate justification for the proposed penalties based on the underlying facts.

**A. Additional Considerations and Facts Warrant Penalty Reduction**

As an initial point, PHMSA’s application of a “history of prior offenses” is effectively a penalty against large operators and the application of this factor to every item in a single penalty over emphasizes this factor. For example, in this matter $28,800 of the $120,500 penalty (nearly 24%) is solely based on TGP’s history of prior offenses. In addition, it was clear at the Hearing that PHMSA personnel applying and calculating the proposed civil penalty in this NOPV lack the requisite context and background of the alleged violations to sufficiently consider, analyze and weigh the statutory and regulatory factors at 49 C.F.R. § 190.225.

With respect to Item 7, additional context of the violation warrant reduction in the calculations for the following penalty factors: gravity, culpability, and other matters as justice may require. *Exhibit 3, Corrected Proposed Civil Penalty Worksheet.* The alleged violation relates to span of control and supervision of unqualified control room personnel performing covered tasks under 49 C.F.R. § 192.805(c). TGP procedures go beyond minimum PHMSA requirements with respect to span of control, however, and require a ratio of 1:1 for qualified personnel supervising the tasks of unqualified personnel.

As background, TGP’s Gas Control Center is located in Houston and effectively manages 12,000 miles of natural gas pipelines. Two gas controllers typically manage the workload (as is typical in the industry) but, in recent years, TGP has assigned three controllers to perform this function as an additional precaution. All of the controllers sit next to one another and can hear and observe the work of the other controllers and see the same information on their monitor screens (e.g., pipeline data, alarms, set-point changes, etc.). The pipeline is not segmented into pieces so that one controller only sees part of the pipeline. Each controller sees the entire pipeline. In order to effectively monitor the TGP system, the controllers are constantly interacting with one another, the pipeline system, with Operations staff and other personnel. Non-qualified staff are guided by a qualified controller as well as leads, managers and directors who provide support during the day shift.

The violations at issue relate to instances where the lead qualified controller supervised two controllers at once who were not fully qualified to perform those tasks. This 2:1 span of control ratio, while not in violation of PHMSA minimum requirements, did not comply with TGP’s procedures which require a 1:1 span of control. One of the two unqualified controllers had
eleven months of formal training and was one month of training away from being fully qualified as a controller, while the other controller was in his third month of training. Exhibit 4, Summary of New Hire Training for Controllers at Issue. Further, both controllers performed the requisite training required by TGP prior to being approved to sit at the gas control desk, which includes training on roughly 48 separate operational topics. See e.g., Exhibit 5, Training Required Prior to Observing Gas Control Desk. As explained below, these circumstances were not adequately considered in the penalty calculation.

B. Application of PHMSA’s Penalty Worksheet to TGP

In light of the above, TGP respectfully requests that the proposed civil penalty be reduced. As outlined in Exhibit 3 (excerpted below and attached), the above context and facts warrant mitigation of the penalties in this case. As recalculated and corrected in Exhibit 3, the overall penalty should be roughly $54,100 (as opposed to $120,500) due to adjustments to the factors for history of prior offenses, gravity, and “other matters as justice may require.”
Corrected Proposed Civil Penalty Worksheet (Exhibit 3)

With regard to “history of prior offenses,” TGP contests PHMSA’s application of this factor where it is based solely on the number of “findings in the past 5 years” without accounting for the mileage for any one operator. Further, TGP contests the application of this factor separately to every proposed penalty in a single NOPV such that history of prior offenses accounts for almost a quarter of the penalty in this case.

In addition, with respect to Item 7, the “gravity” amount should be reduced to reflect that pipeline safety or integrity was minimally affected. There were three controllers monitoring the pipeline (which is more than the typical number) and the lead controller was observing the two not fully qualified controllers. Further, the span of control requirements at issue exceeded PHMSA regulatory standards, and one of the controllers was only lacking 1 month of additional training.

With respect to the “additional gravity for multiple instances of violation,” PHMSA was unable to explain or justify the amounts assigned nor could it explain why the amounts are not consistently applied across the violations. For Item 1, four instances of the violation resulted in...
an increase of 0.75 gravity points (the equivalent of an increase of 18.75%). Applying this same increase to the ninety instances of violations for Item 7, results in an additional 16.875 gravity points (not 23 as PHMSA’s proposed civil penalty worksheet suggests). At a minimum, PHMSA should apply its calculations consistently and uniformly (as outlined in Exhibit 3).

Finally, regarding Item 7, the “other matters as justice may require” amount should be reduced to reflect that “operator’s written procedures exceeded the regulatory requirements and the non-compliance was against the requirements of the procedure that exceeded the regulations.” The regulation at issue requires under 49 C.F.R. § 192.805(c) that operators have a qualification program with procedures that “allow[s] individuals that are not qualified pursuant to this subpart to perform a covered task if directed and observed by an individual that is qualified.” If the span of control requirements had been 2 to 1, there would have been no violation.

IV. The Proposed Compliance Order Should be Modified

The NOPV proposes a compliance order that includes four mandatory items, one of which is associated with Item 9 of the NOPV. Because the Company complied with its obligations to continually evaluate the HCA pipeline segments in the TGP system, TGP respectfully requests that PHMSA withdraw Proposed Compliance Order Item 4.

In the alternative, TGP has satisfied Proposed Compliance Order Item 4 (requiring that the Company “perform [a] study based on [its] current HCA list”) by performing another study to determine whether ASVs or RCVs would be an efficient means of providing additional protection to HCAs on the TGP system (preHearing Exhibit 6 Automatic Shut-Off and Remote Controlled Valves Study and Conclusions (2016)). In addition, TGP voluntarily revised its IMP manual in March to (1) follow the INGAA guidance, and (2) improve its P&M measure procedures, including a requirement to updates it determination with regard to ASV and RCVs (required by 49 C.F.R. § 192.935(c)) every 7 years. Exhibit 1, Kinder Morgan IMP, P&M Measures (2016).

With respect to Items 1 and 2, attached is documentation demonstrating the completion of those items, which included performing atmospheric corrosion inspections and inspections of gas detection and alarm system functions. Exhibit 6, Compliance Order Documentation of Items 1 and 2. For Item 1, atmospheric corrosion inspections were conducted in November 2015 and remaining corrective actions are underway in compliance with Part 192. Id. TGP expects that they will be complete by March 31, 2017. For Item 2, TGP inspected the gas detection and alarm system and confirmed that it is functioning properly. Exhibit 6, Compliance Order Documentation of Items 1 and 2. With respect to Item 3, the relevant corrective actions on the Brazos River Span will be complete by March 31, 2017.

For the above reasons, PHMSA should close out the Proposed Compliance Order as fully satisfied because Items 1 and 2 are complete, Item 3 is scheduled for completion, and Item 4 should be withdrawn, or, in the alternative, should also be determined to be complete.
V. Conclusion

For the above reasons, and other matters as justice may require, TGP respectfully requests that PHMSA withdraw Item 9 of the NOPV because the Company complied with the continual evaluation regulations, reduce the penalty associated with Items 1 and 7 of the NOPV, withdraw Proposed Compliance Order Item 4 and/or find that TGP has satisfied the Proposed Compliance Order based on the information provided.

Respectfully submitted,

TENNESSEE GAS PIPELINE COMPANY, LLC

[Signature]
Jessica Toll
Assistant General Counsel
Kinder Morgan
370 Van Gordon Street
Lakewood, CO 80228
(303) 914-7630

HUNTON & WILLIAMS
Catherine D. Little, Esq.
Annie M. Cook, Esq.
Bank of America Plaza, Suite 4100
600 Peachtree Street, N.E.
Atlanta, GA 30308
(404) 888-4047

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Exhibit Index

1. Exhibit 1, Kinder Morgan Integrity Management Program, Chapter 11, Preventive & Mitigative Measures (2016)
2. Exhibit 2, Tennessee Gas Pipeline, Automatic Shutoff Valve and Remote Controlled Valves Ten Year Plan (2012-2022)
3. Exhibit 3, Corrected Proposed Civil Penalty Worksheet
4. Exhibit 4, Summary of New Hire Training for Controllers at Issue
5. Exhibit 5, Training Required Prior to Observing Gas Control Desk
6. Exhibit 6, Compliance Order Documentation for Items 1 and 2