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August 16, 2023

Alan K. Mayberry  
Associate Administrator for Pipeline Safety  
Pipeline and Hazardous Materials Safety Administration  
U.S. Department of Transportation  
1200 New Jersey Ave., SE  
Washington, D.C. 20590

**Re: Comment of the Pipeline Safety Trust in Support of PHMSA's Proposed Rule, *Gas Pipeline Leak Detection and Repair* (Docket No. PHMSA-2021-0039)**

Associate Administrator Mayberry:

Thank you for the opportunity to comment on this rulemaking. The Pipeline Safety Trust<sup>1</sup> (PST) is extremely supportive of the promulgation of the Gas Pipeline Leak Detection and Repair rule as consistent with sections 113 and 114 of the Protecting our Infrastructure of Pipelines and Enhancing Safety (PIPES) Act of 2020 and the Pipeline Safety Act. From our perspective, pipeline safety means keeping the product in the pipe, and the rule's requirements to monitor and repair their systems and prevent emissions is achievable by operators, cost-effective, and will convey substantial health, safety, and climate benefits.

The rule is an important step towards a much-needed culture change about the serious nature of leaks on gas pipelines at PHMSA and within the industry. For too long, leaks and venting were considered operationally normal for gas pipelines, but we know more now about the serious health, safety, and climate impacts of methane emissions. Beyond explosions and fires, which have killed or injured hundreds of people, emissions have been extremely detrimental to public health and climate. Methane is an extremely potent greenhouse gas with over 80 times the global warming power of carbon dioxide in the first 20 years.<sup>2</sup> Preventing methane emissions will address some of the most immediate effects of climate change, such as extreme weather events and natural disasters.<sup>3</sup> The rule will also have a positive impact on the lives of environmental justice communities, which are more likely to experience the detrimental effects of pipeline leaks, disasters, and the effects of climate change.<sup>4</sup>

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<sup>1</sup> The [Pipeline Safety Trust](https://www.pstrust.org) is a nonprofit, watchdog organization dedicated to pipeline safety. We pursue our mission through education and advocacy, increasing access to information, and building partnerships with residents, safety advocates, government, and industry to promote safe communities and a healthy environment.

<sup>2</sup> *Climate Change 2013: The Physical Science Basis. Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change*, 731 (2013) [https://www.ipcc.ch/site/assets/uploads/2018/02/WG1AR5\\_Chapter08\\_FINAL.pdf](https://www.ipcc.ch/site/assets/uploads/2018/02/WG1AR5_Chapter08_FINAL.pdf) (a report of the Intergovernmental Panel on Climate Change).

<sup>3</sup> IEA (2022), *Global Methane Tracker 2022*, IEA, Paris <https://www.iea.org/reports/global-methane-tracker-2022>.

<sup>4</sup> Ryan E. Emanuel et al., *Natural Gas Gathering and Transmission Pipelines and Social Vulnerability in the United States*, 5 GEOHEALTH 6, 2021 <https://agupubs.onlinelibrary.wiley.com/doi/10.1029/2021GH000442>; Zachary D.

In recognition of these concerns, we ask that PHMSA finalize the rule as expediently as possible with consideration to the comments provided herein.

## 1. Leakage Survey and Patrol Frequencies and Methodologies

The Pipeline Safety Trust is broadly supportive of these provisions but recommends that the following considerations be made.

### 1.1. General

Application to Hydrogen Pipelines. PST requests that PHMSA consider providing guidance to hydrogen pipeline operators about equipment that meets the leakage survey criteria. If no such technology exists, PHMSA should clarify the rule's application to hydrogen pipelines and fund research to fill this regulatory gap and engage in supplementary rulemaking after this knowledge gap is filled.

Application to Underground Natural Gas Storage Facilities. PST recommends that PHMSA require annual leak surveys at UNGS facilities rather than assessments every seven years. Given the fact that these facilities store massive amounts of natural gas and have had major failure events,<sup>5</sup> they present a major risk to public safety and our climate and should be subject to more frequent leakage surveys. PST further recommends that PHMSA undertake an additional rulemaking to update its UNGS regulations. In that rulemaking, PHMSA should consider regulatory improvements to ensure the integrity of UNGS facilities that will prevent blowout events and other large methane releases.

Prior Notice. PHMSA should eliminate the provision allowing leakage surveys without leak detection equipment on transmission and gathering lines with prior notification and review by PHMSA.<sup>6</sup> Allowing operators to conduct leakage surveys without leak detection equipment and use human or animal detection flouts the requirement that leak detection and repair programs "identify, locate, and categorize all leaks that – (i) are hazardous to human safety or the environment; or (ii) have the potential to become explosive or otherwise hazardous to human safety."<sup>7</sup> This is especially concerning given the fact that these are non-odorized lines, meaning that detection would rely upon visual indicators that may be unfamiliar to members of the public if they were to come upon a leak. The use of these unreliable leak detection methods is a loophole that unscrupulous operators will abuse, resulting in harm to frontline communities, the environment, and our climate. The inclusion of this potentially broad exception runs counter to the explicit congressional mandate in the PIPES Act of 2020.

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Weller et al., *Environmental Injustices of Leaks from Urban Natural Gas Distribution Systems: Patterns Among and Within 13 U.S. Metro Areas*, 56 ENVIRON. SCI. TECHNOL. 8599, 2022 <https://pubs.acs.org/doi/pdf/10.1021/acs.est.2c00097>; Marcos Luna & Dominic Nicholas, *An Environmental Justice Analysis of Distribution-Level Natural Gas Leaks in Massachusetts, USA*, 162 ENERGY POLICY 112778, 2022 <https://doi.org/10.1016/j.enpol.2022.112778>.  
<sup>5</sup> E.g. PHMSA, *The Aliso Canyon Event – Lessons Learned* <https://primis.phmsa.dot.gov/rd/mtgs/111616/Barry%20Freifeld.pdf> ("An estimated 97,100 tonnes of methane and 7,300 tonnes of ethane was released into the atmosphere, making it the worst natural gas leak in U.S. history in terms of its environmental impact."); PHMSA, *Notice of Proposed Safety Order to Equitrans Midstream Association*, Dec. 29, 2022, [https://primis.phmsa.dot.gov/comm/reports/enforce/documents/12022080NOPSO/12022080NOPSO\\_Notice%20of%20Proposed%20Safety%20Order\\_12292022\\_\(22-259271\).pdf](https://primis.phmsa.dot.gov/comm/reports/enforce/documents/12022080NOPSO/12022080NOPSO_Notice%20of%20Proposed%20Safety%20Order_12292022_(22-259271).pdf) ("ETRN estimates that Well 2244 vented over one billion cubic feet (BCF) of natural gas to the atmosphere before the leak was halted on November 19, 2022." Later estimates put the leak at approximately 1.29 BCF); PHMSA, *UNGS Major Incidents* (Sept. 11, 2018) <https://www.phmsa.dot.gov/pipeline/underground-natural-gas-storage/ungs-major-incidents> (Yaggy storage field, 143 MMCF natural gas [2001]; Moss Bluff 2004 6 BCF natural gas [2004]).

<sup>6</sup> 88 Fed. Reg. 31,972 (§ 192.9(d)(10)); 31,974 (§ 192.706(a)(2)).

<sup>7</sup> 49 U.S.C. § 60102(q)(2).

If PHMSA chooses to allow this obvious, dangerous loophole to remain, it should require an operator gain approval and meet certain criteria rather than simply providing notice.<sup>8</sup> At a bare minimum, PHMSA should establish minimum compliance and safety record thresholds for approving such an application in addition to meeting the ALDP performance standard in § 192.763(b) or (c). An operator should also have to explain why it is infeasible for it to use advanced leak detection equipment, and this reason should include more than just cost concerns. An operator who applies for this exemption because it claims it cannot regularly survey its system should be met with extremely strict scrutiny by PHMSA. A system that cannot be regularly surveyed for leaks can simply not be considered a safe system or meet the requirements and purpose of the rule. PHMSA should review these “applications” strictly to ensure approvals are only made in the most exceptional circumstances. Given the serious safety concerns that flow from this decision, non-compliance with a major pipeline safety regulation should require serious, thoughtful consideration from PHMSA that is explained, made available to members of the public, and communicated directly to operators.

### *1.2. Distribution Pipelines*

Business Districts. The current interpretation of “business districts” as “associated with the assembly of people in shops, offices and the like,” marked by the conduct of “buying and selling commodities and services and related transactions”<sup>9</sup> leaves far too much up to interpretation by operators and leaves areas outside of business districts subject to less frequent leakage surveys. PST believes that the frequency of surveys assigned to “business districts” in the rule should be based upon the potential for a greater density of people in enclosed spaces. The presence of commerce is irrelevant. For example, under the commerce standard, areas with dense residential populations (such as apartments, multi-family homes, or institutions) or temporary increases in density (such as venues or gathering places) would not be considered a “business district.” PST believes that the “business district” concept used by the rule should be abandoned and replaced by a more workable measurement that would take into account densities of people, pipeline infrastructure, and buildings.

Leak Prone Plastic Pipe. PST asks that PHMSA specifically identify within the regulations the type of leak prone plastic pipe that would be subject to the rule. This list would include polyethylene plastic pipe manufactured by Century Utility Products Inc., plastic pipe manufactured and used for gas service from the 1960s through the early 1980s, low-ductile inner wall “Aldyl A” piping manufactured by DuPont Company before 1973, polyethylene gas pipe designated PE 3306, Delrin insert tap tees, and Plexco service tee Celcon (polyacetal) caps.<sup>10</sup> PHMSA should also consider whether this list should be updated given the fact that this notice was published in 2007.

We further recommend that PHMSA omit the term “historic” when referring to these types of pipe so as to not add any unnecessary ambiguity that would limit its application to plastic pipe known to be leak prone.

### *1.3. Transmission Pipelines*

PST supports these provisions with the exception of matters highlighted in the “general” section above.

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<sup>8</sup> PST finds the provision allowing operators to move forward with an alternative compliance approach if it hears nothing within 90 days absurd. This assumes all operators are working in good faith to communicate with PHMSA and that no extenuating circumstances will exist with respect to PHMSA’s “review” of a notification.

<sup>9</sup> PHMSA Interpretation Response Letter No. PI-72-038 (Aug. 16, 1972).

<sup>10</sup> *Pipeline Safety: Updated Notification of the Susceptibility to Premature Brittle-Like Cracking of Older Plastic Pipe*, 72 Fed. Reg. 51,301 (Sep. 6, 2007).

#### 1.4. Gathering Pipelines

PST recommends that the leakage survey and patrol frequencies and methodologies should apply to all gathering lines. PHMSA has clear authority to regulate all types of gathering lines. In the PIPES Act of 2020, PHMSA was directed to promulgate regulations requiring operators of “regulated gathering lines” as defined at 49 C.F.R. § 191.3. PHMSA defines these lines to include Types A, B, and two new categories of gathering lines: Types C and R.<sup>11</sup> Thus, despite Type C not existing prior to the promulgation of the PIPES Act of 2020, PHMSA recognizes its authority to regulate them under this rule. If PHMSA does not believe its authority under the PIPES Act is sufficient to regulate Type R gathering lines, it should look to its general authority to prescribe safety standards for pipeline facilities.<sup>12</sup> If PHMSA chooses to exclude Type R lines from leakage survey and patrol, it would be arbitrary, and would result in PHMSA failing to meet the rule’s purpose of meeting the “need for gas pipeline safety” and “protect[ing] the environment[.]” as required by the PIPES Act of 2020.<sup>13</sup>

Gathering lines transmit unprocessed natural gas that contain volatile organic compounds (VOCs) and hazardous air pollutants which can be flammable, toxic, and/or corrosive.<sup>14</sup> The constituents can increase the health and safety risks in the event of a release, and make these lines more susceptible to failure.<sup>15</sup> Further, research shows that gathering lines contribute an outsized role in overall pipeline methane emissions and are leaking at a rate that exceeds estimates; with one study by the Environmental Defense Fund demonstrating that the emissions from gathering lines in the Permian Basin were leaking 14 times more methane than EPA’s estimate.<sup>16</sup> Another study found that EPA’s 2015 greenhouse emission survey for methane emissions attributable to gathering lines was a severe underestimate.<sup>17</sup>

The cumulative effects of these emissions is immeasurable at this time—but it appears that our understanding of methane emissions from gas gathering pipelines is a severe underestimate. Failing to require leakage surveys for all gathering lines would mean that these emissions will continue to be unmeasured and unmitigated, which would obviously not advance pipeline safety or protect the environment.

Leakage Survey Frequency. PST has similar concerns as above about PHMSA’s proposal for leakage surveys and patrols for Types B & C gas gathering lines. As mentioned above, these lines are leaky and carry unprocessed natural gas that can have corrosive constituents that increase the risk of failure and the health risks to the public. Fugitive leaks are also more likely in gathering lines than transmission, as highlighted above, and in the notice by PHMSA.<sup>18</sup> Therefore, to meet the safety and climate objectives of

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<sup>11</sup> 49 C.F.R. § 191.3 (“Regulated onshore gathering means a Type A, Type B, or Type C gas gathering pipeline system as determined in § 192.8 of this chapter.”).

<sup>12</sup> 49 U.S.C. § 60102(a)(2).

<sup>13</sup> 49 U.S.C. § 60102(q)(1)(A)–(B).

<sup>14</sup> 88 Fed. Reg. at 31925.

<sup>15</sup> *Id.*

<sup>16</sup> Jevan Yu et al., *Methane Emissions from Natural Gas Gathering Pipelines in the Permian Basin*, *Environ. Sci. Technol. Lett.* 2022, 9, 11, 969–974 (Oct. 4, 2022) <https://doi.org/10.1021/acs.estlett.2c00380>.

<sup>17</sup> Zimmerle, DJ, et al. 2017 Gathering pipeline methane emissions in Fayetteville shale pipelines and scoping guidelines for future pipeline measurement campaigns. *Elem. Sci. Anth.*, 5: 70 <https://doi.org/10.1525/elementa.258>.

<sup>18</sup> “[F]ugitive methane emissions from all types of gas gathering line pipe vastly exceed emissions from gas transmission line pipe in both total and on a per-mile basis. Leaks from gathering line pipe can therefore be correspondingly greater contributors to the climate crisis than leaks from gas transmission line pipe.” 88 Fed. Reg. at 31,931.

the rule, leakage surveys should be more frequent on gas gathering pipelines. Conducting more frequent surveys these lines would be technically feasible, cost-effective, and practicable, given improvements in remote sensing and detection technology.<sup>19</sup>

We suggest that PHMSA require leakage surveys as follows: For Type A and Type B gathering lines, leakage surveys should be conducted 4 times per year at an interval not to exceed 4 ½ months. For Type C gathering lines, leakage surveys should be conducted 3 times per year at an interval not to exceed 5 ½ months. For Type R gathering lines, leakage surveys should be conducted 2 times per year at an interval not to exceed 7 ½ months.

#### *1.5. Other Pipeline Facilities: Valve Sites, ILI Launch/Receiving Sites, Tanks*

PST supports these provisions for transmission pipelines. However, valve sites, in-line instrument launchers and receivers, and tanks on gas gathering lines should be subject to more frequent leakage surveys. It is important for these sites to be subject to frequent leak surveys because as PHMSA noted, they are notoriously leaky.<sup>20</sup> Indeed, one study found that along the US's natural gas transmission network, compressor stations and associated equipment such as valves, flanges, connections, and open-ended lines to be one of the largest sources of fugitive emissions, producing an estimated 50.7 billion cubic feet of methane emissions annually.<sup>21</sup> If operators are not surveying these locations on a regular interval, PHMSA is missing a key opportunity for mitigating methane emissions. As such, PST recommends that these sites on gathering lines should be the subject of the same leakage survey frequency recommendations we made above in section 1.4.

#### *1.6. Liquefied Natural Gas Facilities*

PST supports PHMSA's requirement that LNG facilities conduct quarterly methane leakage surveys.<sup>22</sup> However, we suggest that remediation of leaks discovered during leakage surveys also be conducted on a quarterly basis. This will ensure that operators have an incentive to repair leaks rather than the minimum standards of their operation and maintenance procedures, and it is consistent with PHMSA's finding that equipment leaks and other fugitive methane emissions are the "second largest methane emissions source from LNG storage facilities and the largest methane emissions source from LNG export terminals."<sup>23</sup> Given the seriousness of emissions at these sites, PST suggests that PHMSA develop a leak detection technology standard for LNG facilities, with the same equipment sensitivity requirement as other part 192 regulated facilities. PHMSA should further implement a repair schedule for leaks found at these facilities. It would be inconsistent for the rule to not require these major emissions sources to go without a technology and repair standard, and doing so would promote consistency among facilities regulated by PHMSA. PHMSA should also consider whether continuous emission monitoring systems (CEMS) are appropriate for LNG facilities and underground natural gas storage wells.

## **2. Advanced Leak Detection Programs**

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<sup>19</sup> See Comment on behalf of seven "established technology and solution providers in the field of airborne or satellite-based remote sensing" at 2 "Remote sensing techniques . . . have significant benefits in the gas gathering and transmission pipeline leak detection space. The speed and scale at which remote sensing technologies operate can deliver highly effective leak detection programs at a significant cost savings over cumbersome ground-based programs." <https://www.regulations.gov/comment/PHMSA-2021-0039-4882>.

<sup>20</sup> 88 Fed. Reg. at 31,930.

<sup>21</sup> U.S. EPA, Lessons Learned from Natural Gas STAR Partners: Directed Inspections and Maintenance at Compressor Stations, (Oct. 2003) [https://www.epa.gov/sites/default/files/2016-06/documents/il\\_dimcompstat.pdf](https://www.epa.gov/sites/default/files/2016-06/documents/il_dimcompstat.pdf).

<sup>22</sup> 88 Fed. Reg. at 31,932 (§ 193.2624).

<sup>23</sup> *Id.*

PST is broadly supportive of the provisions found in this section. For too long, leaks on natural gas pipelines have been treated as just the cost of doing business, despite the real-world consequences methane emissions have on human health, the environment, and climate. The advanced leak detection programs (ALDP) contemplated by PHMSA in this rule allow operators flexibility, which will result in improvement in technology over time by allowing operators to use emerging technologies.<sup>24</sup> We also appreciate the “program evaluation and improvement” element of an operator’s ALDP.<sup>25</sup> Annual evaluation of these plans is critical to ensuring effectiveness of operator ALDPs and will reduce emissions and costs over time.

### *2.1. Leak Detection Technology Standards*

Surveys Using Human Senses. PST reasserts its previous concerns regarding the efficacy of human and animal senses for leak detection surveys.

Concentration vs. Volumetric Standard. PST notes that many commenters have expressed concern or preferences about the requirement to use a concentration rather than a volumetric standard. PST does not have the expertise to comment on the appropriateness of one over the other at this stage, but requests that whichever standard PHMSA chooses be as protective as the proposed 5 ppm standard.

### *2.2. Leak Detection Practices*

Leak Confirmation. PST supports the requirement for operators to pinpoint leaks with handheld devices after detection with other equipment such as mobile devices. This standard allows operators the flexibility needed in implementing an effective leak detection system while balancing it with a prescriptive standard to ensure that the purpose of the rule, detection and fixing of leaks, is met.

Offshore Leak Detection. PST is extremely concerned that PHMSA has proposed that offshore gas transmission and offshore gathering pipelines would not require the use of leak detection equipment. PST disagrees that these leaks are per se “visibly conspicuous,” in fact, it would be extremely difficult for small releases or releases from very deep underwater pipelines to be detectible on visual inspection alone. To advance the purpose of the ALD rule, PST suggests that PHMSA consider requiring remotely operated vehicles<sup>26</sup> or other practices for leak detection on offshore pipelines.

SCADA Systems. PST also supports the recommendation submitted by the NTSB that operators of transmission and distribution pipelines equip their supervisory control and data acquisition (SCADA) systems with tools to assist in recognizing and pinpointing the location of leaks.<sup>27</sup> As the NTSB noted, this type of technology can reduce response times which can in turn save lives, limit property damage, and mitigate methane emissions.

### *2.3. Advanced Leak Detection Performance Standard*

Leak Flow Rate Metrics. We understand that previously, PHMSA focused more on emission concentration because of its helpfulness in determining explosion risk for a given risk. However, as PHMSA noted in the NPRM, the leak flow rates are helpful in grading leaks, for calculating estimated and actual emissions,

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<sup>24</sup> *Id.* at 31,933–35 (§ 192.763(a)(1)).

<sup>25</sup> *Id.* at 31,936 (§ 192.763(a)(4)).

<sup>26</sup> Offshore Norge, *Overview of Subsea Methane Emissions Detection and Quantification Technologies: Technologies and Cross-cutting Elements*, (April 2023) <https://www.carbonlimits.no/wp-content/uploads/2023/05/Overview-of-subsea-methane-emissions-detection-and-quantification-technologies.pdf>.

<sup>27</sup> Comment of National Transportation Safety Board at 6, <https://www.regulations.gov/comment/PHMSA-2021-0039-2766>.

and determining the climate impact of a given leak.<sup>28</sup> Leak flow rate is also a component used for distinguishing between grade 1 and 2 leaks. Without requiring operators to measure the leak flow rate, it would be difficult for operators to accurately grade leaks and get them on appropriate repair schedules. It is therefore PST's perspective that operators should be required to incorporate leak flow rate metrics into their ALDPs.

#### *2.4. Alternative Advanced Leak Detection Performance Standard*

PST is not supportive of allowing operators to have alternative advanced leak detection performance standards. At a bare minimum, PHMSA should be reviewing programs submitted under this section critically and approving them rather than just allowing an operator to continue if it hears nothing from PHMSA. We have further concerns and recommendations below.

Gas Gathering Lines. PST believes that allowing these lines to have alternative ALDP plans is misguided, given the fact that these lines have higher leak rates than transmission pipelines, as described above. It is arbitrary to allow these lines to operate under an alternative leak detection performance standard when PHMSA itself stated that these lines are prone to failure and contain noxious constituents. As noted above,<sup>29</sup> PHMSA should not merely require notice for operators to participate in these "alternative" performance standards. This is a loophole that operators will exploit and which will detract from the effectiveness of this rule.

Hydrogen Pipelines. Hydrogen is not methane, yet under this rule, these pipelines would be subject to the same standards.<sup>30</sup> To address hydrogen's unique risks, as well as the differences in leak detection technologies compared to methane, PST recommends that operators of hydrogen pipelines be required to use the alternative advanced leak detection performance standard by default. This would bolster PHMSA's efforts to promulgate hydrogen-specific safety regulations by giving the agency insight into current leak detection and repair practices being used by the existing industry. This is especially important given the potential future buildout of hydrogen pipelines that is expected in the near future.

### **3. Leak Grading and Repair**

Threshold for Leak Detection. While PST's position is that every leak is hazardous and should be repaired, PST recommends that PHMSA implement a 5 PPM (or its volumetric equivalent) threshold for "detectable" leak. PST is concerned that with no threshold, operators may be disincentivized from using more advanced or sensitive leak detection technologies because it could recognize a larger number of leaks and make confirmation of a repair more difficult.

Retirement. PST supports PHMSA's leak repair and replacement program generally. However, PHMSA should also recognize retirement as an option for pipes that are dangerous, located in areas that make leak surveys, detection, and repair difficult, or that are no longer economically feasible.

#### *3.1. Leak Repair Requirement*

Gas Gathering Lines. PST reiterates its arguments above regarding the arbitrary exclusion of Type R gathering lines. Leak repair requirements should apply to all gathering lines, as should the requirement that pipelines known to leak be replaced. It is impossible for PHMSA to implement the statutory

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<sup>28</sup> 88 Fed. Reg. at 31,936.

<sup>29</sup> *Supra* section 1.1.

<sup>30</sup> Pipeline Safety Trust, *Summary for Policymakers: Hydrogen Pipeline Safety* (Jan. 2023) [https://pstrust.org/wp-content/uploads/2023/01/hydrogen\\_pipeline\\_safety\\_summary\\_1\\_18\\_23.pdf](https://pstrust.org/wp-content/uploads/2023/01/hydrogen_pipeline_safety_summary_1_18_23.pdf).



mandate of the PIPES Act if it excludes pipelines that are known to be leaky, and doing so will not protect public safety, the environment, or stop the advancement of climate change.

### *3.2. Compressor Stations*

PST believes that PHMSA should adopt a leak grading and repair requirement for compressor stations rather than relying upon that of the Environmental Protection Agency (EPA). However, given the fact that compressor stations are a major source of methane emissions, we believe they should be subject to a quarterly schedule as EPA has suggested.<sup>31</sup> We believe that the more stringent leak detection technology standard and grading/repair requirements combined with EPA's leak survey schedule addresses the serious contribution to climate change compressor stations make.

### *3.3. Grade 1 Leaks & Grade 2 Leaks*

PST supports these provisions, as we feel that it appropriately balances the need for expedient action on Grade 1 and 2 leaks while balancing the need for operator flexibility in making repairs on a schedule that is appropriate.

### *3.4. Grade 3 Leaks*

PST supports this provision but recommends that PHMSA require operators to take flow rate of leak into account to aid the prioritization of repairs among Grade 3 leaks. We also support PHMSA's effort to create a consistent repair schedule given mixed state standards and that of the EPA mentioned in the NPRM.

### *3.5. Post-Repair Inspection*

PST supports this provision but recommends that for leaks that are eliminated via routine maintenance, post-repair inspections should be required for aboveground facilities and grade 3 leaks from other facilities. An inspection timeline similar to that in the NPRM would be appropriate for these repairs. This inspection requirement is critical to ensuring that the leak is properly repaired and that efforts do not worsen a leak.

## **4. Reporting and the National Pipeline Mapping System**

Large Volume Gas Leak Reporting. PST is extremely supportive of PHMSA's proposal to amend its reporting standard for large volume gas leaks. Clear and consistent reporting requirements are critical to public transparency, successful implementation of the rule, and meeting PHMSA's climate mission. PHMSA is right to amend its 3 million cubic feet reporting threshold and apply the standard to intentional leaks, both of which will advance these goals, but it is PST's position that 1 million cubic feet is still too high. We recommend that PHMSA consider coalescing its proposal to match that of the Environmental Protection Agency's subpart W greenhouse gas reporting standard for large release events, which places the threshold at 500,000 scf of natural gas.<sup>32</sup> A threshold at this level is somewhat more consistent with PHMSA's liquids standard and is a step towards addressing the seriousness of methane emissions.

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<sup>31</sup> 40 C.F.R. pt 60; Env't. Prot. Agency, *Standards of Performance for New, Reconstructed, and Modified Sources and Emissions Guidelines for Existing Sources: Oil and Natural Gas Sector Climate Review*, 87 Fed. Reg. 74,702 (Dec. 6, 2022).

<sup>32</sup> Env't. Prot. Agency, *Greenhouse Gas Reporting Rule: Revisions and Confidentiality Determinations for Petroleum and Natural Gas Systems*, 88 Fed. Reg. 50,282 (Aug. 1, 2023) <https://www.federalregister.gov/documents/2023/08/01/2023-14338/greenhouse-gas-reporting-rule-revisions-and-confidentiality-determinations-for-petroleum-and-natural>.



Incident Reporting. PST supports the expansion of “incident” to include the cost of permits and removal or replacement of infrastructure undamaged by an event. Permitting costs often account for a major percentage of a project’s total impact on the public. Further, it is obvious that repair to damaged infrastructure may require the destruction or modification of unharmed infrastructure, which should be included in this calculation.

PST further recommends that PHMSA consider revising its incident reporting criteria for gas pipelines to address long-time insufficiencies with this standard. PHMSA should require reporting for all incidents in which a fire or explosion occurred and lower the property damage threshold to \$50,000 to match that of the liquids regulations.<sup>33</sup> Until recently, the property damage thresholds for reporting incidents to PHMSA was \$50,000 for both gas and hazardous liquid pipelines. However, in 2021, PHMSA issued final rule in response to industry feedback that the threshold was too low for gas pipelines.<sup>34</sup> This rule increased the gas incident reporting threshold for property damage to \$122,000, to be adjusted annually for inflation.<sup>35</sup> With record inflation, the current threshold stands at a staggering \$139,700.<sup>36</sup> The gas rule excludes the value of the gas itself, which is also distinct from the liquid rule. There is no reason the incident reporting thresholds for natural gas and liquids pipelines to differ to such an extreme, and amending this standard will support PHMSA’s efforts to address the seriousness of natural gas leaks.

Annual Reporting. PST strongly supports the annual reporting requirements proposed in this rule as a necessary component for ensuring the rule’s success. These reports should be easily accessible to the public and made available in an electronic format on PHMSA’s website without a Freedom of Information Act request. PST further requests the annual reporting requirements be expanded to cover Type R gathering lines. Even though these lines are not subject to leak grading and repair under the NPRM, annual reports would be extremely valuable information for PHMSA, researchers, and the public. If operator-specific information is not feasible, at the bare minimum, PHMSA should release aggregate and/or anonymized data to the public.

National Pipeline Mapping System. PST strongly supports the expansion of the requirement for owners and operators of gathering lines to submit geospatial data to NPMS. PST agrees that PHMSA has authority under 49 U.S.C. § 60117(c) to require disclosure of this information to inform the Secretary whether and how to provide proper regulatory oversight of gathering lines. Without knowing where these pipelines are, it is near-impossible for PHMSA to be an effective regulator of these lines. Knowing their location allows for consideration of risks unique to gathering lines and bolster the efforts of damage prevention, leak detection, and emergency response programs. The public also has a right to know what kind of pipeline infrastructure is in their community. PST is an interested stakeholder for this information for its own purposes of advocating for pipeline safety and educating the public about pipelines. PST frequently receives inquiries from the public, academics, and the media about where to find geospatial data about gas gathering lines and is frustrated by the fact that this information is not available even though they face the risks of living in communities with gathering lines.

PHMSA should include type R gathering lines in this reporting requirement. Doing so would be consistent with the rationale PHMSA provided in requiring operators and owners of other gathering lines to report geospatial data: Providing this information to PHMSA helps it determine whether further regulation is

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<sup>33</sup> 49 C.F.R. § 195.50.

<sup>34</sup> Pipeline Safety: Gas Pipeline Regulatory Reform, 86 Fed. Reg. 2219 (Jan. 1, 2021).

<sup>35</sup> 49 C.F.R. pt. 191, app’x.

<sup>36</sup> PHMSA, *Incident Reporting* (Apr. 25, 2023) <https://www.phmsa.dot.gov/incident-reporting> (“Effective July 1, 2023, the property damage threshold is revised to \$139,700 pursuant to the procedures in Appendix A to 49 CFR Part 191”).

appropriate, informs the public, and improves the accuracy of leakage surveys and patrols.<sup>37</sup> PST also agrees that prudent owner/operators should have this information on hand already, given the significant environmental and public safety risks that gas gathering lines present, and thus providing the information to PHMSA should not be a cost burden.<sup>38</sup>

Reporting of Blending. Currently operators blend products such as propane or hydrogen into existing systems at unknown rates because an operator is only required to report the “predominant product” in a natural gas pipeline system to PHMSA. This has been interpreted to mean only reporting a product that is >50% present, overwhelmingly methane/natural gas.

Hydrogen has been highly incentivized in recent legislation such as the Production Tax Credit in the Inflation Reduction Act. Gas distribution operators are considering blending hydrogen into existing gas distribution infrastructure and the trade group the American Gas Association includes hydrogen blends of 20% as a key component of their Net Zero plan for the industry.<sup>39</sup> However, hydrogen transportation by pipeline poses many safety risks and key knowledge gaps remain. Hydrogen has a much higher flammability range than methane and is known to embrittle certain types of steel pipelines. Hydrogen is also a potent indirect greenhouse gas itself with a propensity to leak, therefore leaks can present safety, environmental and climate risks.

Even commonly blended products present safety risks. For example, in December 2022, CenterPoint Energy improperly blended propane into its system. This improper mixing caused incomplete combustion and a buildup of deadly carbon monoxide in hundreds of residences and businesses. This incident sent four people to the hospital,<sup>40</sup> yet operators can continue blending without reporting to PHMSA so long as they meet the “predominant product” threshold.

Unreported blending is clearly not in the public interest. PST recommends that under this rule, PHMSA should require operators to report when they blend hydrogen or any other product into their pipelines at a proportion of 2% or more. Such reports should be made available to the public online without the need to submit a Freedom of Information Act request.

## **5. Mitigating Vented and Other Emissions from Gas Pipeline Facilities**

PST is extremely supportive of PHMSA’s efforts to reduce and/or eliminate the industry’s reliance upon blowdowns and other vented gas emissions from gas pipeline facilities. Specifically, PHMSA’s decision to eliminate leaks of flammable, toxic, or corrosive gases, and the minimization of natural gas releases is critically important to PST. Minimizing vented and planned releases is critical to achieving the mandates of section 114 of the PIPES Act of 2020.<sup>41</sup>

From the public’s perspective, intentional releases are frustrating because they’re often planned events. If an operator has time to plan, it is our perspective that they should be able to limit the release of gas into the atmosphere by using technology or practices to reduce emissions. As PHMSA made apparent in

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<sup>37</sup> 88 Fed. Reg. at 31,947.

<sup>38</sup> *Id.*

<sup>39</sup> American Gas Association, *Net Zero Emissions Opportunities for Gas Utilities* (Feb. 8, 2022) <https://www.aga.org/wp-content/uploads/2022/02/aga-net-zero-emissions-opportunities-for-gas-utilities.pdf>.

<sup>40</sup> Pipeline Safety Trust, *CenterPoint Energy’s Apology Not Enough, More Must be Done to Protect Our Communities from Pipeline Incidents*, (Feb. 8, 2023) <https://pstrust.org/wp-content/uploads/2023/02/PR-2.8.23-CenterPoint-Energy-Propane-FINAL.pdf>

<sup>41</sup> 49 U.S.C. § 60108(a)(2)(D) (originally section 114 of the PIPES Act of 2020).

the NPRM, technology to avoid venting is readily available, is already being used by operators, and only stands to improve with more experience.<sup>42</sup>

PST supports the flexibility that PHMSA offers operators under this section but recommends that PHMSA set standards for operators to follow for each instance of vented emissions, not just theoretical possibilities of a given technology's ability to mitigate emissions. PST also recommends that PHMSA set standards to ensure that operators do indeed mitigate 50% of their emissions using a given technology. PHMSA could, for example, require a report of what method an operator used in each event including information about what an unmitigated release would have been vs the actual emissions with the use of the selected technology. This type of reporting would ensure transparency in how operators are calculating mitigated emissions. Without such a reporting requirement, operators could manipulate initial calculations of unmitigated releases. To prevent manipulation, PHMSA should require operators to use average operating pressure to estimate unmitigated release volumes and the information should be made available to the public. Operator methods for complying with these standards should be incorporated into operations and maintenance plans.

PHMSA should also clearly articulate that reliance upon flaring should be reduced substantially and should be reserved for instances when other mitigation options are impractical or present safety risks. While effective flaring reduces the amount of methane emitted into the atmosphere, it still releases carbon dioxide and water. Water and carbon dioxide are greenhouse gases themselves and depending on the source, other contaminants such as hydrogen sulfide can also be released into the atmosphere during flaring.<sup>43</sup> Finally, these provisions should apply to distribution and all gas gathering lines to ensure that the required environmental and safety benefits are achieved by the rule.

## **6. Design, Configuration, and Maintenance of Pressure Relief Devices**

PST is supportive of these important provisions but suggests that for the rule to be implemented effectively, PHMSA should require pressure relief valves that can change in configuration. Valves that cannot be reconfigured likely do not offer the flexibility necessary to comply with the rule and will contribute to safety risks such as explosions and emissions. PHMSA can write this as a performance standard to ensure there is no violation to 49 U.S.C. § 60104(b).

## **7. Investigation of Failures**

Application to Types B, C, and Type R Gathering Pipelines. PST supports the amended definition of failure, however, PST strongly suggests that PHMSA expand its application to include Types B, C, and R gathering lines. As previously discussed, these lines can be dangerous and present major climate risks. Five years ago, a massive explosion on a then, unregulated non-odorized pipeline in Midland, Texas killed a three-year-old girl.<sup>44</sup> Despite this fatality, no investigation by PHMSA was required, and thus the public and the regulator has no way of determining what happened and or to take action to prevent it from happening again. It is extremely arbitrary to not require an investigation of a failure, especially those that are serious enough to result in a fatality, a major release of natural gas, or cause major property damage. If these lines are really as safe as the industry suggests, investigation of incidents on these pipelines will

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<sup>42</sup> 88 Fed. Reg. at 31,948; Dana Lowell et al., *Analysis of Pipeline and Hazardous Materials Safety Administration Proposed New Safety Rules: Pipeline Blowdown Emissions and Mitigation Options* (June 2016) <https://pstrust.org/wp-content/uploads/2015/10/PHMSA-Blowdown-Analysis-DRAFT-FINAL-30jun16.pdf>.

<sup>43</sup> Duren, Riley and Deborah Gordon. "Tackling unlit and inefficient gas flaring," *Science*. Vol. 337 Issue 6614. (2022): 1486–1487. <https://www.science.org/doi/full/10.1126/science.ade2315>.

<sup>44</sup> Mike Lee & Mike Soraghan, *Deadly Pipelines, No Rules*, *E&E News* (Mar. 3, 2019) <https://www.eenews.net/articles/deadly-pipelines-no-rules/>.

not be a time or cost burden. We all share the goal of zero incidents and without investigating the cause of every failure, we will never achieve our goal.

### **8. Types B and C Gas Gathering Pipelines.**

PST strongly supports these provisions. As PHMSA mentioned in the NPRM, Types B and C gathering pipelines are not subject to many critical safety requirements applicable to other part 192-regulated pipelines, such as procedural manuals for operations and maintenance, emergency response procedures, patrolling, and some recordkeeping requirements.<sup>45</sup> This is particularly troubling to PST, given the fact that these pipelines can be large, operate at higher pressure, can be located in areas where people are present, and carry gas with HAPs, VOCs, and other constituents corrosive to pipes.<sup>46</sup> PST also supports PHMSA's efforts to ensure that section 114 of the PIPES Act of 2020 is fully implemented by clarifying the fact that those requirements apply to Types B and C gas gathering lines.

PST is extremely supportive of eliminating this arbitrary regulatory gap, and believes that there are significant safety, environmental, and climate benefits to doing so. Given the safety concerns associated with these pipelines, PST agrees with PHMSA that many operators are already voluntarily complying with these requirements or have existing protocols that can be expanded with minimal cost. PST also recommends that these provisions be applied to Type R gathering lines given the serious safety risks associated with these pipelines.

### **9. Miscellaneous**

All leaks should be considered hazardous. PST's position on leaks is that safe operation of a pipeline means keeping the product in the pipe. If an operator cannot prevent leaks on its pipe, it is not operating safely and is contributing to public health, environmental, and climate risks. PHMSA's proposal that all leaks be considered "hazardous" is consistent with its mandate under the PIPES Act of 2020, and our understanding of how the methane emissions significantly contribute to these risks. Further, given the social cost of greenhouse gases,<sup>47</sup> even small leaks that were traditionally considered "non-hazardous" have a major societal cost in terms of net harm to society.

In-Home Methane Detection. PST recognizes the jurisdictional issues that exist with respect to in-home methane detectors. However, we support the comments submitted by the NTSB suggesting that PHMSA consider how the rule could incorporate this important, life-saving technology.<sup>48</sup> In particular, PST found the NTSB's point that in-home methane detection devices could help identify jurisdictional leaks to be extremely compelling. If not achievable in this rulemaking, PST recommends that PHMSA consider other methods to incentivize operators to install these devices and liaise with code developers such as the International Code Council and the National Fire Protection Association to find a solution.

Leak Detection and Repair Environmental Justice Communities. Studies have shown that environmental justice communities experience higher leak densities and delays in repair schedules. One study by Colorado State University found that in 13 U.S. metro areas, leak densities increase with increasing

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<sup>45</sup> 88 Fed. Reg. at 31,952.

<sup>46</sup> See *supra*, section 1.4.

<sup>47</sup> Interagency Working Group on Social Cost of Greenhouse Gases, United States Government, *Technical Support Document: Social Cost of Carbon, Methane, and Nitrous Oxide Interim Estimates under Executive Order 13990*, (Feb. 2021) [https://www.whitehouse.gov/wp-content/uploads/2021/02/TechnicalSupportDocument\\_SocialCostofCarbonMethaneNitrousOxide.pdf](https://www.whitehouse.gov/wp-content/uploads/2021/02/TechnicalSupportDocument_SocialCostofCarbonMethaneNitrousOxide.pdf).

<sup>48</sup> Comment of NTSB, *supra* note 27 at 4.

percent of people of color and with decreasing median household income.<sup>49</sup> This trend was present in most metropolitan areas, even after accounting for housing age and spatial structure of the data. Another study focusing on Massachusetts found in that state, people of color, limited English speaking households, renters, lower income residents, and lower educated adults are disproportionately exposed to natural gas leaks and that these leaks take longer to be repaired when compared to the general population. This trend was especially true when compared to white residents and homeowners.<sup>50</sup>

This rule offers a unique opportunity for PHMSA and natural gas pipeline operators to begin to reverse this injustice, which is especially important given the fact that these communities are most likely to experience the effects of climate change.<sup>51</sup> The rule should be modified to address this reality.

PST recommends that PHMSA require operators to analyze the information gathered from leak surveys and repair schedules with an environmental justice lens and to ensure that leaks are not occurring in these communities at disproportionate rates. Operators should also be required to assess their leak detection programs to ensure that the standards in environmental justice communities are just as rigorous as those in non-environmental justice communities. Operators should further examine repair data to ensure that leaks in these communities are repaired on timelines that are at least as fast as non-environmental justice communities. Analysis completed under this requirement should be made available to the public without the need to submit a Freedom of Information Act request.

Thank you again for the opportunity to comment on this rule. We hope that given methane's role in climate change, PHMSA will finalize the rule as expediently as possible without major departures from its original intent. If you have any questions about this comment or would like to discuss, please contact Erin Sutherland at [erin@pstrust.org](mailto:erin@pstrust.org) or (360) 543-5686 x107.

Sincerely,



Bill Caram  
Executive Director



Erin Sutherland  
Policy & Program Director/Counsel

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<sup>49</sup> Zachary D. Weller et al., *Environmental Injustices of Leaks from Urban Natural Gas Distribution Systems: Patterns Among and Within 13 U.S. Metro Areas*, 56 ENVIRON. SCI. TECHNOL. 8599, 2022 <https://pubs.acs.org/doi/pdf/10.1021/acs.est.2c00097>.

<sup>50</sup> Marcos Luna & Dominic Nicholas, *An Environmental Justice Analysis of Distribution-Level Natural Gas Leaks in Massachusetts, USA*, 162 ENERGY POLICY 112778, 2022 <https://doi.org/10.1016/j.enpol.2022.112778>.

<sup>51</sup> U.S. Dep't of Health and Human Services, *Climate Change & Health Equity, and Environmental Justice at HHS*, (Mar. 30, 2023) <https://www.hhs.gov/climate-change-health-equity-environmental-justice/index.html> ("The very same communities that have lived with these climate impacts also are experiencing the brunt of environmental injustice. Climate change is an environmental justice issue. There are factors (listed below) that can lead to certain groups to experience both a disproportionate share of exposures to both environmental pollution and climate change hazards.").