

**Questions Submitted for the Record**  
**Submitted by the Honorable Troy E. Nehls**  
**Chairman**  
**Subcommittee on Railroads, Pipelines, and Hazardous Materials**  
**Subcommittee Hearing on “Ensuring Safety and Reliability: Examining the**  
**Reauthorization Needs of the Pipeline and Hazardous Materials Safety Administration”**  
**Tuesday, May 7, 2024**

**Questions for Mr. Tristan Brown, Deputy Administrator, Pipeline and Hazardous Materials Safety Administration (PHMSA), United States Department of Transportation:**

1. Deputy Administrator Brown, your written testimony for this hearing was not provided to Members until after 10:00 p.m. the night before the hearing, denying Members of this Committee time to adequately review your testimony in preparation for this hearing.

- a. Why did PHMSA take so long to provide the testimony to Members of the Committee?

**Response:** Preparing testimony involves an extensive departmental and interagency review process. These steps are essential to ensure the accuracy and comprehensiveness of the information included in the testimony of a witness from the Executive Branch. Unfortunately, this took longer than anticipated for my testimony, affecting the timeliness of its submission to the Committee.

- b. Given the extremely late submission of your testimony, do you commit to providing responses to Members’ questions for the record in two weeks?

**Response:** It is always PHMSA’s intent to provide information requested by individual members of Congress and our oversight committees within the timeframes specified. As stated during the hearing, PHMSA is also available and responsive to requests for information via phone calls, briefings, and email to ensure Congress has the information it needs to complete its legislative activities. Responding to Questions for the Record involves an extensive departmental and interagency review process. These steps are essential to ensure the accuracy and comprehensiveness of the information included in responses from an agency within the Executive Branch. Unfortunately, this took longer than anticipated, affecting the timeliness of submitting these responses to the Committee.

2. Adequate staffing for PHMSA has always been a concern for Congress. That is why the *PIPES Act of 2020* mandated PHMSA maintain a certain number of pipeline inspectors on staff.

- a. Has PHMSA met these numbers?

**Response:** As noted in my testimony, with a red-hot economy and historically competitive job market, PHMSA faces fierce hiring competition from the private sector and other Federal agencies who are also competing with the same limited talent pools. In 2023, 43% of pipeline inspection and enforcement job offers were declined and in 2024, the percentage increased to 44%. PHMSA’s safety inspections require engineers or

technical staff that are willing to spend up to 50% of their time traveling to remote parts of the U.S. and perform physically demanding work. Regardless, PHMSA continues to explore ways to continue to improve the agency's hiring and recruitment to make it both more efficient and effective in recruiting and retaining talented applicants.

PHMSA is grateful for the PIPES Act of 2020, which supported the use of incentives to improve efforts to attract and retain a talented pool of professionals. PHMSA has undertaken new recruitment and retention efforts—in coordination with the Office of Personnel Management—including developing new tuition reimbursement efforts and utilizing new online recruitment methods. Specifically, special salary rates were implemented in 2023 and PHMSA continues to implement programs to take advantage of all available hiring flexibilities.

b. How many pipeline inspectors are currently employed by PHMSA?

**Response:** As of June 3, there are 224 inspection and enforcement staff onboard with an additional 10 candidates going through the security process.

3. The *PIPES Act of 2023*, which this Committee passed on a bipartisan basis, authorizes PHMSA to hire up to 30 additional employees who have advanced technical expertise to complete rulemakings and Congressional mandates. How might these additional positions address PHMSA's backlog of outstanding rulemakings?

**Response:** The additional positions could enable PHMSA to develop and implement rulemaking mandates more expeditiously. Effective rulemaking requires many different technical skills. Engineers and Physical Scientists provide technical support and analysis in support of rulemaking and improvement of reliability and serviceability of the pipeline transportation network. Transportation Specialists perform research and analysis related to the development of regulatory changes and interpretation of regulations, as well as in the development of proposed and final rulemaking documents, including environmental reviews and economic impact statements, evaluation of public comments, and incorporation of legal input on proposed regulatory changes. Attorneys provide legal advice in the development of rulemaking, implementation guidance, and defense of the same from administrative and appellate litigation. Economists conduct economic research to understand economic and industry trends that influence risks to pipelines, transportation of hazardous materials, and related industries, as well as develop data models to evaluate safety risks and assess costs, benefits, efficiency, and impacts of PHMSA's regulatory and safety programs. Technical Writers provide writing and editorial support in the development of materials to respond to congressional reports, mandates, and rulemaking requirements. All of these positions work together to ensure rulemakings are technically sound and are developed in consideration of existing regulatory requirements, will achieve the desired result, and are defensible against litigation. PHMSA could utilize additional positions to address outstanding and upcoming rulemakings as expeditiously as possible.

4. In May 2023, PHMSA published a proposed rule on leak detection and repair requirements for pipeline operators. What is the status of this proposed rule and when does PHMSA expect it to be published?

**Response:** In order to meet its statutory obligation, PHMSA held two gas pipeline advisory committee (GPAC) meetings on the proposed rule for leak detection and repair requirements. Following the last GPAC meeting in March 2024, stakeholders were given 30 days to provide public comments on the GPAC proceedings related to the proposed rule. The comment period for the proposed rule closed on April 29, 2024, and PHMSA is now working to consolidate and respond to all GPAC recommendations and public comments received and is on track to publish the final rule by January 2025. The schedule for all outstanding congressionally mandated rulemakings can be found on the PIPES Act 2020 Web Chart, located on PHMSA's website.

5. Please detail how PHMSA has worked with the Environmental Protection Agency (EPA) to harmonize its proposed Leak Detection and Repair Rule with similar regulations at EPA.

**Response:** PHMSA has met with different offices within EPA to better understand their published leak data associated with pipeline infrastructure and the technology solutions they considered to address methane abatement in order to synchronize our rulemakings and to minimize or eliminate all inconsistencies and duplication.

PHMSA also notes that this rulemaking is subject to the interagency review process set forth in Executive Order 12866. As part of that process, PHMSA provided briefings on the NPRM for personnel from EPA and other agencies on the content of the rulemaking and responded to multiple rounds of comments on the draft rulemaking package from Executive Branch agencies (including, but not limited to, EPA). Further opportunity for input from EPA and other agencies will be provided as part of the Executive Order 12866 review of the final rule.

6. The proposed Leak Detection and Repair Rule includes a requirement for gathering line operators to participate in the national pipeline mapping system (NPMS), despite *the PIPES Act of 2020* providing no such authorization.
  - a. Please detail where in the *PIPES Act of 2020* PHMSA draw its authorization for including gathering lines in the NPMS.

**Response:** In its Notice of Proposed Rulemaking (NPRM) for the Gas Pipeline Leak Detection and Repair rulemaking (RIN2137-AF51), PHMSA states that it has statutory authority pursuant to 49 U.S.C. 60117(c) to extend NPMS reporting requirements at 49 CFR 191.29 to offshore, Type A, Type B, and Type C gas gathering pipelines so as to better inform PHMSA's regulatory oversight of those facilities. See 88 FR at 31946-47, 31964-65. PHMSA also notes that, insofar as the NPRM identifies safety and environmental benefits from its proposed extension of the NPMS to those gas gathering facilities, PHMSA's broad safety authority at 49 U.S.C. 60102 could provide an alternative statutory basis for such an extension. See 88 FR at 31946-47.

b. Does PHMSA intend to keep this directive in the final rule?

**Response:** PHMSA has received numerous comments — both in opposition to and in support of — its proposed extension of NPMS reporting requirements at 49 CFR 191.29. PHMSA is carefully reviewing the entirety of the administrative record on this issue in evaluating whether to codify this proposal in its forthcoming final rule in the Gas Pipeline Leak Detection and Repair rulemaking (RIN2137-AF51).

7. PHMSA’s authority to administer the NPMS is codified at 49 U.S.C. § 60132. Subsection (a) of § 60132 states that “the operator of a pipeline facility (*except* distribution lines and gathering lines)” shall submit geospatial data and other information to the NPMS. Do you believe this statute gives PHMSA authority to require gathering and distribution operators to submit information for the NPMS?

**Response:** Section 60132(a) does not give PHMSA authority, it is a self-executing mandate requiring operators of certain pipeline facilities to submit geospatial information to PHMSA “[n]ot later than 6 months after the date of enactment of this section.” Section 60132(a) does not preclude PHMSA from requiring operators of distribution or gathering facilities to submit geospatial data under § 60117(c).

As explained in response to Chairman Nehls’ question 6(a), PHMSA understands it has the authority under several provisions of the Pipeline Safety Laws to extend NPMS reporting requirements at 49 CFR 191.29 to gas gathering pipelines. Similarly, PHMSA understands that neither of the statutory provisions referenced in that earlier response prohibit PHMSA from extending the NPMS to gas distribution lines as well if PHMSA determines such an extension is necessary for public safety or environmental protection (49 U.S.C. 60102) or to ensure compliance with standards or orders issued by PHMSA (49 U.S.C. 60117).

8. Since the creation of the NPMS, has PHMSA ever required distribution or gathering lines to submit information for the NPMS? If so, please detail when PHMSA collected that information.

**Response:** PHMSA has never required operators to submit geospatial information for gas distribution or gas gathering pipeline facilities but does require submission of NPMS data for regulated rural onshore hazardous liquid gathering lines.

PHMSA first regulated hazardous liquid gathering pipeline facilities in Docket PHMSA-RSPA-2003-15864, RIN 2137-AD98, Protecting Unusually Sensitive Areas from Rural Onshore Hazardous Liquid Gathering Lines and Low-Stress Lines. In the 2008 final rule, operators of regulated rural onshore hazardous liquid gathering lines were required to comply with 49 CFR part 195 subpart B reporting requirements no later than January 3, 2009. In Docket PHMSA-2010-0026, RIN 2137-AE59, Miscellaneous Changes to Pipeline Safety Regulations, a 2015 final rule amended PHMSA regulations to require operators of hazardous liquid pipeline facilities to submit geospatial data to PHMSA each year by June 15. The earliest date PHMSA required operators of regulated rural onshore hazardous liquid gathering lines to submit geospatial data was June 15, 2016.

9. 49 U.S.C. § 60117(c) states that “The Secretary may require owners and operators of gathering lines to provide the Secretary information pertinent to the Secretary’s ability to make a determination as to whether and to what extent to regulate gathering lines.”

- a. Do you believe 49 U.S.C. § 60117(c) gives PHMSA authority to require gathering lines to submit information to the NPMS? Please explain your position.

**Response:** As explained in the response to Chairman Nehls’ question 6(a), PHMSA understands it has the authority under several provisions of the Pipeline Safety Laws to extend NPMS reporting requirements at 49 CFR 191.29 to gas gathering pipelines, including 49 U.S.C. 60117(c).

10. Do you believe PHMSA would require new statutory authority to require gathering and distribution lines to submit information to be included in the NPMS? Please explain your position.

**Response:** As explained in responses to Chairman Nehls’ questions 6(a) and 7, PHMSA understands it has the authority under several provisions of the Pipeline Safety Laws to extend NPMS reporting requirements at 49 CFR 191.29 to gas gathering and distribution pipelines.

11. Do you believe the *PIPES Act of 2020* provides authority to PHMSA to include liquified natural gas (LNG) facilities to be included in the proposed Leak Detection and Repair rule? If so, please detail where in the *PIPES Act of 2020*, or in statute, this authorization is located?

**Response:** In its Notice of Proposed Rulemaking (NPRM) for the Gas Pipeline Leak Detection and Repair rulemaking (RIN2137-AF51), PHMSA states that several of its proposed amendments to 49 CFR part 193 requirements governing liquefied natural gas (LNG) facilities codify a self-executing statutory mandate within section 114 of the PIPES Act of 2020 for operators of those and other gas pipeline facilities to update their inspection and maintenance procedures to “minimize releases of natural gas.” See 88 FR at 31947-48. PHMSA also has broad authority under 49 U.S.C. 60102(a) (reinforced in 49 U.S.C. 60103(d)) to promulgate operating and maintenance safety standards for LNG facilities, including the enhanced leakage survey standards proposed in the NPRM.

12. PHMSA held two Gas Pipeline Advisory Committee (GPAC) meetings in November 2023 and March 2024 on the Leak Detection and Repair proposed rule. GPAC meetings are required by statute to help provide PHMSA guidance on writing highly technical rules. Given the length of these meetings and complicated nature of this proposed rule, will PHMSA provide an extension of the comment period? If not, please justify PHMSA’s position.

**Response:** PHMSA provided the public a 90-day comment period after publication of the Leak Detection and Repair proposed rule. The public had close to 150 additional days to comment following the GPAC meeting in November of 2023, where the most difficult issues relative to the rulemaking were addressed. PHMSA believes that the 30

days provided for the public to comment following the March 2024 GPAC meeting was ample time to comment on the issues discussed at that meeting.

Additionally, PHMSA received comments from the public opposing the extension of the comment period for GPAC proceedings pertaining to the Leak Detection and Repair NPRM. Noting that the rule is urgently needed to improve safety and reduce methane emissions across the millions of miles of pipelines in the United States and that the Protecting Our Infrastructure of Pipelines and Enhancing Safety Act of 2020 directed PHMSA to finalize advanced leak detection and repair standards by December 2021, commenters urged PHMSA to swiftly finalize the proposed measures to improve public safety, arguing that extending the comment period for GPAC proceedings pertaining to the Leak Detection and Repair NPRM could further delay PHMSA's finalization of that rule.

13. After Congress reached bipartisan agreement on a technology pilot demonstration program in the *PIPES Act of 2020*, additional conditions PHMSA imposed through guidance subsequently resulted in no technology pilots proposed or undertaken.

- a. What changes or actions has PHMSA taken since our last hearing to improve this program?

**Response:** As mandated by 49 U.S.C. 60142(c)(2), the Pipeline Safety Enhancement Program (PSEP) expired three years after enactment of the PIPES Act of 2020, December 2023. Prior to expiration of the program, PHMSA expressed a willingness, including at the March 2023 T&I hearing, to work with committee members and stakeholders to improve the application process. However, no applicants came forward to participate in the program prior to its expiration. PHMSA stands ready to work with operators to advance modern technological advancements which can continue to be explored through the special permit process and through other provisions of the pipeline safety regulations using 49 CFR part 192.18.

- b. Pipeline safety deserves the benefits of modern technological advances. What can PHMSA do to reduce barriers to demonstrating the benefits of pipeline safety technology?

**Response:** PHMSA agrees new technologies can improve pipeline safety. However, use of unproven technology cannot be allowed to expose the public or the environment to unreasonable risk.

49 U.S.C. 60142 authorized PHMSA to allow testing of innovative technologies and operational practices and required under subsection (d) that any testing program approved must provide more robust protection of public safety and the environment than the existing Federal pipeline safety regulations. PHMSA followed congressional direction by utilizing the review process of the existing special permit (waiver) program (see 49 U.S.C. 60142(d)(2)(A)), and PHMSA remained amenable to working with interested operators to alleviate some of the application requirements while ensuring that an equivalent level of public and environmental safety was being

maintained by any new technologies or operational practices being implemented on in-service, or active, pipelines.

PHMSA remains open to working with interested operators to establish the safety of modern technological advances.

14. The Committee on Transportation and Infrastructure advanced a pipeline safety reauthorization bill, H.R. 6494, that contains an important provision that will increase pipeline safety and reduce methane emissions. The provision would address maximum allowable operating pressure records for older pipelines. Please elaborate on the importance of this provision, given its safety and environmental benefits.

**Response:** In October 2019, PHMSA issued the Pipeline Safety: Safety of Gas Transmission Pipelines: MAOP Reconfirmation, Expansion of Assessment Requirements, and Other Related Amendments. This rule, addressing several congressional mandates from the Pipeline Safety, Regulatory Certainty, and Job Creation Act of 2011, requires operators of certain onshore steel gas transmission pipeline segments to reconfirm the maximum allowable operating pressure (MAOP) of those segments where the records needed to substantiate their current MAOP are not traceable, verifiable, and complete. Records to confirm, or reconfirm, MAOP include pressure test records or material property records that verify the MAOP is appropriate for the pipeline. Having accurate and reliable asset data (records) is important to ensuring safe and reliable operations.

PHMSA has worked with stakeholders on determining a process to address the issues regarding identifying acceptable records for older pipelines. PHMSA has worked collaboratively with stakeholders on this process since implementation of the rulemaking and continues to do so.

15. Is PHMSA considering an update to the potential impact radius, which remains a highly effective tool to prioritize risk and ensure the safety of our Nation's natural gas pipeline system, as reported by Government Accountability Office (GAO) earlier this month?
- a. Did the agency hold a public meeting on the potential impact radius (PIR) in December 2022 where PHMSA reaffirmed its efficacy and application?

**Response:** PHMSA conducted a public meeting on December 13-15, 2022, that included discussion of the PIR. More details about the public meeting can be found on PHMSA's website at this link: <https://primis-meetings.phmsa.dot.gov/archive/MtgHome.mtg@mtg=161.html>

- b. What new data or engineering analyses support a change in the PIR?

**Response:** During PHMSA's December 13-15, 2022, public meeting (<https://primis-meetings.phmsa.dot.gov/archive/MtgHome.mtg@mtg=161.html>) in Houston, Texas, there were two presentations that touched on and provided information related to potential impact radius (PIR), including one related to the National Transportation Safety Board's (NTSB) recommendation for PHMSA to consider a revision to the

calculation methodology used in the pipeline safety regulations to determine PIR (see NTSB Safety Recommendation P-22-001); and a second presentation that provided information on the background for development and validation of the PIR.

Following the public meeting PHMSA established a team to review the current potential impact radius (PIR) calculation methodology, the available accident data, and the human response data to determine if revisions to the pipeline safety regulations are required. PHMSA has completed its review of data and is in the process of discussing options regarding methodology to respond to the NTSB's recommendation. If a rulemaking initiative is established, all data reviewed by PHMSA's team will be included in the docket.

16. Section 25 of H.R. 6494, the *PIPES Act of 2023* includes direction for PHMSA to issue a Notice of Proposed Rulemaking (NPRM) on the transportation of gaseous state carbon dioxide by pipeline and includes other direction for such rulemaking.

- a. PHMSA is in the process of issuing an NPRM on carbon dioxide transportation. Does the NPRM incorporate provisions of H.R. 6494? If so, which provisions? Are there any provisions excluded?

**Response:** PHMSA notes that its draft Notice of Proposed Rulemaking (NPRM) for its Safety of Carbon Dioxide and Hazardous Liquid Pipelines rulemaking (RIN2137-AF60) is currently in interagency review pursuant to Executive Order 12866. PHMSA is therefore constrained by regulation (49 CFR part 5.5) and Departmental policy (see <https://www.transportation.gov/sites/dot.gov/files/2022-04/Guidance-on-Communication-with-Parties-outside-of-the-Federal-Executive-Branch-%28Ex-Parte-Communications%29.pdf>) from disclosing the content of that forthcoming NPRM to persons outside the Executive Branch.

- b. Assuming this legislation is enacted into law, how will PHMSA incorporate the bill's direction into a NPRM or Final Rule?

**Response:** PHMSA seeks to comply with applicable law and will endeavor — consistent with the procedural requirements of the Pipeline Safety Laws (49 U.S.C. 60101 et seq.) and the Administrative Procedure Act (5 U.S.C. 500 et seq.) — to reconcile the contents of its forthcoming NPRM and any final rule with Congressional statute.

**Questions Submitted for the Record**  
**Submitted by the Honorable Frederica S. Wilson**  
**Ranking Member**  
**Subcommittee on Railroads, Pipelines, and Hazardous Materials**  
**Subcommittee Hearing on “Ensuring Safety and Reliability: Examining the**  
**Reauthorization Needs of the Pipeline and Hazardous Materials Safety Administration”**  
**Tuesday, May 7, 2024**

**Questions for Mr. Tristan Brown, Deputy Administrator, Pipeline and Hazardous Materials Safety Administration (PHMSA), United States Department of Transportation:**

1. For the record, could you state what has been the leading cause of serious, significant, and all pipeline incidents over the last 20 years, and the last 3 years? Where do excavation damage incidents rank among leading causes?

**Response:** Excavation damage is a leading cause of serious pipeline incidents for all pipeline system types, as of 6/18/24. Below is a breakdown for all incidents. Serious Incidents are the most impactful to people and include fatalities or injuries requiring in-patient hospitalization. Significant incidents are a broader category of incidents, including all serious incidents and events with additional economical or environmental consequences. More specifically, significant incidents include the following:

- 1. Fatality or injury requiring in-patient hospitalization
- 2. \$50,000 or more in total costs, measured in 1984 dollars
- 3. Highly volatile liquid releases of 5 barrels or more or other liquid releases of 50 barrels or more
- 4. Liquid releases resulting in an unintentional fire or explosion

All Pipeline Types		
	Leading Cause	Excavation Damage Ranking
3 Years		
Serious Incidents	Incorrect Operation	2 <sup>nd</sup>
Significant Incidents	Equipment Failure	3 <sup>rd</sup>
All Incidents	Equipment Failure	4 <sup>th</sup>
20-Years		
Serious Incidents	Excavation Damage	1 <sup>st</sup>
Significant Incidents	Corrosion	3 <sup>rd</sup>
All Incidents	Equipment Failure	4 <sup>th</sup>

Natural Gas Distribution Pipelines		
	Leading Cause	Excavation Damage Ranking
3 Years		
Serious Incidents	Excavation Damage	1 <sup>st</sup>
Significant Incidents	Excavation Damage	1 <sup>st</sup>
All Incidents	Excavation Damage	1 <sup>st</sup>
20-Years		
Serious Incidents	Other Outside Force	2 <sup>nd</sup>
Significant Incidents	Excavation Damage	1 <sup>st</sup>
All Incidents	Excavation Damage	1 <sup>st</sup>

**Questions Submitted for the Record**  
**Submitted by the Honorable Tracey Mann**  
**Subcommittee on Railroads, Pipelines, and Hazardous Materials**  
**Subcommittee Hearing on “Ensuring Safety and Reliability: Examining the**  
**Reauthorization Needs of the Pipeline and Hazardous Materials Safety Administration”**  
**Tuesday, May 7, 2024**

**Questions for Mr. Tristan Brown, Deputy Administrator, Pipeline and Hazardous Materials Safety Administration (PHMSA), United States Department of Transportation:**

1. Representative Pete Stauber (R-MN) asked Deputy Administrator Brown during the hearing about PHMSA holding an additional Gas Pipeline Advisory Committee (GPAC) meeting regarding the Class Location Rule. Deputy Administrator Brown answered that the GPAC had already completed its work on the rule. However, Representative Stauber was referencing a consensus reached during the March 2024 Class Location GPAC meeting where the advisory committee voted by supermajority threshold to meet again on the rulemaking within one year.
  - a. Can PHMSA commit to holding the next GPAC meeting on the Class Location Rule before March 2025?
  - b. If not, what is preventing PHMSA from doing so?
  - c. Will this second GPAC meeting require a supplemental notice and comment period?

**Response:** *(Answer for all three questions)* During the Class Location GPAC meeting in March 2024, the GPAC provided the following recommendation to PHMSA:

- i. PHMSA should continue to review the class location change requirements for possible future rulemaking action.
- ii. PHMSA, within 12 months, hold a GPAC meeting on the concepts and history of the class location change requirements and how they interact with 49 CFR subpart O.

The meeting request from the GPAC was not directly related to the notice of proposed rulemaking discussed during the advisory committee meeting, “Pipeline safety: Class Location Change Requirements.” The request was, however, related to the concepts and history of the class location change requirements and how they interact with existing regulatory requirements. PHMSA fully intends to adhere to the GPAC request and hold a meeting.

2. Industry recently calculated that the Class Location Rule will reduce 28 times the amount of released methane as the proposed Leak Detection and Repair Rule would across the gas transmission sector. In addition to eliminating up to 800 million cubic feet of natural gas releases annually due to class change pipe replacements, the rule will significantly

increase safety by applying integrity management, the highest standard of care, to thousands of miles of additional pipe.

- a. What assurances can PHMSA provide that the agency is prioritizing completion of this important rulemaking, which advances safety and environmental objectives?
- b. How soon can the agency issue a final rule?
- c. With the significant improvement in safety and environmental impacts, why isn't the Class Location Rule being prioritized over other rulemakings?

**Response:** *(Answer for all three questions)* The 2020 PIPES Act had nearly double the number of mandates as the 2016 PIPES Act. Nevertheless, PHMSA has swiftly worked to complete these directives. A final Class Location Rule needs to be very carefully considered to provide protection against risks to life and property posed by pipeline transportation.

3. Representative David Rouzer (R-NC) asked Deputy Administrator Brown during the hearing several questions about the Leak Detection and Repair (LDAR) proposed rule. Please provide more detail regarding the following questions.

- a. Deputy Administrator Brown stated that the agency will likely complete the rule at the end of the year. Can PHMSA please be more specific on timing? Are there certain milestones PHMSA is working to achieve?

**Response:** PHMSA is on track to publish a final rule by January 2025. As shown in the PIPES Act Web Chart (see: <https://www.phmsa.dot.gov/legislative-mandates/pipes-act-web-chart>), PHMSA anticipates delivering the final rule to the Office of the Secretary of Transportation this summer and to the Office of Management and Budget by the fall.

- b. Deputy Administrator Brown stated that the White House and the Council on Environmental Quality had minimal involvement in the proposed rule but expected the standard interagency review process for other governmental bodies to provide feedback on the final rule. Can PHMSA please share who will be reviewing the final rule including, but not limited to the following agencies and offices: the Department of Transportation (DOT) Office of the Secretary, the Office of Management and Budget, the Office of Information and Regulatory Affairs, the Council on Environmental Quality, and the White House?

**Response:** Consistent with Department of Transportation Order 2100.6A and the interagency review process established in Executive Order 12866, PHMSA expects its forthcoming draft rulemaking package for the Gas Pipeline Leak Detection and Repair rulemaking (RIN2137-AF51) will be reviewed by personnel in the DOT Office of the Secretary (OST), and across the Executive Branch—including (but not limited to) personnel from the Office of Information and

Regulatory Affairs in the Office of Management and Budget, and other Executive Branch offices and agencies.

- c. On April 15, 2024, PHMSA recently denied a reasonable request from the entire gas pipeline industry to extend the comment period following the GPAC meeting for the LDAR rule. Given that this is one of the largest rulemakings PHMSA has undertaken in years and considering there were only about two weeks to review all the required materials from the recent GPAC meeting on the LDAR Rule, can PHMSA please explain this decision? Is PHMSA concerned about the potential of substantive errors with the final rule since it appears the comment process was being rushed and the rulemaking expedited? If PHMSA is not concerned, what is the basis?

**Response:** PHMSA provided the public a 90-day comment period after publication of the Leak Detection and Repair NPRM. The public was provided nearly 150 additional days to comment following the GPAC meeting in November of 2023, where the most difficult issues relative to the NPRM were addressed. PHMSA believes the 30 days provided for the public to comment on the March 2024 GPAC meeting was ample time to comment on the issues discussed at that meeting.

Additionally, PHMSA received comments from the public opposing the extension of the comment period for GPAC proceedings pertaining to the Leak Detection and Repair NPRM. Noting that the rule is urgently needed to improve safety and reduce methane emissions across the millions of miles of pipelines in the United States, and that the Protecting Our Infrastructure of Pipelines and Enhancing Safety Act of 2020 directed PHMSA to finalize advanced leak detection and repair standards by December 2021; commenters urged PHMSA to swiftly finalize the proposed measures to improve public safety, arguing that extending the comment period for GPAC proceedings pertaining to the Leak Detection and Repair NPRM could further delay PHMSA's finalization of that rule.

- d. Deputy Administrator Brown stated that PHMSA has been working with EPA to harmonize the LDAR rule from the proposal stage to the final stage with new EPA methane regulations since there will be overlapping requirements. Can PHMSA please share the dates of all meetings between PHMSA and EPA, including the names of the EPA offices, for each meeting? Please list other agencies and other stakeholders who may have been included in these meetings as well.

**Response:** PHMSA primarily met with representative from EPA's Office of Air and Radiation. PHMSA also notes that this rulemaking is subject to the interagency review process set forth in Executive Order 12866; as part of that process, PHMSA provided briefings on the NPRM for personnel from EPA and other agencies on the content of the rulemaking, and responded to multiple rounds of comments on the draft rulemaking package from the Office of Information and

Regulatory Affairs in the Office of Management and Budget, and diverse Executive Branch agencies (including, but not limited to, EPA). Further opportunity for input from EPA and other agencies will be provided as part of the Executive Order 12866 review of the final rule.

4. Representative Seth Moulton (D-MA) asked Deputy Administrator Brown about PHMSA's perspective on integrity management programs. Deputy Administrator Brown responded that integrity management is working for some operators and not others. Additionally, when asked if integrity management was the right approach, Deputy Administrator Brown discussed other PHMSA programs without mentioning the efficacy of the integrity management regulations.
  - a. According to an industry review of PHMSA gas transmission incident data in high consequence areas from 2010-2023, there have been zero incidents due to external corrosion in 10 of 14 years, there have been zero incidents due to internal corrosion in 12 of 14 years, and there have been zero incidents due to stress corrosion cracking in 12 of 14 years. These three threats are directly managed by integrity management programs. Does PHMSA agree that these statistics show that integrity management programs have made a positive impact on safety in high consequence areas?

**Response:** PHMSA is not familiar with analysis of incidents the question refers to and is unable to provide comment on the analysis without seeing it. In general, integrity management programs are comprised of many individual measures and responses. Over the past decade, the mileage of integrity assessments has increased, and we have observed a decrease in all types of corrosion incidents across both gas transmission and hazardous liquid pipelines for high consequence areas (HCAs) and non-HCAs. Additionally, during the same period, there has been a steady reduction in the number of repaired leaks and known leaks scheduled for repair in gas transmission pipeline across all areas and zones. It is encouraging to see the positive trends, but we remain vigilant in our focus on how to improve integrity management.

- b. Given the statistics above, does the agency support the expansion of integrity management principles on the nation's pipeline systems beyond high consequence areas and moderate consequence areas?

**Response:** PHMSA supports consideration of initiatives that improve pipeline safety, including consideration of the expansion of integrity management principles beyond currently covered pipelines. It should be noted that the Pipeline Safety Laws establish the minimum federal pipeline safety regulations, operators are able to expand integrity management principles to pipelines outside of their identified HCAs as part of their safety programs without approval from PHMSA, and some currently do so.

- c. Does the agency have measures or metrics, other than incident reports or enforcement actions that it uses to track and evaluate safety performance?

**Response:** PHMSA uses a variety of measures to evaluate the safety performance of operators. Incident rates (e.g., number of incidents per 1,000 miles) and enforcement actions are important measures, but PHMSA has many others. Leaks and repair rates are used to track operator issues that do not rise to the level of reportable incidents. PHMSA also tracks miles of pipe composed of higher risk materials such as cast iron, wrought iron and bare steel that merit additional scrutiny. In addition, PHMSA evaluates operators' implementation of integrity management, including the types and miles of in-line inspection tool runs conducted each year and the results of those tool runs.

Serious incidents, onshore significant incidents in HCAs, and additional metrics normalized per miles assessed by operator are also analyzed and shared publicly on the PHMSA National Pipeline Performance Measures page available to the general public here: <https://www.phmsa.dot.gov/data-and-statistics/pipeline/national-pipeline-performance-measures>. Based on input from stakeholders, including industry and public advocacy groups, PHMSA is considering revisiting these measures and potentially adding others.

Besides these standard measures, PHMSA inspectors consider information specific to overall company performance as well as individual pipeline segments when preparing and conducting inspections. This information varies based on the specific segment, but can include factors such as special permits, river crossings, natural force threats, time since last inspection, any operational changes, and attached components.

- 5. Recently, PHMSA informed the Government Accountability Office (GAO) that the agency is considering regulatory changes to improve the accuracy of its potential impact radius (PIR) formula.
  - a. Why is PHMSA considering an update to the PIR, which remains a highly effective tool to prioritize risk and ensure the safety of our nation's natural gas pipeline system, as reported by GAO earlier this month?
  - b. The agency held a public meeting on the PIR in December 2022 where PHMSA and the developer of the methodology (CFER) reaffirmed its efficacy and application. The PIR was developed to systematically define reasons to apply integrity management. It was not intended to be a model for accurately determining the extent of damage from a rupture. Can PHMSA please share why after the December 2022 meeting the agency is considering a shift in its belief that the current PIR is an effective tool in prioritizing work to manage safety threats?
  - c. Can you please share the data, research, or analysis that supports a change in the PIR?

**Response:** On August 15, 2022, the National Transportation Safety Board (NTSB) issued Safety Recommendation P-22-1 to PHMSA. NTSB recommended that PHMSA “Revise the calculation methodology used in your regulations to determine the potential impact radius of a pipeline rupture based on the accident data and human response data discussed in this report.” In response to NTSB’s recommendation, PHMSA conducted a public meeting December 13 -15, 2022, in Houston, Texas. There were two presentations that touched on and provided information related to potential impact radius (PIR): one related to the National Transportation Safety Board’s (NTSB) recommendation for PHMSA to consider a revision to the calculation methodology used in the pipeline safety regulations to determine PIR (see NTSB Safety Recommendation P-22-001); and the second was information on the background for development and validation of the PIR.

Following the public meeting PHMSA established a team to review the current potential impact radius (PIR) calculation methodology, the available accident data, and the human response data to determine if revisions to the pipeline safety regulations are required. PHMSA has completed its review of data and is in the process of discussing options regarding methodology to respond to the NTSB’s recommendation. If a rulemaking initiative is established, all data reviewed by PHMSA’s team will be included in the docket.

6. In prior presidential election years, DOT, including PHMSA, has barred major rulemaking activity and grant awards from being released several months prior to a presidential election.

- a. Will DOT and PHMSA be under a similar prohibition this year?

**Response:** PHMSA is not aware of any historical prohibitions along the lines of those suggested. Rather, in advance of the most recent presidential election, PHMSA issued a final rule on LNG by Rail (RIN2137-AF40) in late July 2020, and a Notice of Proposed Rulemaking on Class Location (RIN2137-AF29) in October 2020. Similarly, before the 2016 presidential election, PHMSA issued each of the following rulemaking actions: a final rule on FAST Act Requirements for Flammable Liquids and Rail Tank Cars (RIN2137-AF17) in August 2016; a final rule on Expanding the Use of Excess Flow Valves in Gas Distribution Systems to Applications Other Than Single-Family Residences (RIN2137-AE71) in October 2016; and an Interim Final Rule on Enhanced Emergency Orders for Pipelines (RIN2137-AF26) in October 2016.

- b. If so, what dates will DOT and PHMSA bar major rulemaking activity and grant funding from being released?

**Response:** PHMSA is not aware of any prohibitions for either rulemaking activity or grant funding in the nature described.

7. Concerns have been raised about instances of certain PHMSA inspectors, in several regional offices, acting in an unprofessional manner during audits and inspections.
- a. Can the agency please provide details on what trainings and/or programs PHMSA institutes to ensure its inspectors are acting professionally and abiding by the Department of Transportation's Standards of Ethical Conduct? Are any of these programs recurrent?

**Response:** PHMSA's Office of Pipeline Safety (OPS) takes the conduct of our staff very seriously. We encourage all operators to bring issues to the Region Directors and PHMSA/OPS leadership. Every year OPS leadership conducts a planning meeting with the Region Directors and Operations Supervisors. In the most recent two planning meetings we have invited representatives from the regulated community and other public interest stakeholders to come in and speak freely about their observations on topics ranging from regulatory oversight and newly issued regulations to inspection conduct. The attendees have not raised the topic of federal inspector conduct as a concern in these meetings. Additionally, several operators meet with PHMSA and OPS leadership throughout the year, usually at their request. If a conduct issue were to be raised, it would be investigated thoroughly.

With regard to training, every new inspector goes through an "orientation" with their supervisor. During this time the new inspector is introduced to the various programs and policies at OPS. The supervisor and new inspector discuss the various program objectives and expectations. One policy in particular is the "Conducting Inspection Policy." Within this policy is section 3.2.2 "Practical and Behavioral Guidance for OPS Inspectors" which describes OPS's expectations for inspector conduct and behavior. PHMSA provides an ethics orientation to every new employee during onboarding that reviews the Standards of Ethical Conduct for Employees of the Executive Branch. Additionally, PHMSA also provides ethics training annually for all its employees.

Additionally, our inspectors are trained on performing an inspection exit briefing with operator personnel. Our inspectors are required to identify potential non-compliances to personnel who may face company chastisement for failing to ensure the company meets minimum safety requirements. These exit briefings are constructive, and inspectors are trained to identify the issues as potential, not final findings. Potential findings are discussed with Operations Supervisors and Region Directors. Region Directors make the final determination of whether an enforcement case will be initiated.

Continuing on with the new inspector's training and development, all inspectors attend several formal classroom training classes at OPS's Training and Qualification center in Oklahoma City, OK. In their initial class PL1250 Introduction to Pipeline Safety Inspections, there is a block of instruction

“Standards of Ethical Conduct” which discusses conducting inspections in a professional manner and about their interactions with operators.

Finally, OPS is continuing to improve its programs and communication. Underway in 2024 is the updating and improvement of OPS’s On-the-job Training (OJT) policy. Within this update we are emphasizing the introduction or orientation of new inspectors to better ensure the culture of OPS is introduced to new staff from the beginning of their career with OPS. Continuing with the inspectors’ OJT, all inspectors are evaluated as they progress through OJT. Their supervisor will accompany them on inspections to observe their performance. A specific portion of that evaluation is the behavior and conduct of the inspector.

- b. If none have been created, can PHMSA commit to holding nationwide training for its inspection personnel in 2024? Furthermore, can PHMSA establish a frequency with which inspectors must be re-trained?

**Response:** OPS believes it has adequate policies and programs to address the conduct and behavior of its inspection staff and conducts ongoing training for its inspection staff on various topics including required annual PHMSA ethics training. OPS leadership holds regular meetings with inspection staff throughout the year, and this topic is one that will be raised to continue to impress on staff the importance of ethical and professional behavior.

- c. How does PHMSA address reports from operators that inspectors have acted unprofessionally and/or violated the DOT’s Standards of Ethical Conduct? What measures does PHMSA have in place to ensure that no retaliation occurs against an operator for making such a report?

**Response:** PHMSA encourages operators to contact PHMSA management with any concerns about the performance or conduct of its inspectors; PHMSA cannot act to correct behavior it is not informed of. While conduct complaints are rare, allegations are taken seriously and thoroughly investigated. If possible and appropriate, PHMSA will maintain the anonymity of the complainant. All reports related to misconduct are immediately elevated throughout the PHMSA management chain for appropriate follow-up action.

- d. Concerns have also been raised about instances where PHMSA audits can take months to complete when they are scheduled to be completed in one week. Can PHMSA please explain why this occurs?

**Response:** Pipeline inspections are rarely, if ever, scheduled to be completed in one week. A routine inspection will include a 1-2 day virtual scoping meeting with the operator, followed by a week or two of preparation as inspectors review operator incident data and compliance histories. This is generally followed by several days (or weeks depending on the size of the system) reviewing company procedures, maintenance manuals and records, and when appropriate, some of the procedural and record review are performed virtually. Some companies operate

only a few hundred miles of pipeline and others many thousands of miles. A typical pipeline inspection includes evaluation of hundreds of pipeline miles and associated facilities, hundreds of pages of procedures and multiple years of records. PHMSA physically inspects the system's compressor or pump stations, overpressure protection devices, manifolds, breakout tanks, as well as drive hundreds of miles verifying adequate cathodic protection (corrosion prevention) readings and right-of-way maintenance. Inspecting this quantity of facilities and materials generally occur over many weeks. In consideration of the impact to company staff, PHMSA will often spread the inspection weeks out over multiple months. For example, PHMSA may schedule a one-week inspection along an operator's right-of-way and then return a month later for a one-week examination of the operator's records at its office. Additionally, if an inspector identifies safety concerns, they may request additional information to better understand the circumstances. If this occurs, a scheduled inspection timeframe may be extended.

- e. What can PHMSA do differently to ensure that audits are completed efficiently going forward?

**Response:** PHMSA crafts each inspection to focus on the known risks of the pipeline based on the company and pipeline history—as well as other risk-based factors. This means that all other things being equal, pipeline companies with better safety and compliance histories, as well as those that are situated in lower risk areas (e.g., not near schools, population centers) will experience relatively fewer inspections topics and a potentially shorter inspection time. During each of the last two years, PHMSA has invited stakeholders to its annual inspection planning meeting and asked they provide insight into what PHMSA is doing well in its inspection program and what can be improved. In 2024, PHMSA will again seek input from the regulated industry on ways to improve our efficiency and effectiveness.

As resources are available, PHMSA will explore opportunities to leverage machine learning to enhance our ability to focus inspection resources on the riskiest aspects of pipeline systems and perhaps lessen time spent evaluating less risky aspects. However, our number one priority continues to be the safe operation of the nation's 3.3 million miles of regulated pipelines that we oversee.

- f. Ensuring consistent auditing and understanding of the code is important to avoid ambiguity, misinterpretation, and confusion during PHMSA audits. How is the agency working to ensure that PHMSA inspectors are objectively and consistently auditing to the code language as opposed to incorporating their opinions or interpretations of the code?

**Response:** As noted previously, PHMSA requires all federal and state inspectors to undergo rigorous training, provides continuous opportunities for various training, and is enhancing its OJT program to help ensure national consistency. PHMSA also provides its inspectors training and enforcement guidance, as well as access to agency decisions, interpretations, and consensus standards—many of these resources are also made publicly available by PHMSA.

Inspectors are not authorized to independently determine non-compliance and all proposed enforcement actions are reviewed by at least one supervisor and a region attorney prior to issuance. As mentioned, Region Directors make the final determination of whether an enforcement case will be initiated. This ensures that the enforcement action is not based on inaccurate or inconsistent interpretations of the pipeline safety regulations.

If a company disagrees with an enforcement action, it has a multitude of response options, including requesting a hearing, settlement discussions, and petitioning for reconsideration of any final order. Ultimately, a challenge to a final PHMSA determination may be brought in federal court. PHMSA works to be clear and effective in its oversight and companies have many opportunities to contest PHMSA citations in both informal and formal settings.

8. Representative Dusty Johnson (R-SD) asked Deputy Administrator Brown about PHMSA's technology pilot program and why the agency has not made modifications to it since, to date, no industry members have applied. In Deputy Administrator Brown's testimony, he stated that PHMSA sought feedback from stakeholders prior to the program being finalized, as well as after it was determined the program needed modifications.
  - a. In testimony to the Committee on May 7, 2024, Deputy Administrator Brown stated PHMSA gathered public comment on the Pipeline Safety Enhancement Program (PSEP) before it issued program guidance. On what date(s) prior to February 2, 2022, did PHMSA request public input on the PSEP and how did it make this request?
  - b. On February 2, 2022, PHMSA issued a Notice (87 Fed Reg 5939) outlining how PHMSA would review and process PSEP requests. The Notice makes no mention of PHMSA gathering public comments or description of how PHMSA incorporated public comments into the Notice. How did PHMSA reflect in the February 2, 2022 Notice any public comments it may have gathered?
  - c. In testimony to the Committee on May 7, 2024, Deputy Administrator Brown stated PHMSA gathered feedback from stakeholders after the Committee's 2023 hearing and questioning on this topic? On what dates did PHMSA meet with stakeholders to discuss PSEP improvements? With which groups did PHMSA meet?
  - d. What actions has PHMSA taken to make changes to its PSEP request review process to improve program participation?

**Response:** 49 U.S.C. 60142 authorized PHMSA to allow innovative technologies and operational practices that may provide more robust protection of public safety and the environment than the existing Federal pipeline safety regulations. PHMSA issued program guidance on February 2, 2022, and on February 9, 2022, met with representatives of the industry (i.e., Association of Oil Pipelines) to

discuss possible improvements to the PSEP process. During the hearing it was mentioned that PHMSA did not receive any public comment regarding the PSEP process.

Prior to the issuance of a Federal Register notice (Notice) regarding the establishment of the PSEP (87 FR 5939), PHMSA held virtual gas and liquid pipeline advisory committee meetings, and the industry submitted comments to the docket for PHMSA's consideration in the development of the PSEP guidance materials. Following the issuance of the Notice, PHMSA met with industry representatives to discuss potential candidates for participation; however, none of the projects moved forward.

**Questions Submitted for the Record**  
**Submitted by the Honorable Bruce Westerman**  
**Subcommittee on Railroads, Pipelines, and Hazardous Materials**  
**Subcommittee Hearing on “Ensuring Safety and Reliability: Examining the**  
**Reauthorization Needs of the Pipeline and Hazardous Materials Safety Administration”**  
**Tuesday, May 7, 2024**

**Questions for Mr. Tristan Brown, Deputy Administrator, Pipeline and Hazardous Materials Safety Administration (PHMSA), United States Department of Transportation:**

1. Mr. Brown, my understanding is the Gas Pipeline Advisory Committee met in March to discuss PHMSA’s proposed leak detection and repair rulemaking. The GPAC recommended several changes to the proposed rule to ensure it is technically feasible, reasonable, cost-effective, and practicable.
  - a. Will you commit to the Committee that you and your staff will seriously consider the GPAC’s recommendations as you revise the proposed rule?

**Response:** PHMSA will consider all of the GPAC’s recommendations and the comments received during the open comment periods, as we prepare the final rule.

2. The EPA has finalized several rules recently that apply to emissions in the oil and natural gas sector. I am concerned that inconsistent regulations between EPA and PHMSA will place undue burden on the industry and smaller independent companies in particular.
  - a. At the very least, will you commit to ensuring consistency between EPA’s regulations and PHMSA’s ultimate leak detection and repair final rule?

**Response:** PHMSA is committed to ensuring consistency between EPA regulations and our final rule. PHMSA also notes that this rulemaking is subject to the interagency review process set forth in Executive Order 12866; as part of that process, PHMSA provided briefings on the NPRM for personnel from EPA and other agencies on the content of the rulemaking, and responded to multiple rounds of comments on the draft rulemaking package from the Office of Management and Budget, and diverse Executive Branch agencies (including, but not limited to, EPA). Further opportunity for input from EPA and other agencies will be provided as part of the Executive Order 12866 review of the final rule.

**Questions Submitted for the Record**  
**Submitted by the Honorable David Rouzer**  
**Subcommittee on Railroads, Pipelines, and Hazardous Materials**  
**Subcommittee Hearing on “Ensuring Safety and Reliability: Examining the**  
**Reauthorization Needs of the Pipeline and Hazardous Materials Safety Administration**  
**Tuesday, May 7, 2024**

**Questions for Mr. Tristan Brown, Deputy Administrator, Pipeline and Hazardous Materials Safety Administration (PHMSA), United States Department of Transportation:**

1. How long has PHMSA investigated both thermite and thermite technology?

**Response:** PHMSA began formally investigating thermite and thermite technology on September 27, 2018, with the first Task Order to Southwest Research Institute. Although PHMSA had previously received questions relating to thermite classifications dating back to when the agency was the Research and Special Projects Administration (RSPA), the impetus leading to formal research efforts was an email PHMSA received from one of our third-party explosive testing agencies on March 4, 2016. Subsequently PHMSA had discussions with other explosive testing agencies, Federal agencies including the Bureau of Alcohol, Tobacco, Firearms and Explosives (ATF) and the Department of Defense (DOD), and international transport regulators regarding how thermites should be considered under the definitions for explosives and pyrotechnics and ultimately how such materials should be classed.

2. On September 22, 2023, PHMSA released an interim thermite policy stating it does not have the force and effect of law. Why did PHMSA not follow *the Administrative Procedure Act* when generating this policy?

**Response:** On September 22, 2023, PHMSA issued a Notice of Explanation of how it has reviewed and classified previous thermite mixtures. Since initiating its research into thermite classification, PHMSA has sought to provide regulatory relief by reclassifying certain thermite substances, which meet PHMSA’s definition of Class 1 explosives, as Division 4.1 flammable solids pursuant to the Associate Administrator’s existing authority under 49 CFR § 173.56(i). This notice explained what data PHMSA has analyzed and found convincing when reclassifying thermite substances. This notice was only intended to provide clarity for how PHMSA has treated and reviewed previous requests while we complete the ongoing research to determine proper testing and criteria required to address the safe transportation of thermite formulations. While PHMSA did not issue its policy through the notice and comment period, its actions were still consistent with the Administrative Procedure Act.

3. Will domestic manufacturers of thermite be held accountable for the policy?

**Response:** PHMSA applies the same standards for classification of explosives, including the thermite policy, to all applicants, whether domestic or foreign.

4. Why would PHMSA, with the September 2023 Safety Management Service (SMS) research, state that all thermites are provisionally considered explosive?

**Response:** Thermites meet the regulatory definition of an explosive under the Hazardous Materials Regulations (HMR) at 49 CFR 173.50(a) and the United Nations Recommendations on the Transport of Dangerous Goods Section 2.1.1. The SMS research report confirmed this, stating “It is the recommendation of SMS that thermite powders, which are manufactured with the view to producing a pyrotechnic effect, be classed into Class 1 in the condition and form in which they are offered for transport...”

As noted above, PHMSA has also been engaged with other foreign competent authorities to promote an internationally harmonized approach toward thermite regulation. In discussion with several of these competent authorities, it was the unanimous opinion that thermite materials are appropriately placed within the class of explosives (Class 1) as they meet both of the HMR and UN definitions of explosives.

5. If you believe thermites meet the definition of a pyrotechnic substance, wouldn't this necessitate all Class 4 flammable solids also meet the definition (...create light, heat, smoke...)?

**Response:** While pyrotechnic substances and flammable solids are both capable of creating light, heat, smoke, etc., they differ in that pyrotechnic substances contain a combination of both fuel and oxidizer and are thus self-sustaining and will continue to react without an external oxygen source, whereas flammable solids are merely fuels that require external supplies of oxygen to sustain combustion. Once thermites are initiated, they cannot be extinguished by most traditional means.

6. If a thermite manufacturer can produce a stable mixture that can be proven through UN testing, why are you penalizing innovation over a definition (pyrotechnic substance)?

**Response:** PHMSA is not penalizing any manufacturer of pyrotechnic substances, only seeking to apply the hazardous materials transportation regulations safely and consistently. All substances that have a pyrotechnic effect remain in Class 1 by definition unless they are diluted or desensitized from their pure state. This approach has been harmonized internationally across foreign competent authorities to ensure accurate, fair, and consistent classification of explosives. Under the current PHMSA interim thermite policy, manufacturers of certain thermite substances that have been properly examined can request regulatory relief to be shipped as a Division 4.1, flammable solid.

7. Why did you allow a foreign company (SPEX), which does not conduct business in the U.S., to impact your view of thermites when you have domestic manufacturers with decades of experience?

**Response:** No single company influenced PHMSA's view of thermites or their classification. In February 2022, SPEX reached out to PHMSA technical staff to discuss thermite classification, testing, and the relationship of the interim policy and the

published letters of interpretation. SPEX received responses to their inquiries on how explosive definitions and testing schemes apply to thermite substances and articles that were commensurate with how PHMSA regularly responds to outside stakeholders requesting insight or guidance on how the HMR applies to specific situations. SPEX's inquiries did not impact PHMSA's technical opinion or guidance, and PHMSA did not provide information to SPEX specific to any particular manufacturer or product. PHMSA has also had informational meetings with domestic manufacturers (i.e., MCR Oil Tools, Chammas Plasma Cutters, Goldschmidt, etc.) to discuss their process, materials, and articles.

8. How many injuries and/or deaths have occurred in the U.S. due to commercial thermites within the last 30 years?

**Response:** PHMSA only collects data on incidents involving the commercial transportation of hazardous materials. Of those, there are approximately 10 transportation incidents per year involving thermite or thermite-like materials, each causing on average about \$7,000 in damages. Ninety percent of these incidents occurred on the highway, and none in the last thirty years resulted in injury or death.

9. Only 3 of the 8 mixtures were commercial products in the SMS report about thermites. Do you believe it's a sound decision to make a blanket ruling on thermite technology based on test results of non-commercial grade thermites?

**Response:** The SMS research included some worst-case scenarios for thermite formulations to delineate how particle size, morphology, packaging, and chemical composition impact behavior. Their results confirmed the ability for some thermite formulations to detonate, and it was important that SMS design the study materials to explore how these variables interact in either accelerating or slowing the relative reactivity for those thermite formulations. SMS also performed several large-scale tests with commercially produced thermites in shipping containers and aircraft fuselage to understand the behavior and hazards of palletized transport of thermites subjected to credible accident scenario initiation methods (e.g., external fire).

10. Have you contacted the U.S. manufacturers of thermite technology to understand how a Class 1 explosive classification would affect their business and industry?

**Response:** The agency does routinely, and frequently, engage with regulated stakeholders through public meetings, industry trade groups, specialized consultants, and by request from individual stakeholders. The agency also provides letters of interpretation, on request, on how the regulations should be interpreted to specific cases and takes consideration of public comments made on all rulemakings. PHMSA has also had informational meetings with domestic manufacturers (i.e., MCR Oil Tools, Chammas Plasma Cutters, Goldschmidt, etc.) to discuss their processes, materials, and articles.