PIPES ACT OF 2016 IMPLEMENTATION: OVERSIGHT OF PIPELINE SAFETY PROGRAMS

(115–47)

HEARING

BEFORE THE

SUBCOMMITTEE ON RAILROADS, PIPELINES, AND HAZARDOUS MATERIALS

OF THE

COMMITTEE ON TRANSPORTATION AND INFRASTRUCTURE

HOUSE OF REPRESENTATIVES

ONE HUNDRED FIFTEENTH CONGRESS

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June 21, 2018

SUMMARY OF SUBJECT MATTER

TO:	Members, Subcommittee on Railroads, Pipelines, and Hazardous Materials
FROM:	Staff, Subcommittee on Railroads, Pipelines, and Hazardous Materials
RE:	Subcommittee Hearing on "PIPES Act of 2016 Implementation: Oversight of Pipeline Safety Programs"

PURPOSE

The Subcommittee on Railroads, Pipelines, and Hazardous Materials will meet on Thursday, June 21, 2018 at 10:00 a.m. in 2167 Rayburn House Office Building to receive testimony from the Pipeline and Hazardous Materials Safety Administration (PHMSA), the Association of Oil Pipe Lines (AOPL), the American Petroleum Institute (API), the Interstate Natural Gas Association of America (INGAA), and the Pipeline Safety Trust on matters relating to oversight of the Department of Transportation's (DOT) pipeline safety program.

BACKGROUND

PHMSA was created under the *Norman Y. Mineta Research and Special Programs Improvement Act of 2004* (P.L. 108-426). Prior to enactment of the 2004 Act, DOT's Research and Special Programs Administration handled pipeline and hazardous materials safety. On the pipeline safety side, PHMSA oversees the safety of the Nation's 2.6 million miles of gas and hazardous liquid pipelines, which account for the transportation of 64 percent of the energy commodities consumed in the United States.

PHMSA regulates the safety of pipeline facilities used in the transportation of gas and hazardous liquids. A state agency that is certified by PHMSA to enforce federal safety standards may adopt additional or more stringent safety standards for intrastate pipeline facilities and intrastate pipeline transportation only if those standards are compatible with federal regulations. A state agency may not adopt or continue to enforce safety standards for interstate pipeline facilities or interstate pipeline transportation.

PHMSA's pipeline safety functions include developing, issuing, and enforcing regulations for the safe transportation of natural gas and hazardous liquids by pipelines. Regulatory programs are focused on ensuring safety in the design, construction, testing, operation, and maintenance of pipeline facilities.

In support of these regulatory responsibilities PHMSA: administers grants to aid states in conducting intrastate gas and hazardous liquid pipeline safety programs; monitors performance for those state agencies participating in the programs; collects, compiles, and analyzes pipeline safety and operating data; and conducts training programs through the Transportation Safety Institute for government and industry personnel in the application of pipeline safety regulations. PHMSA also conducts a pipeline safety technology program with emphasis on applied research for improved safety.

The Pipeline Safety, Regulatory Certainty, and Job Creation Act of 2011

The *Pipeline Safety, Regulatory Certainty, and Job Creation Act of* 2011 (P.L. 112-90) ("2011 Act"), which was enacted on January 3, 2012, authorized PHMSA's pipeline safety programs until September 30, 2015. The 2011 Act included 42 congressional mandates for PHMSA, the most consequential of which PHMSA has yet to implement. Of the 42 mandates, 34 are complete. Important outstanding mandates in the 2011 Act include integrity management and leak detection.

Integrity Management

Currently, owners or operators of gas and hazardous liquid pipelines are required to develop and implement written integrity management programs to ensure the integrity of their pipelines in High Consequence Areas (HCAs) and to reduce risk of injuries and property damage from pipeline failures. These programs must include procedures and processes to identify HCAs, determine likely threats to a pipeline within a HCA, evaluate the physical integrity of a pipe within a HCA, and repair or remediate any pipeline defects found.

Section 5 of the 2011 Act requires the Secretary of Transportation (Secretary) to transmit a report to Congress evaluating: (1) whether gas and hazardous liquid pipeline integrity management programs should be expanded beyond HCAs; and (2) whether applying integrity management program requirements to additional areas would mitigate the need for class location requirements (with respect to gas transmission pipeline facilities). Additionally, the 2011 Act directs the Secretary to issue final regulations if the Secretary finds, in the report, that integrity management requirements should be expanded beyond HCAs. Though the Congressionally mandated deadline for the report was January 3, 2014, the report has not been completed.

Leak Detection

Section 8 of the 2011 Act required the Secretary to study and transmit a report to Congress on leak detection systems utilized by operators of hazardous liquid pipelines and transportation-related flow lines to detect ruptures and small leaks. In conducting the

study, the Secretary must analyze the technical limitations of current leak detection systems and consider the practicability of requiring technical, operational, and economically feasible leak detection standards for operators.

The Secretary completed the study and submitted the report finding that it was practicable to establish such standards. Therefore, the Administration plans to issue final regulations to require operators to use leak detection systems where practicable and to establish standards for the capability of such systems to detect leaks. PHMSA reports that the rule is currently under agency review.

The Protecting our Infrastructure of Pipelines and Enhancing Safety Act of 2016

The last reauthorization of the DOT's pipeline safety programs was the *Protecting our Infrastructure of Pipelines and Enhancing Safety Act of 2016* (P.L. 114-183) (PIPES Act), which was enacted on June 22, 2016 and authorized PHMSA's pipeline safety programs until September 20, 2019. In order to ensure that PHMSA carries out its outstanding mandates, the PIPES Act requires PHMSA to update Congress every 60 days on outstanding statutory mandates, including the status of each mandate, reasons for its incompletion, and estimated completion date. The PIPES Act instructed PHMSA to complete 19 mandates, 13 of which are complete. Important outstanding mandates in the 2016 Act include emergency order authority, nationwide integrated pipeline safety regulatory database, and underground natural gas storage.

Emergency Order Authority

Section 16 of the PIPES Act directed PHMSA to issue temporary Emergency Order regulations for pipelines within 60 days after the date of enactment, and final regulations not later than 270 days after enactment. This section would allow the Secretary to impose on an owner or operator of gas or hazardous liquid pipeline facilities an emergency order to abate an imminent hazard caused by an unsafe condition or practice, or combination of unsafe conditions or practices. Prior to issuing such an emergency order, the Secretary is required to consult with appropriate federal agencies, state agencies, and other entities, including hazardous liquid and gas pipeline owners, operators, and trade associations. The Secretary shall consider the impact of the order on public health and safety, including the health and safety of end users, the economy, national security, owners and operators of pipelines, and consumers.

The emergency order shall contain a detailed written description of the condition or conditions, entities subject to the order, the restrictions imposed, the standards and procedures for obtaining relief from the order, how the ordered is tailored to abate the imminent hazard, why other authorities, such as corrective actions orders, are insufficient to abate the hazard, and how the pre-issuance considerations were taken into account.

Section 16 also provides an entity subject to an order an opportunity for petition and review by an administrative law judge (49 CFR 109.19 (d) and (g)), and if the Secretary fails to make a decision within 30 days of receiving a petition for review, the

emergency order would be voided. The Secretary has yet to issue the final regulations, which were due March 19, 2017.

Nationwide Integrated Pipeline Safety Regulatory Database

Section 11 of the PIPES Act requires the Secretary to establish a national integrated pipeline safety regulatory inspection database. The purpose of the database is to improve communication and collaboration between PHMSA and state pipeline regulators. The due date was June 22, 2017.

Underground Natural Gas Storage

Section 12 of the PIPES Act requires the Secretary to develop minimum safety standards for underground natural gas storage facilities, including a depleted hydrocarbon reservoir, an aquifer reservoir, and a solution-mined salt cavern reservoir. It also allows for a state authority to adopt additional or more stringent safety standards for intrastate underground natural gas storage facilities, so long as such standards are compatible with the minimum safety standards prescribed in this section. PHMSA published an IFR on December 19, 2016, and reopened the comment period on October 19, 2017 for 30 days.

Charts detailing PHMSA's progress in meeting the mandates of the 2011 Act and the PIPES Act are attached to this memorandum. As evidenced in the chart, PHMSA has completed 34 of the 42 mandates from the 2011 Act and 13 of the 19 for the PIPES Act. The Subcommittee looks forward to hearing from the agency, industry, and safety advocates on the status and impact of the mandates included in the 2011 Act and PIPES Act.

WITNESS LIST

Panel I

The Honorable Howard "Skip" Elliot
Administrator
Pipeline and Hazardous Materials Safety Administration

Panel II

Mr. Andrew Black
President and CEO
Association of Oil Pipe Lines

Mr. Robin Rorick
Group Director, Midstream and Industry Operations
American Petroleum Institute

Mr. Chad Zamarin
Senior Vice President, Corporate Strategic Development
Williams
On behalf of the Interstate Natural Gas Association of America

Mr. Carl Weimer
Executive Director
Pipeline Safety Trust

PSA11 (Enacted January 3, 2012)
Statutory and Non-Statutory Tasks and Deliverables Executive Summary by Section
34 of 42 mandates complete

NOTE: Statutory Deadlines signified with an (S).

Pending Mandates:

1. **Rulemakings (5):**

Deadlines	Task		Section
12/21/12	Require operators to report any exceedance of MAOP within 5 days, and regulations to ensure safety of pipelines without records to confirm MAOP Communicated request through Advisory Bulletin: Reporting of Exceedances of Maximum Allowable Operating Pressure *Status:* May further address in "Pipeline Safety: Safety of Gas Transmission Pipelines"		PSA11 Sec. 23(a) 49 U.S.C. § 60139(b) and (c)
1/3/2015	IMP Expansion and Class Location Replacement PHMSA. If appropriate, issue regulations *Status*: May be addressed by "Pipeline Safety: Safety of Gas Transmission Pipelines" (4/8/2016) and "Pipeline Safety: Safety of Hazardous Liquid Pipelines" (10/13/15)		PSA11 Sec. 5(f)
1/3/2014	Leak Detection on Hazardous Liquid Pipelines *Status*: NPRM of "Pipeline Safety: Safety of Hazardous Liquid Pipelines" of 10/13/15 and second rulemaking in draft: "Amendments to Parts 192 and 195 to Require Valve Installation and Minimum Rupture Detection Standard		PSA11 Sec. 8(b)
N/A	Regulations for Offshore Liquid Gathering Lines *Status*: may be addressed by the "Pipeline Safety: Safety of Hazardous Liquid Pipelines". The NPRM published 10/13/15		PSA11 Sec. 21 (c) 49 U.S.C. § 60108(c)(8)
As soon as practicable after: 1/3/2014(S)	Automatic and Remote Controlled Shut off Valves *Status:* Studies for the Requirements of Automatic and Remotely Controlled Shutoff Valves completed 10/31/12; Report submitted to Congress 12/27/12 Rulemaking under development "Amendments to Parts 192 and 195 to Require Valve Installation and Minimum Rupture Detection Standards.		PSA11 Sec. 4 49 U.S.C. § 60102(n)

2. Other Deliverables to Congress (3):

Deadlines	Task		Section
12/15/2011 (S)	Public Education and Awareness - Maintain a map of all HCAs as part of NPMS. *Status:* Working on identifying all needed datasets to update the map.		PSA11 Sec. 6(a) 49 U.S.C. § 60132(d)(1)
N/A	PHMSA **may** extend a gas pipeline operator's 7-year reassessment interval by 6 months if the operator submits written notice with sufficient justification of the need for an extension. Guidance under development.		PSA11 Sec. 5(e) 49 U.S.C. § 60109(c)(3)(B)
N/A	CO2- Issue regulations for transporting carbon dioxide by pipeline in a gaseous state. *Status:* Report "'Background for Regulating the Transportation of Carbon Dioxide in a Gaseous State,' published in FR on 6/27/2016 Assessing path forward.		PSA11 Sec. 15 49 U.S.C § 60102(i)

Completed

1. **Rulemakings :**

Date Published	Task		Section
9/25/13	Enforcement hearing regulations within: Pipeline Safety: Administrative Procedures; Updates and Technical Corrections		PSA11 Sec. 20(a)
N/A	Update Part 190 to be consistent Part 194: Pipeline Safety: Administrative Procedures; Updates and Technical Corrections		PSA11 Sec. 10
10/14/16	Pipeline Safety: Expanding the Use of Excess Flow Valves in Gas Distribution Systems to Applications Other Than Single-Family Residences		PSA11 Sec. 22 49 U.S.C. § 60109(e)(3)(B)
1/23/17	Review and revise procedures for operators and the NRC to notify emergency responders, including 911: Operator Qualification, Cost Recovery and Accident Notification		PSA11 Sec. 9
1/23/17	Prescribe fee structure and procedures for assessment and collection in order to implement authority to recover design review costs of "new technology" projects included in Final rule: Operator Qualification, Cost Recovery and Accident Notification		PSA11 Sec. 13(a) 49 U.S.C. § 60117(n)

2. **Guidance Updates and Advisory Bulletins :**

Date Published	Task		Section
11/3/2010	Emergency Preparedness Communications		PSA11 Sec. 9 (b)(2)
05/07/2012	MAOP Verification of Records Advisory Bulletin		PSA11 Sec. 23 49 U.S.C. § 60139(a)
10/11/2012	Communication During Emergency Situations		PSA11 Sec. 6(b)
12/21/12	Developed form for reporting gas transmission lines: Gas Transmission Reporting Form Advisory Bulletin: Reporting of Exceedances of Maximum Allowable Operating Pressure		PSA11 Sec. 23 49 U.S.C. § 60139(b)
12/27/2012	Cost Recovery for Design Review Meaning for New Technologies		PSA11 Sec. 13(b)
7/3/2013	Require tests to confirm the material strength of previously untested gas transmission pipelines in HCAs. Advisory Bulletin - Reporting Exceedances of Maximum Allowable Operating Pressure (MAOP) published 12/21/12		PSA11 Sec. 23(a) 49 U.S.C. § 60139

3. Authorization Reports to Congress :

Date Published	Task		Section
10/9/14	A Study on Impact of Excavation Damage on Pipeline Safety		PSA11 Sec. 3(d)
06/8/2016	IMP Expansion and Class Location Study and Report		PSA11 Sec. 5(a) thru (d)
N/A	Publication Education and Awareness – Oil Spill Response plans – available upon request		PSA11 Sec. 6(c) 49 U.S.C. § 60138
12/27/2012	Status report on Cast Iron Pipelines Inventory		PSA11 Sec. 7(a)-(b)
12/10/2012 12/27/2012	Leak Detection Study Report to Congress		PSA11 Sec. 8(a)
8/12/14	Effects of Diluted Bitumen on Crude Oil Transmission		PSA11 Sec. 16
4/11/2016	Study of Non-Petroleum Hazardous Liquids		PSA11 Sec. 17
5/8/15	Gathering Lines		PSA11 Sec. 21(a)-(b)
03/04/2015	Pipeline Transportation R&D Congressional report		PSA11 Sec. 32(f)
11/30/2012	Pipeline Inspection & Enforcement Needs		PSA11 Sec. 31
10/9/14	Response to Depth of Cover Over Buried Pipelines		PSA11 Sec.28 49 U.S.C. § 60140

4. Discretionary Grants :

Date Published	Task		Section
ongoing	Minimum Standards for State One-Call Notification Grants		PSA11 Sec3(a)-(c) 49 U.S.C. § 6103
2012-2014	Maintenance of Effort of State Pipeline Safety Grants		PSA11 Sec19 49 U.S.C. § 60107(b)

5. Other PSA11 Accomplishments :

Date Published	Task		Section
12/10/2012	Leak Detection Study **completed**		PSA11 Sec 8(a)
01/03/2013 (S)	Public Education and Awareness – Update map of all HCAs every two years. New NPMS website has been launched as well as other outreach methods. *Status:* Implemented.		PSA11 Sec. 6(a) 49 U.S.C. § 60132(d)(2)
	Continuing Improvements to PHMSA Facility Response Plan Policy		PSA11 Sec.9 49 U.S.C. § 60138
02/28/2015	Information on standards incorporated by Reference		PSA11 Sec 24 49 U.S.C. § 60102(p)
07/25/2013	Pipeline Transportation R&D 5-year plan Government/ Industry Research & Development Workshop Results		PSA11 Sec. 32(f)
1/3/2013	Tribal Consultation Protocol		PSA11 Sec. 30
ongoing	Cast Iron Pipelines Inventory Tracking		PSA11 Sec 7a 49 U.S.C. § 60108(d)(4)

PIPES Act of 2016 (Enacted June 22, 2016)

Statutory and Non-Statutory Tasks and Deliverables Executive Summary by Section
13 of 19 PHMSA Mandates Complete

NOTE: Statutory Deadlines signified with an (S).

Pending Mandates

1. **Rulemakings (3):**

Deadlines	Task		Section
8/21/16 (S)	Issue temporary Emergency Order regulations. Temporary regulations shall expire on the date of issuance of the final regulations. *Status:* IFR Emergency Orders published on 10/14/16. Final rule deemed significant and with OST.		PIPES Act of 2016 Sec. 16 49 U.S.C. § 60117(o)
N/A	Rulemaking to classify locations near pipeline right-of-way that are a part of the Great Lakes, coastal beaches, and marine coastal waters as unusually sensitive environmental areas *Status:* **Public meeting** to discuss Coastal Ecological (Eco) Usually Sensitive Areas (USAs) was held on 11/17/17.		PIPES Act of 2016 Sec. 19 49 U.S.C. § 60109(b)(2)
N/A	(a) Rulemaking to consider 'national security' in the location of new liquefied natural gas facility (b) Rulemaking to update the minimum safety standards prescribed for permanent, small scale liquefied natural gas pipeline facilities *Status*: Working with OST on path forward.		PIPES Act of 2016 Sec. 27(a)-(b) 49 U.S.C. § 60103(a)(7)

2. Authorization Reports to Congress (2):

Deadlines	Task		Section
6/22/17 (S)	Submit to Congress a report on the feasibility of establishing a National Integrated Pipeline Safety Regulatory Inspection Database to improve communication and collaboration between the PHMSA and State pipeline regulators *Status: Report is currently under review*		PIPES Act of 2016 Sec. 11(a)-(c)
6/22/18 (S)	Enter an agreement with the Transportation Research Board of the National Academies to conduct a study examining the safety, regulatory requirements, techniques, and best practices applicable to pipeline facilities that transport or store only petroleum gas or mixtures of petroleum gas and air to 100 or fewer customers *Status:* The National Academy of Science's study is underway; study results and final report expected by June 2018.		PIPES Act of 2016 Sec. 26

3. Other PIPES Implementation Deliverables (1)

Deadlines	Task		Section
12/19/16 (S)	Voluntary Information Sharing System Working Group. Publish the recommendations on a publicly available Web site of the Department of Transportation *Status:* The VIS Working Group met **Group meeting** held 2/28/18; 4/5/18 -- 4/6/18 and scheduled for 6/20/18.		PIPES Act of 2016 Sec. 10

Completed Actions

1. **Guidance Updates (3):**

Date Published	Task		Section
	Safety Data sheets; Executed by the regulated community.		PIPES Act of 2016 Sec. 14
11/21/16	ANPRM- Hazardous Materials: PIPES Act Requirements for Identification Numbers on Cargo Tanks Containing Petroleum Based Fuel		PIPES Act of 2016 Sec. 15
8/16/16	ADB- Pipeline Safety: Clarification of Terms Relating to Pipeline Operational Status		PIPES Act of 2016 Sec. 23

2. **Authorization Reports to Congress (4):**

Date Published	Task		Section
10/18/17	Congressional Report: Inspection Finding Notifications		PIPES Act of 2016 Sec. 7 (b)
8/3/17	Improving Damage Prevention Technology		PIPES Act of 2016 Sec. 8
8/2/17	State-level Policies that Encourage or Present Barriers to the Repair and Replacement of Leaking Natural Gas Pipelines		PIPES Act of 2016 Sec. 30
6/5/17	Processes for Removing Financial Conflict of Interest in the Peer Review of Pipeline Safety R&D		PIPES Act of 2016 Sec. 22(b)
5/16/17	Lost and Unaccounted For Natural Gas Metrics		PIPES Act of 2016 Sec. 29(a)-(b)

3. **Other PIPES Act Completed Actions (5):**

Date Published	Task		Section
6/22/18 (S)	Issue minimum safety standards for underground natural gas storage facilities *Status:* IFR on Underground Natural Gas Storage published on 12/19/16. Comment period reopened for 30 days on 10/19/2017.		PIPES Act of 2016 Sec. 12(b) 49 U.S.C. § 60141

Date Published	Task		Section
11/17/16	Notice- Pipeline Safety: Underground Natural Gas Storage Facility User Fee		PIPES Act of 2016 Sec. 12(c) 49 U.S.C. § 60302
6/20/17	Fill vacancies Technical Pipeline and Hazardous Liquid Pipeline Safety Standards Committee. Mandate is reoccurring as positions become vacant **Federal Register Notice** Soliciting Applicants posted on 5/24/16. **GPAC nomination package** Notice posted 6/20/17.		PIPES Act of 2016 Sec. 6(b) 49 U.S.C § 60115 (b)(5)
6/20/17	Guidance for Compliance		49 U.S.C. § 60108 (e)
10/20/16	Rulemaking Chart Mandate is reoccurring and requires an update every 90 days.		PIPES Act of 2016 Sec. 3 (a)-(b)

PIPES ACT OF 2016 IMPLEMENTATION: OVERSIGHT OF PIPELINE SAFETY PROGRAMS

THURSDAY, JUNE 21, 2018

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON RAILROADS, PIPELINES, AND HAZARDOUS MATERIALS,
COMMITTEE ON TRANSPORTATION AND INFRASTRUCTURE,
Washington, DC.

The subcommittee met, pursuant to notice, at 10:01 a.m. in room 2167, Rayburn House Office Building, Hon. Jeff Denham (Chairman of the subcommittee) presiding.

Mr. DENHAM. The subcommittee will come to order. Without objection, the Chair is authorized to declare a recess at any time.

I ask unanimous consent that Members not on the subcommittee be permitted to sit with the subcommittee at today's hearing and ask questions.

Without objection, so ordered.

Good morning. This is the Subcommittee on Railroads, Pipelines, and Hazardous Materials. Our hearing today will focus on the oversight of the Department of Transportation's pipeline safety program, which is administered by the Pipeline and Hazardous Materials Safety Administration, or PHMSA.

The United States has the largest network of energy pipelines in the world, and it helps power nearly every facet of our daily activities. Pipelines account for transportation of 64 percent of the energy commodities consumed in the United States. To ensure that pipelines continue to be the safest and most cost-effective means to transport energy products, diligent oversight of DOT's pipeline safety programs is a top priority.

Here is the issue. Over the past decade, we have continued to see this committee pass out reauthorizations, only to see them get stalled. The 2016 PIPES [Protecting our Infrastructure of Pipelines and Enhancing Safety] Act strengthened a lot of our efforts from the 2011 act. But as Mr. Capuano and I have continued to discuss these issues, we have seen slow implementation. The PIPES Act contained 19 mandates, 13 of which are complete. The 2011 law included 42 congressional mandates, of which 34 are complete. And today we'll hear from PHMSA on where all the PIPES Act and 2011 act mandates stand.

I look forward to hearing from industry on how it is being proactive in its own safety initiatives to ensure best practices for inspections, detecting leaks, and other important safety initiatives.

In closing, I want to thank each of the witnesses here today, and I would now like to recognize the ranking member, Mr. Capuano, for any opening statement he may have.

Mr. CAPUANO. Thank you, Mr. Chairman. I want to thank all the panelists for being here today.

I generally don't do much of an opening statement, and I am not going to do one today. But I am going to ask the panelists. The thing I am most interested in is what has happened to the regulations that we mandated and we set deadlines for that are now—some of them—many years past that deadline.

Now, I am not a stickler for deadlines by day by day. It is one thing being 1 month late. Six months late, a year late—some of these are many, many, many years late, and they are not small regulations. And for me, I would ask our panelists today to focus on that issue. What is the problem with getting some of these done? And why is it taking so long?

And with that, I am simply going to pass it back.

Thank you, Mr. Chairman.

Mr. DENHAM. Thank you, Mr. Capuano. Today we have two panels of witnesses.

I would like to recognize Mr. Larsen to introduce one of our witnesses on the second panel.

Mr. LARSEN. Thank you, Mr. Chairman. And thanks for letting me sit in on this. And I appreciate the indulgence. There is a hearing in the Committee on Armed Services that I need to get over to, as well, but do want to note what a critical role pipelines play in our Nation's infrastructure.

And I am very pleased to be able to welcome a fellow Washingtonian and a constituent from Whatcom County to the second panel, Carl Weimer, who is the executive director of the Pipeline Safety Trust.

Carl has been a vocal champion and leader of improving pipeline oversight and accident prevention measures for nearly 20 years. The Trust was formed following the deadly 1999 pipeline explosion in my district, a day that a pipeline explosion caused release of 237,000 gallons of gasoline into a creek that flowed through Whatcom Falls Park in Bellingham. It was ignited and claimed the lives of two 10-year-old boys and an 18-year-old young man.

Since that tragedy, the Trust has worked tirelessly to achieve zero pipeline incidents, promote sustainable energy production and distribution, and increase the transparency of pipeline information for local communities.

So Carl does a lot of things, but he is also a Whatcom County Council member, so he is an elected official. So he gets it, he understand what we go through trying to make these decisions and to represent folks, and do that in a way that is respectful.

I do as well share with the subcommittee the concern about implementing the mandates, implementing the things we have said we needed to implement, going back to the 2011 and 2016 pipeline bills. But I would note that, going back to 2002, when I first got here, I have been working on these issues of pipeline safety.

So I want to thank Carl for testifying.

And if I may just have a special thanks to PHMSA Administrator Skip Elliott, as well, for recently visiting Washington State's Sec-

ond Congressional District to tour the Olympic pipeline site in Bellingham with the Pipeline Safety Trust and others, and I appreciate him being here today.

And with that, I yield back.

Mr. DENHAM. Thank you, Mr. Larsen.

We have two panels today. The first is the Honorable Skip Elliott, Administrator of PHMSA. Our second panel will have four witnesses today. We will have questions for both.

I ask unanimous consent that our witnesses' full statements be included in the record.

Without objection, so ordered.

Since your written testimony has been made part of the record, the subcommittee would request that you limit your oral testimony to 5 minutes.

We will begin with the first panel.

Mr. Elliott, welcome to the Subcommittee on Railroads, Pipelines, and Hazardous Materials. We welcome your testimony.

TESTIMONY OF HON. HOWARD "SKIP" ELLIOTT, ADMINISTRATOR, PIPELINE AND HAZARDOUS MATERIALS SAFETY ADMINISTRATION

Mr. ELLIOTT. Chairman Denham, Ranking Member Capuano, thank you for the opportunity to testify before the Railroads, Pipelines, and Hazardous Materials Subcommittee today.

The mission of PHMSA, the Pipeline and Hazardous Materials Safety Administration, is to protect people and the environment by advancing the safe transportation of energy products and other regulated commodities that are essential to our daily lives.

After working for decades in the freight rail industry, a great deal of it focused on improving public safety, I believe that safety is the result of effective smart regulations that hold operators fully accountable for their systems.

But I also know that it takes more than just regulations to improve pipeline safety performance to its highest possible levels. In my 7 months leading PHMSA I have worked hard to listen closely to all stakeholders: public, Government, industry.

And I believe that firsthand experience is the best way to fully understand the impact of an event, and I traveled extensively to see how natural gas pipelines are being installed in Pennsylvania; how we train State and Federal pipeline inspectors at our world-class training facility in Oklahoma; how States are working to reduce third-party pipeline excavation damage in Arizona; how operators are developing and testing the latest in pipeline inspection technology in Texas; and how near a beautiful place called Whatcom Falls in Bellingham, Washington, a pipeline disaster forever changed that community and the people who live there.

With this as background, I hope today you will all leave with a clear picture of how I seek to advance PHMSA's important safety mission. My written testimony reports on two categories of PHMSA activity.

First, I wanted to update you on our progress in closing outstanding mandates, including rulemakings for hazardous liquid and natural gas transmission pipelines, as well as valves and rupture detection. I do understand the committee's concerns about

these rules. During my confirmation hearing I talked about the importance of setting priorities and ensuring quality and safety.

In my written testimony I provide details on PHMSA's efforts to prioritize congressional directives in a way that will allow us to finalize each rule quickly, but without impacting the quality and safety benefits of each individual rule. These rules remain at the top of my priority list, and I assure you that PHMSA is working diligently and expeditiously to complete each one.

Second are PHMSA's nonregulatory efforts, including our inspector training, grants program, and research and development. Other important nonregulatory steps include pipeline damage prevention programs and other initiatives that encourage industrywide investments in safety management systems. Each of these areas extends PHMSA's influence beyond our own relatively small staff, which is an operational necessity, if we are ever to approach the goal of zero incidents.

As we work at moving our regulatory portfolio forward, our most important focus is and always will be on safety. We work hard at balancing the information, data, comments, and concerns of all of our regulatory stakeholders, including industry. And while there has been significant advancement in the capability of sophisticated inline pipeline inspection tools, there is not always enough verifiable data available to fully validate the positive safety effects we require.

Accordingly, PHMSA is not always able to provide the regulatory latitude some in industry are seeking as quickly as they may want. It is worth noting, however, that the pipeline industry appears to be on the verge of a safety technology renaissance. And once this technology can be fully proven, the greatest hurdle will be in keeping regulatory requirements current with the pace of new and better safety solutions that, in the not too distant future, have the real potential to provide the most serious pipeline incidents from ever occurring.

Safety of the systems that we regulate is very good, with a positive safety rate on both the pipeline and hazardous materials side that exceeds 99.99 percent. But because our goal is an incident rate of zero, very good is just a subtle way of saying not quite good enough.

In that context, our prospect of success lies at the margin. Zero incidents is a maximum goal. It will never be met only by enforcing minimum standards. Even as we work hard to close congressional mandates and perfect our core regulatory functions, we must pursue success at that margin through comprehensive training and education, cutting-edge research and development, strengthening State partnerships, and encouraging industrywide development of consistent and culture-changing safety management systems.

With that, thank you again for this opportunity today, and I look forward to answering any questions you may have.

Mr. DENHAM. Thank you, Mr. Elliott. You have been on the job a few months now. Can you describe some of the challenges that PHMSA has faced in implementing the 2011 and 2016 mandates?

Mr. ELLIOTT. Mr. Chairman, thank you for that question. As I mentioned in my comments, I certainly do share the subcommit-

tee's frustrations on moving forward these open mandates. In your——

Mr. DENHAM. But I would say it is a very bipartisan frustration, as well.

Mr. ELLIOTT. Yes, sir. We recognize that the 2016 PIPES Act has a number of open mandates, as does the 2011.

But going back to what I mentioned, I am fully focused on prioritizing the rules that will move most of the mandates forward as quickly as possible.

We have done several things. We are moving forward the liquid pipeline rule that is in the final rule stage. That will answer a number of mandates that are open from both the 2011 and the 2016 PIPES Act, as well as some NTSB [National Transportation Safety Board] and GAO [U.S. Government Accountability Office] requirements.

We are also expediting the safety of natural gas pipeline rule, which was oftentimes referred to as the mega-rule. It actually had 14 separate sections to it. What we have done is basically parsed that out into three sections. But the first section that will move the most quickly—it too is in the final rule stage—will address the open mandates from the 2011 and 2016 bill.

And the last rule that is the one that I get a lot of questions about has to do with rupture detection and automatic valves. That one is not as far along. It is still at the notice of proposed rulemaking. But I have informed my staff that that is one that we have to move forward as quickly as possible.

I think there's some other good news on the mandates. The mandate that dealt with emergency order authority is in the interim final rule stage, and it is over at OMB [Office of Management and Budget] now, so that should be coming out shortly. And then there are several others that are following up.

So basically, what we are trying to do is move the rules that have the ability to close most of those open mandates from 2011 PIPES Act, 2016 PIPES Act, as well as addressing open NTSB and GAO requirements.

We have a concerted effort at PHMSA. We are working to consolidate our whole regulatory process under my Deputy Administrator, and we see good movement. I have had great discussion with the Department on moving these mandates forward, too.

Mr. DENHAM. What takes so long to implement a rule? We are talking about 2011 and 2016.

Mr. ELLIOTT. Mr. Chairman, I can only really address what I have seen since coming on board about 7 months ago.

Mr. DENHAM. Well, as you work to implement several new regulations, are there legacy regulations that need to be updated or eliminated?

Mr. ELLIOTT. I would say that we need to look into seeing if there are more legacy regulations, yes, sir, that need to be updated or regulated. And the team at PHMSA does that regularly, it looks to update regulations.

Mr. DENHAM. Are there impediments to implementing regulations that you feel like you need legislative fixes to implement them?

And we are searching here——

Mr. ELLIOTT. Right.

Mr. DENHAM. We have had a number of conversations here on, you know, Congress passes laws, you would expect, once a law is passed, signed into law, that it gets implemented very, very quickly. We're talking 2011.

So, you know, we have had an ongoing frustration here on why it would take so long to pass something, let alone something that we passed in 2016. When young Mr. Shuster was a chair of this subcommittee in 2011, those still aren't even implemented. What can we do to help you?

Mr. ELLIOTT. Well, Mr. Chairman, I certainly share your frustrations. I can tell you that after 40 years in the freight rail industry, where things moved at a pretty rapid pace, to me there were some frustrations taking over the leadership at PHMSA about some of the sluggishness.

We are doing everything that we can within PHMSA to expedite and streamline the process so at least that part of the rulemaking process that we have control of at PHMSA that we can move through in a much quicker pace than we have historically. That work is ongoing. I am a man that believes that actions speak louder than words. We are working on that now, and I hope that in the not too distant future you will be able to see some of the results of that action.

Mr. DENHAM. Thank you.

Mr. Capuano?

[No response.]

Mr. DENHAM. Mr. DeFazio?

Mr. DEFAZIO. Thanks, Mr. Chairman.

You started to say, in response to the chairman, that you could only speak to what you had seen since you arrived 7 months ago, in terms of why the rulemaking is so delayed. You didn't get to answer that, or didn't finish that thought, I don't think. Could you?

Mr. ELLIOTT. Ranking Member DeFazio, good morning to you, sir.

Mr. DEFAZIO. Thank you. Good morning.

Mr. ELLIOTT. I have to, I think, tell you that, you know, coming into the role at the head of PHMSA and beginning to understand the whole regulatory process, including the backlogs of open mandates, I think it is fair to say that there were a number of explanations as to why the open mandates seem to languish, even those from the 2011 PIPES Act.

But what I have really tried to focus on is understanding the concern. I mean from the first day that I came to PHMSA, you know, there were regular dialogue about why are these mandates not moving any faster. And going back to my confirmation hearing, I said that we need to prioritize, but we can't reduce quality and we can't reduce safety.

So I think we have done the prioritization part, at least from what I have been able to see from my time at PHMSA. Again, we are working to make the whole regulatory process at PHMSA much more streamlined. We have made good progress. I think there is more work to do. But I do hope, Ranking Member DeFazio, that this is something that will be sustainable for years to come.

I am also learning, you know, that there are some reviews that take place outside of PHMSA that also play a role in the whole regulatory process, and I am learning quickly about that.

Mr. DEFAZIO. Yeah, I think we would be talking about OMB. They hold up a lot of things over there.

Are you bound by this two-for-one rule, so you are going to have to repeal two things—like, for instance, you mentioned that rupture detection, which is a very, very high priority of the Congress, is still in the NPRM stage.

Mr. ELLIOTT. Right.

Mr. DEFAZIO. You know, if you are going to move forward with that, are you going to have to find two other rules to repeal?

Mr. ELLIOTT. Congressman, you know, one, I think, bit of good news is, you know, at least my experience in dealing with the regulatory reform process, is that we have been able to basically—in the case of the gas rule, we have been actually able to streamline the bill. It was actually getting too complex, and I worried that it would be too complex for operators to implement. And I do honestly think that could have a negative impact on public safety. So no, I don't think that has been an impediment at all.

With regards to the leak detection rule, I mean, I asked the same questions. I mean it seems to me that this is a very important rule. There are some people that thought, you know, some of the elements of that rule were included in the liquid pipeline rule.

But I am comfortable with the fact that a lot of the leak detection, rupture detection elements that provide the greatest protection actually go back to the original integrity management rule that was put in place a number of years ago. So it is not as if there aren't any rupture or leak detection ingredients in the rulemaking. It is just that this is going to enhance that part of the rule.

Mr. DEFAZIO. Well, yes. I mean the idea is, I mean, we have had incidents—you know, Enbridge and others—where, you know, quite a period of time elapsed between, you know, the initial leak and their capability.

And then also automatic shutoffs. So, you know, I would hope that both of those things are going to move along. I mean the integrity management obviously didn't work in those cases, and the—or the California gas explosion. So I think we need something more than the basic integrity program to assure public safety and also protection for the environment.

One other quick question. I don't want to overuse my time here. PHMSA is also working on a rule to require railroads to develop and implement comprehensive oil spill response plans. Where are we at on that?

Mr. ELLIOTT. So that rule is moving forward, as well. I need to inform you all that actually I am recused from that rule, but I can give you my perspective.

That rule is something very near and dear to my heart, after spending 40 years in the railroad. I am proud of the work that we did at the railroad that I worked on in developing a very solid, comprehensive spill plan. I think it is something that all railroads need.

I do understand the nuances that came into play after we started moving unit trains of petroleum crude oil and ethanol. So I can as-

sure you, and the team at PHMSA understands that this is a rule that we are moving through pretty quickly. It was one that was—I wouldn't say it was on a back burner, but it is now on a front burner, sir.

Mr. DEFAZIO. OK, thank you.

Thank you, Mr. Chairman.

Mr. DENHAM. Mr. Shuster?

Mr. SHUSTER. Thank you, Chairman.

Thank you, Mr. Elliott, for being here today. And I know you have been there several months, and I think I have seen a pickup in the pace of some of these things moving. But as Chairman Denham and I think Mr. DeFazio expressed, there is bipartisan concern and frustration. So again, we want to encourage you to move forward. And I think, as Chairman Denham said, if there is something we can do legislatively to assist, we are standing ready, willing, and able to do that.

In the 2011 bill, one of the priorities that I had in the bill was to set up training facilities across the United States. I know you set up one in Oklahoma City. And by all accounts and reports it is producing, it has been successful, I think. And I just wanted to know the proliferation of pipelines throughout the Northeast, and hopefully into the New England States, if we can get New York to finally get off their hands and get that gas to New England.

Are there any plans for establishing other training facilities? And I know Pennsylvania is very, very interested in working in—quite frankly, it was the Pennsylvania Public Utility Commission that came to me with that idea, and it seemed like a good idea. So can you address that?

Mr. ELLIOTT. So, Mr. Chairman, good morning. It is very good to see you today.

Training and education of our inspectors, as well as the broader emergency response community is something that I strongly believe——

Mr. SHUSTER. Can you pull your mic a little closer to you? The whole box. The whole box will move. Thanks.

Mr. ELLIOTT. You are correct about our training facility in Oklahoma City. I mentioned in my oral comments that I do think it is a world-class facility. It just received accreditation, international accreditation, so that we can start issuing credits for the training that we do.

But to answer your question, I think it is something that we talk about regularly, and I met with some of the leadership of the Pennsylvania Public Utility Commission back in February at their conference. My real concern is making sure that if we move away from doing training at other than the Oklahoma training facility, where we bring in our Federal and State inspectors now, to ensure that same level of training that we can transfer to remote sites.

And the reason that I say that is because if we can't, if somehow we are providing substandard training to the inspectors, then, to me, that has a direct impact on public safety because the inspectors are not providing the same level of public safety.

So the answer is we are looking into it. But I have to understand better how we can take this world-class training that we are doing

in Oklahoma City and transfer that to remote facilities, if we can do that at all.

I do understand the convenience of it when we met with the Pennsylvania delegation. You know, one of their big concerns was about the level of convenience, having people go out to Oklahoma City. But right now that is the place to go, because we know the consistency of the training out there.

And our goal is to make sure that every State and every Federal inspector has the possible best training, whether or not it is for liquid, gas, or underground storage facilities. And as soon as we can figure out how to bottle that and move it someplace else, we can do that.

Mr. SHUSTER. Well, I appreciate that you want to make sure that the training is world class, and so, as you move forward, I know that Pennsylvania and many of the other mid-Atlantic States are very interested in that, because again there is a convenience that people don't have to fly halfway across the country.

And training for pipeline inspections is pipeline inspection with a State inspector or a Federal inspector, basically, is that correct?

Mr. ELLIOTT. Say that again, sir.

Mr. SHUSTER. If a State inspector and a Federal inspector—they are basically—a pipeline is a pipeline to—you know, different pipelines, but their training should be identical, correct?

Mr. ELLIOTT. It is very similar, yes.

Mr. SHUSTER. OK, all right. And the second question I have is in the 2016 bill that Mr. Denham shepherded through to law, section 16 provides for an entity subject to the order—an opportunity for a petition and review of an administrative law judge under the emergency order authority, but the final regulation, I don't believe, is done yet. Will you be including in that to allow for the petition for review by an administrative law judge, as required by the statute?

Mr. ELLIOTT. Chairman Shuster, thank you for the question. So that rule is in the final rule stage, and the answer to your question is yes, it does have the provision that would allow review by an administrative law judge.

Mr. SHUSTER. Right, right. And then, just finally, a comment that I know that many of the pipeline companies around the country are developing and implementing, or they want to implement new technologies. Their big concern is, though, going out and spending millions of dollars to deploy this new technology and make this pipeline safer, and PHMSA's not keeping up with them. And their concern is they go out and put this money out there, and then PHMSA makes a rulemaking and they have got to go back and redo what they have already done.

Again, that is a great concern, I know, from industry, and something that I hope you and your folks at PHMSA are going to keep your eye on that ball. Because, again, that would be not a good thing to spend money on those types of technologies and those kinds of safety improvements and then just having to redo them. So again, your attention to that would be greatly appreciated, from our standpoint.

Mr. ELLIOTT. Well, Chairman, we are addressing that, and I share that exact concern, having gone out to see just how quickly the safety technology is advancing in the pipeline industry.

You know, and I use the analogy—it was very similar in the railroad side, and I basically say in the not too distant future the technology will be there to preclude, you know, a lot of these catastrophic incidents from ever occurring. We have to be smart enough to get out of the way of that——

Mr. SHUSTER. Right.

Mr. ELLIOTT [continuing]. Smart technology.

Mr. SHUSTER. Great. Thank you very much.

Mr. DENHAM. Mr. Capuano?

Mr. CAPUANO. Thanks, Mr. Chairman. Thanks, Mr. Elliott.

Mr. Elliott, you have enough staffing over at PHMSA to get your job done?

Mr. ELLIOTT. Yes, we do. I will tell you when I came on board I was a bit concerned when I was getting my initial briefs. We had 40 vacancies, and most of those were in field inspection positions. The answer is why do we have so many vacancies is, as you might imagine, on the pipeline side, where we——

Mr. CAPUANO. That is fair. But you have enough staffing to get your job——

Mr. ELLIOTT. We do. And I will tell you that——

Mr. CAPUANO. Fair enough. You have enough funding for that staffing, and for the things you need to do?

Mr. ELLIOTT. We do right now.

Mr. CAPUANO. Yes, but how is your relationship with OMB?

Mr. ELLIOTT. I think the relationship is fine.

Mr. CAPUANO. OK.

Mr. ELLIOTT. I mean, I think they——

Mr. CAPUANO. So you have enough staffing, you have enough funding.

Mr. ELLIOTT. We do.

Mr. CAPUANO. You get along with OMB. Well, and again, I don't—I am not even sure I can ask you this question, because you haven't been there long enough. But, of course, that leads to the question if you have enough staffing, you have enough funding, you get along with OMB, what is taking so long?

And I don't really want to ask you, because, you know, you haven't been there long enough. I appreciate that. I am not going to blame you. What about some of the guys behind you? Had they been there long enough to answer the question? Because there has got to be someone there who has been there more than a couple of months.

Mr. ELLIOTT. Well, Congressman, I believe that a good part of the staff at PHMSA shares the same frustration you do and that I do about moving regulations through——

Mr. CAPUANO. Well, I understand that. But—I mean I get all that. But, you know, come on, 8 years? Eight years. And we are not talking about small, unimportant things.

We are talking about a regulation talking about what is the maximum pressure that can be used in a pipeline. I think that is kind of important, and I don't know a whole lot about pipelines. I just

know if you put too much pressure in a balloon, it pops. And I assume the same thing happens with pipelines.

We are talking about pipelines' automatic or remote shutoff valves. Why? Because pipelines are pretty long and they go through long areas where there is nobody there. And if you don't have those, somebody has to get in the truck and drive for hours to go shut off a valve that has gone pop.

Those are the kinds of regulations we are talking about, not small, little things. And you are telling me we have enough staffing, you have enough funding, you get along with OMB. I don't understand the problem.

And the reason I ask is because we go through this every once in a while. PHMSA is a relatively new agency. I know you know that. Reauthorization is coming up, I think, next year. I am trying to ask myself why should I have an agency that I actually believe in. I think it is the right thing to have PHMSA, but if you are not doing your job, why bother? And if I do have you, why shouldn't we tie your funding to actually getting some of the job done?

Now, again, I am not going to sit here and argue about regulations that are 6 months overdue. Fine, I get all that. Eight years? Eight years for not just one difficult regulation, but for multiple.

And again, I don't want to blame you, you haven't been there 8 years. Is there anybody who has been there for 8 years?

Mr. ELLIOTT. Yes, there is a number of staff that have been there 8 years.

Mr. CAPUANO. I am a little bit more than frustrated, to be honest with you. I am kind of angry. I would rather be sitting here fighting with you about the substance of your regulations that maybe I don't like, or whatever. But I can't even do that.

Honestly, when you want to build pipelines it makes my job darn near impossible to look at my constituents and say, "Trust PHMSA, trust somebody that your safety is good," when I don't have a regulation that says what is too much to put into the pipeline, when I don't have a regulation that says how we are going to turn these things off when they do fail, when I don't have an agency that sits there and tells me something on the order of 35 to 50 percent of the accidents we have had are preventable.

It feels like nobody cares. Now, I know that is an overstatement, and I actually think you care, and I actually like PHMSA. I like, when you do stuff, you seem to do it pretty well. But it seems like when you don't want to do stuff, you just don't do it. And for me, that kind of bodes poorly for reauthorization. It means I am going to be looking at ways to get you to do your job.

Now, don't get me wrong. I am hoping, when reauth comes around, that these are done, and you can sit there and say, "Congressman, we did them all," and I am going to clap, and that is great, and let's move forward. But if not, of course, by that time I will be sitting in the big chair where Mr. Denham is.

[Laughter.]

Mr. CAPUANO. That is called optimism. And when we are, we are going to have a different conversation.

Again, I know you are new, and I don't mean to beat you up, but you knew this was coming. It is not what you do, it is what you

don't do that you haven't been asked to do, you have been required to do. These are not requests.

And, by the way, mandates from Congress are exempted from the President's own Executive order, that two-for-one nonsense. If you got an old regulation, you should repeal it anyway. You shouldn't have to be told by daddy to repeal something that is no longer useful. Those are exempt.

I appreciate you being here today and I appreciate the chairman's tolerance.

Mr. ELLIOTT. Congressman, my job, my responsibility, is to make you feel good about PHMSA again.

Mr. CAPUANO. I hope so. Good.

Mr. DENHAM. Thank you. Mr. Faso, you are recognized for 5 minutes.

Mr. FASO. Thank you, Mr. Chairman.

Mr. Elliott, the concern that I have is along the lines with what Mr. Capuano was expressing in his very expressive way: the delay on the hazardous liquid rule, for instance.

I represent a district in upstate New York that includes, among the 11 counties I represent, Schoharie County, where in 1991 there was an explosion along a propane gas line in Blenheim, New York, that killed two people. And obviously, you can't go to that community today and talk about pipelines without many people having a very vivid recollection of that.

So I would like you—you don't have to respond on this today, unless you can, but I would like to know the status of the regulatory oversight on that particular line, and expressing to you my concern with additional delay. Because the automatic shutoff valves and the leak detection systems—this is quite an old system that we have in that part of our State, and it is vitally important, I think, that people be reassured as to the safety of that system, and that the Federal and State agencies are doing what they can to ensure that incidents like that are not going to occur in the future, and that we are making every effort to ensure that incidents like that don't occur in the future.

Mr. ELLIOTT. Thank you, Congressman, we will look into that and make sure that we respond back to you. I do share your concerns. In my railroad days, having spent a lot of time up in your neck of the woods, any incident is an incident that we don't want to have, especially those that end up resulting in casualties, including injuries and fatalities. And we will look closely at what we can continue to do to improve the safety of transmission, distribution, and gathering lines.

I have talked a little bit about it through some of the research and development that we are trying to put in place that will help us look over the horizon on what is the next best technology. And I do think that the integrity management systems, the safety management systems that we talk regularly about and enforce with the operators are making some headway.

And then I do think it is the quality of the inspectors that are out there working with the operators every day and in the communities such as yours to make sure that we keep them as safe as possible.

But I do share your concern.

Mr. FASO. Thank you. I look forward to hearing back from you on that particular topic. Thank you so much.

Mr. ELLIOTT. Thank you, Congressman.

[The Pipeline and Hazardous Materials Safety Administration indicated that it has provided Congressman Faso with the information he requested.]

Mr. FASO. I yield back, Mr. Chairman.

Mr. DENHAM. Ms. Esty, you are recognized for 5 minutes.

Ms. ESTY. Thank you very much, and I appreciate you being with us here today. You understand the high level of frustration here. And that is concern. I mean it is not frustration about our prerogatives being disrespected. This is about the people we represent.

Sixty-four percent of energy in this country is carried through pipelines, 64 percent. PHMSA reported 649 pipeline incidents last year, 649, half of which were designated serious or significant, resulting in 22 fatalities of people we represent, 35 injuries, and more than $242 million in damages. The failure to implement these mandated requirements results in deaths.

When I was serving in the State legislature, we had a new natural gas plant explode in Connecticut for failure to follow proper procedures. Six people lost their lives.

So we need to know what exactly is the holdup here. What possibly can be—if you have got—again, as Mr. Capuano said, you have enough funding, you have the resources. Then why is this not happening? Because the consequences at a time when we are expanding pipelines—right?

This administration has a commitment to expand resources and energy production in the United States. Almost all of that is flowing through pipelines. So you can understand we have extremely severe concern about the consequences of 6, 7, 8-year-old mandates that have yet to be implemented. So we are facing a really serious question here of how we do our duty in oversight and in resourcing your agency to protect the American people.

So again, I would ask what exactly is the holdup?

Mr. ELLIOTT. Congresswoman, I share your concerns and thank you for the question.

I can't put my finger on any one item or thing that is the holdup. I can only tell you that we will continue to work very, very hard to move these very meaningful regulations through to conclusion.

And as I said in my comments, I think it is going to take more than just the regulations, though. I think it is going to take continued conversation with all the shareholders—the stakeholders, the public, industry, and other Government agencies to make sure that we get that last bit of safety.

I mean, as much as we talk about the incidents that occur, and they seem to be, when we hear them, to be an alarming number, it is still the safest way to move energy products in this country. What my job is, what the job of PHMSA is, is to work with you all to make sure that we can get that last little bit of safety. Unfortunately, what we see today are not maybe some of the minor incidents that were of large number, but now what we are seeing, unfortunately, might be more of those less-frequent but very high-consequence kind of incidents that do create casualties. That is what I am focused on, that is what the team at PHMSA is focused on.

So again, my job is to make you and the members of the subcommittee believe in PHMSA again through action.

Ms. ESTY. Well, I will tell you. In New England we have a real critical shortage. And there are efforts to try to expand pipelines. It is very hard for me to go to my constituents and urge them to do this when we have congressionally mandated safety regulations that have not even been introduced or promulgated for years. How can I go to my constituents and say, "We are from the Government, trust us"? We can't do that, responsibly.

And so I will tell you there is a great deal of concern. We are facing energy shortages and price hikes in my part of the country, in my State. And yet, at the same time, we are facing regulations that have been mandated and aren't in place.

So if you need more people, tell us, because asking for more time is—we are impatient because we are concerned about the safety of the people we represent. So again, I would urge you in the strongest possible terms to identify for us what we can do to move this forward, because, truly, the ball is in your court, and we are not patient at this point.

Thank you. I realize you haven't been here long. But again, this needs to be done, and it is now your responsibility to do so.

Thank you, and I yield back.

Mr. ELLIOTT. Thank you, Congresswoman.

Mr. DENHAM. Thank you, Ms. Esty.

Mr. Gallagher, you are recognized for 5 minutes.

Mr. GALLAGHER. Thank you, Mr. Chairman.

Thank you, Mr. Elliott. As a new member of the committee, I look forward to working with you.

So PHMSA has been exploring changes to the gas transmission integrity management program and gathering of pipeline regulations since 2011. These changes were supposed to be finalized in a single rulemaking that was supposed to be issued this summer, if I am understanding this correctly. However, a couple months ago PHMSA split that single rulemaking into three separate rules covering separate gathering and transmission pipeline issues with revised publication dates of 2019.

So just so I understand it, why did PHMSA split that rulemaking at this late stage?

Mr. ELLIOTT. Congressman, thank you for the question. The answer to the question is the fact that, to move that regulation along in as unwieldy of a State that it was, would cause even further delay.

The way that we have broken the rule into three parts, the first two deal with transmission lines, the third deals with gathering line. But the first two will deal with the two open mandates, as well as an—NTSB recommendations. So the plan is we are going to move them all forward, but that part of the rule now that has the open mandates and the recommendations is the one that we are going to give the most attention to.

What I don't want to convey is the belief that just because we have split that rule into three, that we are not going to continue to move the other parts of the rule through as quickly as possible. We are going to do that. It is just going to make it more manageable for us to move it through the process.

Mr. GALLAGHER. Why, then, did the publication dates get pushed out an entire year?

Mr. ELLIOTT. I will have to look into that. I am not sure of the exact reasons that the dates have been pushed out.

[The Pipeline and Hazardous Materials Safety Administration indicated that it has provided Congressman Gallagher with the information he requested.]

Mr. GALLAGHER. OK. I look forward to following up with you on that.

And then, is PHMSA moving forward on the pipeline valve and rupture detection rulemaking?

Mr. ELLIOTT. Yes, we are. And as I had mentioned earlier, of the three priority regulations, the liquid rule, the gas rule, and the rupture detection rule, that is the one that is probably the furthest behind at the notice of proposed rulemaking stage. But we are going to fast-track that the best that we can.

But again, I also want to remind you that a lot of the integrity management regulations cover a lot of the leak and rupture detection. This will modernize it, it will create some additional safety measures, but it is not by any means the only leak and detection rules that we have.

Mr. GALLAGHER. Yes, can you give me an example of the current policies that are in place to address rupture detection in pipelines?

Mr. ELLIOTT. Well, I think perhaps, for me, based on some of my experience, the best example is the modernization of a number of the oil and gas control sites. I have been out in my time at PHMSA to look at those sites, and I am very impressed with the continuing improvements in the software that the control rooms that monitor the flow of both gas and liquid pipelines—the ability to identify any anomaly that would indicate either a leak or a rupture.

And again, as I said, I have been a long-time believer in the fact that I think technology and automation is where we are going to get to the next levels of safety. But to me, that is where I have been the most impressed with the work that I am seeing done in the control rooms.

Mr. GALLAGHER. Well, I look forward to following up on that one issue, and thank you. And I yield the balance of my time.

Mr. DENHAM. Mr. Sires, you are recognized for 5 minutes.

Mr. SIRES. Thank you, Chairman, and thank you for being here.

I represent New Jersey, probably the most congested area in the country. Just to give you an idea, I live in a town that is 1 square mile, it has got 51,000 people on it. OK? Hoboken, New Jersey, has another 1 square mile, or 50,000 people.

A few years ago we had an incident in Edison, New Jersey. And we found out that the pipe was 3 feet wide, and it was right next to an apartment complex. They said it was deep enough, but I don't know how you deal with these pipes that are so big and so large next to apartment complexes. And the maintenance of them, since it was so deep I don't know how much maintenance they did on that pipe when it blew up.

And quite frankly, I have sat across people that want to put pipelines in my community when I was mayor, and the district—it is one of these districts where you put a shovel in the ground, you are

bound to hit a cable or a water pipe or—but they dangle money in front of these communities. And I get concerned that maybe it is not as large as this 3-foot pipe. Some of these are very close to the top of the ground.

And I am one that feels that these regulations that we have tried to implement since 2011, I think it is needed. So when I keep hearing all the time that we expedite, that we are working on it, and we are working on the regulation, and we are moving quickly, or we are streamlining this, I just hope it doesn't take another big blowup like what happened in Edison for you to move on some of these regulations, because it is going to be catastrophic.

And half of these pipes don't even serve New Jersey, they come from Texas right into New York. We are just what they call interlace piping. Is that the proper word that you use in the industry? They all come in, and they fill in, and they go into another one.

And the other concern that I have, which has always been a concern, is about the communications between the local firefighters and the people who put the pipe, and where the shutoff valves are. I don't know if the industry does that to a degree that is satisfactory to the communities that they run through, because they have to be aware of where the shutoff valves are. They have to be aware that these pipes are being maintained. And they have to communicate with the local firefighters because, at the end of the day, they are the first respondents.

So all these safety features that we are talking here are extremely important for a district that is so congested. So I would hope that you would move quickly on some of these things, especially the ones that are the most important for the safety of these pipes.

And I really don't have any particular question, other than try to get you to move on the safety of these pipes. Can you imagine these pipes, 3 feet wide, next to an apartment complex?

Nobody knew it was there. That is another factor. I think they keep it quiet half of the time, so they don't tell the community, so they come out to the town meetings and put pressure on the local officials not to allow it. And you know, and quite frankly, they are run through, for example, Jersey City, right under the Hudson River, right into New York.

So, sir, I will—you know, I will ask you—I know you have only been there 7 months, but, quite frankly, this is something that has to be addressed before there is another incident and then everybody reacts. But by that time it is too late.

Thank you, Chairman.

Mr. DENHAM. Thank you, Mr. Sires.

Mr. Babin, you are recognized for 5 minutes.

Dr. BABIN. Yes, sir.

Thank you very much for being here, Mr. Elliott. Mr. Elliott, now that you have been at PHMSA for a few months, what are your biggest priorities?

And I was here earlier, then I had to leave to go to another hearing, and back in here. If you have already talked about this, please let me know. But what are your biggest priorities as it relates to the outstanding rulemakings at PHMSA? What are your number one, two, three, on down?

Mr. ELLIOTT. Congressman Babin, thank you for the question. They are all important. And I think the comments of the subcommittee underscore the sense of urgency, even more so now, that we need to have in moving those mandates forward.

I do think that, you know, focusing primarily on moving the safety of liquid pipeline and the safety of gas transmission pipelines are my primary top goals. I think, by moving those forward, we get the best success in closing a number of open mandates, as well as NTSB and GAO recommendations.

But I know there is a lot more behind there that we have to do, and I think, you know, kind of an equal priority is the fact that we can't lose our momentum. As I said earlier, I think we have to prove by our actions, not our words, that we are capable of moving forward with open mandates and with other rules and standards that promote the safety of moving energy products throughout this country. We all know that we need that energy to do that.

So—and I think, you know, another priority is making sure that we have the most professional staff available, especially in the inspection side of PHMSA, to make sure that each and every day, when our inspection and investigation staff is out in the field, that we know that we have got the best talent available out there, working with the operators to ensure that the Nation's pipeline system stays as safe as possible.

Dr. BABIN. Right, OK. Thank you. Have you had the opportunity to go into the field and to see pipeline operations firsthand? Have you had that opportunity yet?

Mr. ELLIOTT. Congressman, thank you for that question, too. I am an old railroader. I am my happiest when I have my boots and hardhat on, I really am. And fortunately, the last few months I have been able to get out and I have traveled a lot. I have—you know, to Pennsylvania to see how natural gas pipeline is being installed, so I can actually get in a ditch and see it. Thanks to my colleagues from Williams for allowing me to do that.

You know, in going to places, too, I think that, you know, seeing firsthand and, you know, being able to go up to Bellingham and talk to Carl Weimer and his team about that, I mean, that is a humbling experience.

Dr. BABIN. Right.

Mr. ELLIOTT. You know, I went, in my 40 years in the railroad, to a lot of derailments, and I saw a lot of impact to communities and to the environment. But I am not sure, after hearing the folks up there relive the events of 1999 that anything compares to something of that magnitude.

And I will tell you, too, that, you know, trips to Texas to see pipeline operations and then to see the work of the pipeline industry in trying to push as fast as they can safety technology and inline inspection devices, it was really important for me to see and be able to talk to the vendors to try to understand what is on their horizon for them, what is the next best safety technology. So——

Dr. BABIN. Well, I was going to ask you if you had met with stakeholders and community leaders, and it sounds like you have. And is that accurate?

Mr. ELLIOTT. Some, but not enough. I mean I think, as my travels continue this year, it is really getting out to talk more to the public-sector side stakeholders.

I have had the great pleasure to talk to the members of our public information sharing working group, the members of our gas and pipeline advisory groups. I have been out to a number of trade association conferences. So I have had a chance to talk to stakeholders. I think what I need to do is kind of balance that with talking more to some of the folks in the local communities.

Dr. BABIN. Well, you mentioned Texas. And, of course, my district is from Houston to Louisiana, and that portion of Texas. It has the largest pipeline infrastructure in the Nation, more than 439,771 miles of pipeline, representing about one-sixth of the total pipeline mileage of the entire country, a substantial portion of which is in the southeast Texas coast that Congressman Weber and I share and represent. And I would like to personally invite you to come visit our region at your next available opportunity.

Mr. ELLIOTT. Thank you, Congressman. I will tell you that I saw more various types of pipe in the supply yards in 5 minutes than I had in all my life before I went to see the pipeline system in Houston. Thank you.

Dr. BABIN. Yes, sir. Thank you very much.

And I yield back, Mr. Chairman.

Mr. SHUSTER [presiding]. I thank the gentleman. Mr. Garamendi is recognized for 5 minutes.

Mr. GARAMENDI. Thank you, Mr. Chairman.

Mr. Elliott, thank you very much for your testimony and for appearing today. I know that you have a difficult task, catching up with the history of noncompliance by your agency.

I was here for the hearings in 2010, following the San Bruno. And these photos were displayed at that time. That is a picture of the actual explosion. That is the 100- by 28-foot crater that was created. And those are the homes. [Indicating photographs.] And I suppose you might find the—well, we will just say those are the homes that were burned. It has been 8 years, just short of 8 years since that explosion.

The mandate in the 2010 law has not yet been completed. We remain extremely concerned about this. The automatic shutoff, the detection systems are known. They have existed for years. Pipeline companies across the Nation do employ automatic shutoffs and remote shutoff valves. But yet there is no regulation that requires that they be in place for 3-foot diameter pipe that Mr. Sires was talking about a moment ago, or for other pipelines across the Nation that are in high-hazard or high-explosive zones.

Could you tell me what the status is of the specific regulations on shutoff valves, remote and automatic, and on the pressure requirement systems?

Mr. ELLIOTT. Congressman, yes. And thank you for your question. And, you know, the San Bruno incident also was the same year that we had a serious incident in Michigan, in the Kalamazoo——

Mr. GARAMENDI. Serious in that eight people died.

Mr. ELLIOTT. Yes, and 51 injured, I believe, too, in there.

So as I had mentioned earlier, the status of the rupture detection valve rule is a bit behind the liquid and gas rules. It is in the notice of proposed——

Mr. GARAMENDI. Could you define "bit behind"?

Mr. ELLIOTT. Well, it is in the notice of proposed rulemaking stage, so I cannot say specifically, time-wise, how far behind. But——

Mr. GARAMENDI. Is there any reason you do not have a timeline for the rulemaking process?

Mr. ELLIOTT. I just do not have enough understanding of where we are at in the notice of proposed rulemaking drafting. And once we can complete that, then I can provide a better timeline.

Mr. GARAMENDI. You have been there 7 months, and we understand that is a short period of time.

If you do not have a calendar for the 2018–2019 year, I will be happy to deliver one to your office. We have congressional calendars that we hand out to our constituents. I will be happy to deliver you one. Could you put on that calendar a specific date on which you will address this issue?

Mr. ELLIOTT. I understand your concern, Congressman, and we will——

Mr. GARAMENDI. I will have a calendar in your office. Perhaps you can——

Mr. ELLIOTT. I do.

Mr. GARAMENDI [continuing]. Return it to me with a circle around the dates in which you will begin the process.

Mr. ELLIOTT. I——

Mr. GARAMENDI. Is that possible?

Mr. ELLIOTT. Congressman, you have my word that we will move that rulemaking through as quickly as we can.

Mr. GARAMENDI. No, I want a calendar date.

Mr. ELLIOTT. I can't do that, sir. I can't move it——

Mr. GARAMENDI. Why?

Mr. ELLIOTT. Because I just don't know what calendar date it would be.

Mr. GARAMENDI. Why don't you know when you can get this thing underway?

Mr. ELLIOTT. Congressman, I appreciate your concern. We will work as quickly as we can to move that rulemaking through.

Mr. GARAMENDI. I am going to be on you like a bad spell. And I can assure you that the California delegation will be there, also. It was September 9th, 2010. Eight people died. Thirty-eight homes were destroyed. And you don't have a calendar. That is not acceptable, sir. It is simply not acceptable.

A final rule, not on this particular issue, but on liquid, hazardous liquid pipelines, was completed, was to go into the Federal Register on January 13, 2017. And this administration pulled that back the very first day it came into office. What is the status of that particular regulation?

Mr. ELLIOTT. Congressman, that rule is in the final rule stage, and we hope to move that forward as quickly as possible, too.

Mr. GARAMENDI. Do you have a date?

Mr. ELLIOTT. No, sir. I do not.

Mr. GARAMENDI. You don't have a calendar, either?

Mr. ELLIOTT. I do not have a date for the——

Mr. GARAMENDI. Perhaps you can have two circles, a red and a black circle around a specific date of when you will get the job done.

You have shined us on. You and your predecessors have shined this committee on for 8 years. And it is over, sir. Give us a calendar date on when you are going to begin the process to move the process along, and when it will be completed.

I am out of time. I yield back.

And a calendar will be in your office later today.

Mr. ELLIOTT. Thank you, Congressman.

Mr. SHUSTER. Mr. Perry is recognized for 5 minutes.

Mr. PERRY. Thank you, Mr. Chairman. Thank you, Mr. Elliott, for your presence. Over here, way on the right, here—so to speak.

In your experience, are all 50 States—just so to speak—are all 50 States equal in quality in their regulation of interstate pipeline facilities?

And let me just maybe add some context to that. You know, I am from Pennsylvania. We have got a lot of resources, and we have got a lot of old infrastructure. And one of the struggles we are having right now—and we have had for some time—is to get our product to market. And some States aren't as—and God bless them. We have the Constitution and they have voters, and, you know, they make decisions for their States. But depending on where they are located, they are in between other States that would like to have access to what Pennsylvania has.

And I know that maybe—unfortunately, I am conflating construction and regulation with operation and—but I will tell you my constituents—and I don't think most people see it any—they just see a pipeline, or they see a lack of a pipeline.

And I am sure you know we had an incident with a pipeline running across part of the district in south-central Pennsylvania, and the Department of Environmental Protection got involved with a contractor with some infractions, and so on and so forth, and that further imperils people's feeling of security and satisfaction with pipelines, in general, right? They don't differentiate between construction and operation, right?

But I am just wondering. Are they generally equal in their quality of regulation and enforcement of those things? And is there something that the Federal Government should be doing, could be doing in keeping with the Constitution and the States' 10th Amendment rights, but yet to, you know, move interstate commerce to where it needs to be going?

Mr. ELLIOTT. Congressman, thank you for the question. I would say that, you know, there is consistency between the States. But I think, to answer the very specific nature of your question, I would like to go back and talk to my staff about it and get a more detailed response and respond back to you, if I might.

[The Pipeline and Hazardous Materials Safety Administration indicated that it has provided Congressman Perry with the information he requested.]

Mr. PERRY. Well, I would appreciate that. And like I said, just with the understanding that this is specific, and you obviously

know your job very well, and you are here testifying on it today, but most people driving up and down the highway, looking at farm fields and what have you, they see pipeline, whether they see markers or whether they see construction, and they don't differentiate between operation and construction, but they don't want problems, right? They want to make sure that they can buy what is coming through the pipeline, and they understand it has got to get to places for refining and other things.

But they want to make sure that it is safe, and they are counting on you and us to make sure that we are respecting individual property rights and States rights, but at the same time the interstate commerce that needs to happen, so that States that are landlocked out of—and I am not going to name any here, but I suspect you can imagine where we are headed here—but States are landlocked out of having the provisions that they want and need, because of States in the way.

And what is the appropriate response to that? And is there a regulatory response, or is there something else that Congress needs to be doing, or that States need to be doing? And I would like to have you fashion your staff's answers, so to speak, in that kind of vein, if you would, please. And I appreciate your presence here.

Mr. Chairman, I yield.

Mr. SHUSTER. I thank the gentleman and recognize Mrs. Napolitano for 5 minutes.

Mrs. NAPOLITANO. Thank you, Mr. Chair. Thank you, Mr. Administrator Elliott.

My California colleagues, Representative Carbajal and Senator Feinstein wrote a letter to you on May 17th requesting an update on the status of the rulemaking regarding automatic and remote control shutoff valves. As you are aware, this happened in 2015 that we had the Refugio oil spill in Santa Barbara.

Mr. ELLIOTT. Yes.

Mrs. NAPOLITANO. Major disaster, 100,000 gallons of oil spilled into the ocean and shut down commercial fisheries.

The shutoff valves and leak detection technology could have prevented the environmental and public health damage caused by the tragedy. Could you give me the status of that rulemaking, and when you can expect to answer that letter?

Mr. ELLIOTT. Congresswoman, thank you. I am aware of the letter that came in, and we are preparing the response for that letter.

With regards to the rulemaking, again, the leak detection rulemaking is one that we are going to work quickly on. It is in the notice of proposed rulemaking stage. We have some work to do on it in order to get it to the final rule stage. But it is my pledge to you that we will continue to move forward on that rulemaking as quickly as we can, ma'am.

Mrs. NAPOLITANO. Well, I look forward to your answer, sir. And I would like to have a copy of that letter to Mr. Carbajal and Senator Feinstein.

Mr. Elliott, because of your background in the railroad industry—which you have pointed out—and your current position, I have a question regarding the intersection of pipeline safety and railroad operations.

And I'm happy to report that after 8 years of negotiation between Kinder Morgan Pipeline Company and Union Pacific, Cal Poly Pomona University, and the Alameda Corridor East Public Transportation Agency in my district, two rail grade crossings are being closed because of a new division track for Union Pacific. The project will reduce congestion, reduce smog, and increase public safety by allowing the residents in the valley to travel on a major corridor without stopping at two previous railroad crossings.

The project was held up for 8 years because the new rail line ran over Kinder Morgan pipeline, and there was a disagreement between Union Pacific and Kinder Morgan on the level of protection needed for the pipeline—one type of cement versus another.

Are you aware of these ongoing disagreements between railroads and pipeline companies across the country on the level of safety when they cross? And what would you do to solve these issues, to speed up the projects, and improve the safety?

Mr. ELLIOTT. Congresswoman, thank you for your question.

I will tell you, from my railroad experience, that any time we can close a highway railroad grade crossing, that is a good thing because it promotes safety.

And I can also tell you from my railroad experience managing environmental matters for the railroad, we were often in dialogue with pipeline operators to ensure the safety of pipelines underneath the railroad right-of-ways.

And I think we saw that progress over the years, and I think we saw safety improve, as well, with the advent of horizontal directional drilling that allowed the pipelines to actually go further underneath the right-of-ways. As you know probably from your experience, our concern in the railroad is the vibration underneath the railroad bed. So we were always concerned about making sure that the pipes were far enough down that that vibration didn't impact the lines.

I would expect that the railroads today continue to have good dialogue with their counterparts at the oil and gas companies to make sure that they are having those crossings as safe as possible.

[The Pipeline and Hazardous Materials Safety Administration indicated that it has provided Congresswoman Napolitano with a copy of the letter that she requested.]

Mrs. NAPOLITANO. But are you addressing those issues?

Mr. ELLIOTT. I will have to look more into that to see if we have got any current issues dealing with both oil and gas pipeline operators and the railroads, so—and I might—I can consult with my colleagues over at the Federal Railroad Administration.

Mrs. NAPOLITANO. Would you kindly let this committee know? Because that is an important issue when it has impact on public safety.

Mr. ELLIOTT. Yes. Yes, ma'am, we will let you know.

Mrs. NAPOLITANO. Thank you. I yield back.

Mr. MITCHELL [presiding]. Thank you. The Chair recognizes himself for 5 minutes.

You are aware of the Line 5 pipeline in Michigan, and some of the challenges we have had with that, Mr. Elliott?

Mr. ELLIOTT. I am.

Mr. MITCHELL. One of the challenges we face is the delay in regulations while they try to comply both in terms of what the regulatory requirements are, as well as what the public perception of the safety of that pipeline is.

I am concerned. I want you to understand that. On a bipartisan basis the delays are really causing a great deal of distress of the public, as well as the State agencies to ensure full compliance in a safe environment.

So let me go back around about that question again. What do we do about ensuring that we can give a timeline to folks of what the safety regulations will be, so they are out for review and we can address those?

Mr. ELLIOTT. Congressman, thank you for the question. I think I have a newfound appreciation for the subcommittee's sense of urgency on this issue. I have had the pleasure to speak with some of you individually. But collectively your concerns are magnified. And I think I understand that.

We continue to do everything that we can within PHMSA to move the issues and prepare the regulations, those things under our control. We have had very good discussions with the Department about the need to move some of these mandates forward, and they are very responsive to that. And as you know, there are multiple steps in the process.

But I can assure you that, while I can't provide a specific date or a time, that with the liquid rule and the gas rule and the rupture detection rule, those will move as quickly as we possibly can move them.

Mr. MITCHELL. Well, let me stop you because I—you are aware of the leak that we had in the Kalamazoo River——

Mr. ELLIOTT. Yes, sir.

Mr. MITCHELL [continuing]. A few years back. Are you aware of the anchor strike on the pipeline crossing the Sioux Straits? Are you aware of that? And, in fact, the pipeline was dented. It was not—you are aware of that, as well?

Mr. ELLIOTT. Yes, I have had numerous conversations with the executives at Enbridge on that issue, yes.

Mr. MITCHELL. And I understand the economic importance of the Line 5 in the State, in my district. It crosses the St. Clair River in my district, it crosses Port Huron into Sarnia. So it is not that I am immune to what the issues are. But the reality is a lack of clear guidance as to whether the current technology is acceptable that is in place. Will we need to change that? It is really troublesome for both the State to ensure compliance, the company, Enbridge, as you know, as well as the public impression.

So, while I appreciate your comments regarding we will do the best we can, in terms of timing, I would join my colleague, Mr. Garamendi, to say, you know, jointly, I am sure we can give you a calendar. And at some point in time—I ran a business for 35 years. Setting a date that we are going to get something done by matters.

So I can't encourage you enough, and your agency enough, to say we need to set dates, we need to get the regs out, we need to get public comment on them, and we need to take that public comment seriously.

Mr. ELLIOTT. Yes, sir.

Mr. MITCHELL. Or we leave ourselves vulnerable.

One more question for you in the limited time I have. What does—a little more general, what does PHMSA do with funding to States that do not comply with safety standards in place at this time?

Mr. ELLIOTT. Congressman, thank you for the question. You know, as you know, we can fund up to 80 percent of a State's ability to conduct pipeline inspections. We have a group within PHMSA that is specifically responsible for going to ensure the quality, the integrity of the inspections that are done by our State partners.

Their funding, basically, is based on their ability to show success within the program.

Mr. MITCHELL. Let me stop you there. What are the ways that you hold States accountable if they fail to comply?

Mr. ELLIOTT. I think we have a number of ways. But the specifics of those, I can look further into what those items are and get back to you.

Mr. MITCHELL. Let me stop you a second. I know it has been 7 months——

Mr. ELLIOTT. Yes, sir.

Mr. MITCHELL [continuing]. And lord knows you are up to your eyeballs. That is clear. A response of "I think there are ways" troubles me a great deal. Do we not have a better idea how we hold States accountable for funding 80 percent of the inspection cost? Does any of your staff behind you have any idea how we do this?

Mr. ELLIOTT. Congressman, I am certain there are. But again, I just don't have the specifics that would provide me to give you a specific answer.

[The Pipeline and Hazardous Materials Safety Administration indicated that it has provided Congressman Mitchell with the information he requested.]

Mr. MITCHELL. Can we request that you provide something to the committee in writing of what the specifics are, in terms of holding them accountable and how you—if it is—funding another mechanism?

One more quick question, if you will bear with me a moment. How many States, last time you reviewed it, were not in compliance?

Mr. ELLIOTT. You know, we have a regular process that allows us to look at State noncompliance. I don't have the exact number that were not in compliance. I can add that to the document——

Mr. MITCHELL. When was the last time that this review was done to determine whether States were in compliance?

Mr. ELLIOTT. Yes. Sir, I don't know that, and I will have to determine that and get back to you.

Mr. MITCHELL. You recognize the number of times you said "I don't know" in the last 10 minutes, right?

Mr. ELLIOTT. Yes.

Mr. MITCHELL. I appreciate it. I will—who is next?

The Chair yields for 5 minutes to Mr. Nolan.

Mr. NOLAN. Thank you, Mr. Chairman.

First of all, I want to commend you, compliment you, congratulate you for taking on this assignment. And you know, looking at your background, it seems as though you have a lot of experience in transporting hazardous materials and compliance with regulations. And so we do have big expectations of you, OK, and applaud you for taking on this assignment.

But as you know, in many cases, many of the companies have already started the—and gone a long ways toward implementation of some of these various regulations.

But you know in good Government and in good business, that people have goals. They have a mission, they have workplans, they have timelines. And in your case, you got a mandate to get this done. And I want to join my colleagues here—as you will notice, it is a very nonpartisan, very bipartisan—the concerns that have been expressed. And I share all of them with them.

So I would just like to remind you and everybody—and I know you know this, but to not have an estimated timeline—nobody here expects you to be there on an exact date or a moment in time, but we do expect the workplan, and we do expect a timeline. And you have got the experience to put that all together, we know that. You have done good in the past, and you can do that for us here today.

And to do otherwise, you know, it would be hard to judge it as anything other than irresponsible, a dereliction of duty—worst case, malfeasance. And you do not want that to be your legacy, because you are capable of so much more and so much better. So I just want you to know that we are expecting a lot out of you, and when you come back we don't want to hear "I don't know" any more.

And I would just have one question. Can you give this committee an assurance that you will put a high priority in the planning and your operation to give us a workplan and a timeline for implementation of these mandates?

Mr. ELLIOTT. Congressman, thank you for the good words of wisdom. I will tell you that in my private industry life all those things you talked about were highly valued, and they are the types of things that I am trying to put in place at PHMSA. And I will continue to do that.

And, you know, I will work the best I can to create a more structured timeline so the subcommittee has a much better understanding of the delivery of these open mandates and other rules and standards. I am just not to the point yet where I can—my crystal ball doesn't allow me to be specific enough, I think, for the satisfaction of this subcommittee. But I will continue to work on that.

Mr. NOLAN. Thank you.

Mr. ELLIOTT. Thank you, Congressman.

Mr. MITCHELL. The Chair will now recognize Mr. Weber for 5 minutes.

Mr. WEBER. Thank you, Mr. Chairman.

Mr. Elliott, I am late, so I don't know if these questions have been asked yet. So if they are redundant, please forgive the redundancy.

Do you know what the pipeline industry itself safety rating is?

Mr. ELLIOTT. Congressman, it is extremely good. It is above 99.99 percent.

Mr. WEBER. Above 99.99 percent? Do you know of any other industry that has a safety rating that high?

Mr. ELLIOTT. Well, I am happy to say that my former industry, the railroad industry, had a safety rate of above 99.99——

Mr. WEBER. Well, I think you are a little off track, now. We are talking pipelines, not railroads. That is—you all see that pun, see what I did there?

[Laughter.]

Mr. WEBER. Yes, Elizabeth is saying she got it.

Here is my question. And it may have been asked. But I commend the pipeline industry for that kind of safety rating.

I have the gulf coast of Texas, five ports. We produce 65 percent of the Nation's jet fuel, almost 20 percent of the Nation's gasoline east of the Rockies. So a lot of pipelines come in to the gulf coast of Texas.

How long have you—and I didn't get a chance to read your bio. How long have you been at the agency?

Mr. ELLIOTT. A little over 7 months, Congressman.

Mr. WEBER. A little over 7 months?

So PHMSA has been exploring changes to the hazardous liquid integrity management program. And again, I have not had a chance to read through this, I was at another event.

DOT's last report on the status of significant rulemaking show that the final rule should be issued in August. Have they asked you—or are you still on track to publish that rule in August?

Mr. ELLIOTT. We continue to be optimistic that the rule will be out—will be the first rule out. And while we can't put a specific date on——

Mr. WEBER. OK.

Mr. ELLIOTT [continuing]. We are still shooting for a period of time that is relatively close to what we have——

Mr. WEBER. So you may be like the Senate. You will still be working in August?

Mr. ELLIOTT. Yes, sir.

Mr. WEBER. OK. Is there a listing—I am sure there is—of the exact materials—liquids, gases, whatever—that this rule covers? Do you have a listing of that?

Mr. ELLIOTT. We can provide that, yes.

Mr. WEBER. Can you get that to me?

Mr. ELLIOTT. Yes, sir.

[The Pipeline and Hazardous Materials Safety Administration indicated that it has provided Congressman Weber with the information he requested.]

Mr. WEBER. OK, great. That would be great.

And then you also have—in my district we have the largest carbon capture sequestration storage facility in Port Arthur, Texas. It was built, actually, by ARRA, American Recovery and Reinvestment Act. And so we have some underground storage.

Is PHMSA seeking input from States and stakeholders as it relates to underground storage on natural gas? Are you all seeking that input?

Mr. ELLIOTT. Congressman, we are. We have issued an interim final rule on underground natural gas storage, and we continue to

now look at the comments that have been coming in from all stakeholders on that interim final rule. And I am happy to say that we have begun training State and Federal inspectors at our training center in Oklahoma on underground natural gas storage facilities. So we are making good progress there.

Mr. WEBER. You are aware of the shale play in Texas, Eagle Ford Shale Play, as well as other shale plays, and how Texas is leading the other 49 lesser States in natural gas production. And so it is a big thing for us. And as that natural gas production in the market is like it is for natural gas, we are now exporting so much LNG—my district is responsible for exporting about 95 percent of the Nation's LNG, worldwide. So it is extremely important to us.

As that production ramps up, as natural gas prices stay low, does it give you all a little bit more impetus to try to make sure that you keep up with this on a more frequent basis? Are you paying close attention to the gas plays?

Mr. ELLIOTT. Certainly, yes. I mean we have actually reallocated resources, technical resources at PHMSA to help us stay as current as we can on the natural gas, especially on the export side. We continue to work closely with other regulatory agencies, such as FERC [Federal Energy Regulatory Commission], on the whole siting issue, as well.

Some of our natural gas rules are ones that we want to modernize. But again, we are working hard, because we understand the pace at which that whole sector is moving, and we need to make sure that we can stay up to speed with that.

Mr. WEBER. Is your office—since you have been there 7 months—I know there has been some questions about a lot of some of the nominations that are not making it through the Senate, for example—is your office adequately staffed?

Mr. ELLIOTT. Yes, sir, it is. We have made significant headway. As I had mentioned earlier, when I came on board we had about 40 vacancies, and a large number of those were in the field inspection investigation side. On the pipeline side the number was close to 20. I am happy to say we actually have 15 offers on the table now for new pipeline inspectors.

It has been a challenge to find qualified people. But with some changes in our recruiting process, I think we have kind of gotten over the hump on that.

Mr. WEBER. OK. Thank you, Mr. Chairman. I yield back.

Mr. MITCHELL. The Chair recognizes Mrs. Napolitano for some questions.

Mrs. NAPOLITANO. Thank you, sir. Thank you for allowing me the second go-around.

But I had one more question to add, Administrator Elliott, that one of our priorities in the 2016 act was to ensure that the coastal beaches and marine coastal waters are considered unusually sensitive areas for purposes of ensuring pipelines in these areas are governed under PHMSA's integrity management regulations, which include inspection, repair, and maintenance.

The DOT website states that this is still in the advanced notice of proposed rulemaking stage, and that you have 13 staff working

on it, but it is delayed due to competing priorities. Would you explain and clarify this?

Mr. ELLIOTT. Congresswoman, thank you for that question. I am very aware of the need and the sense of urgency of that rulemaking.

You know, I have been working to prioritize rulemakings, and I have worked with my staff to make the determination to prioritize and focus most on the mandates that really provided the greatest level of safety.

You are correct, it is still in the advanced notice of proposed rulemaking. We have had a public meeting on that topic, and we are looking at the responses of that.

I think one of the difficulties in this specific rulemaking is we are finding it difficult to actually define some of the parameters of the Great Lakes area, as it applies to the rulemaking. So it has been a little bit more of a challenge to the staff, but it is something that we are going to keep focusing on, and keep moving forward as quickly as we can.

Mrs. NAPOLITANO. Well, you have three great areas: Florida——

Mr. ELLIOTT. Yes, ma'am.

Mrs. NAPOLITANO [continuing]. California, and Texas that require specific focus on these issues. Anything we can do to ensure this moves along?

Mr. ELLIOTT. Congresswoman, I think what you can all do for me is just, you know, provide me with your thoughts, your comments, your concerns. You know, I do apologize that I am still getting up to speed on certain areas. But again, I am a person who believes in actions and not necessarily words as proof of what we are capable of doing at PHMSA.

Mrs. NAPOLITANO. I am glad to hear that, sir. And we will look forward to the answer.

Thank you, I yield back.

Mr. ELLIOTT. Thank you, Congresswoman.

Mr. MITCHELL. Seeing no further questions, I want to thank you, Administrator Elliott, for your time today, for your testimony and feedback. They have been very helpful. And I am sure we look forward to seeing you again in a hearing in the future to get more feedback from you, sir. Thank you for coming.

Mr. ELLIOTT. Thank you, Congressman. Thank you, members of the subcommittee.

Mr. MITCHELL. I would now like to welcome—we are awaiting votes, so we are going to introduce the next panel and, depending on the schedule of votes, we will then proceed.

I would now like to welcome our second panel, if they want to get settled.

[Pause.]

Mr. MITCHELL. Good morning, gentlemen. It is still morning. Thank you for coming, and I appreciate it.

I would like to welcome our second panel. We welcome today Mr. Andrew Black, who is president and CEO of the Association of Oil Pipe Lines.

Thank you for coming.

Mr. Robin Rorick, midstream and industry operations group director for American Petroleum Institute.

Mr. Chad Zamarin, senior vice president of corporate strategic development at the Williams Companies, on behalf of the Interstate Natural Gas Association of America. That is quite an acronym.

And Mr. Carl Weimer, executive director of the Pipeline Safety Trust.

I ask unanimous consent that our witnesses' full statements be included in the record.

Without objection, so ordered.

Since your written testimony has been made a part of the record, the subcommittee would request that you limit your oral testimony to 5 minutes.

We will kick off today with Mr. Black.

Would you please proceed?

TESTIMONY OF ANDREW J. BLACK, PRESIDENT AND CEO, ASSOCIATION OF OIL PIPE LINES; ROBIN RORICK, GROUP DIRECTOR, MIDSTREAM AND INDUSTRY OPERATIONS, AMERICAN PETROLEUM INSTITUTE; CHAD ZAMARIN, SENIOR VICE PRESIDENT, CORPORATE STRATEGIC DEVELOPMENT, THE WILLIAMS COMPANIES, INC., ON BEHALF OF THE INTERSTATE NATURAL GAS ASSOCIATION OF AMERICA; AND CARL WEIMER, EXECUTIVE DIRECTOR, PIPELINE SAFETY TRUST

Mr. BLACK. Thank you. I am Andy Black, president and CEO of the Association of Oil Pipe Lines. AOPL represents transmission pipeline operators that deliver crude oil, refined products like gasoline, diesel fuel, and jet fuel, and natural gas liquids such as propane and ethane. Ourpipelines safely deliver more than 18 billion barrels of crude oil and energy products per year.

Pipelines play a critical role in delivering energy to American workers and families. Americans use the energy our pipelines deliver in their cars and trucks to commute to work or drive on the job. Our pipelines transport products like propane that farmers use for rural heating and crop drying, and raw materials such as ethane that American workers use for good-paying manufacturing jobs.

Pipelines are an exceedingly safe way to deliver the energy America needs. As the American people debate alternatives for transporting energy across the country from where it is produced to where it is refined to where it is consumed, you can know that pipelines are the safest way for the American people to get the energy they need.

According to data collected by PHMSA, the safety of liquids pipelines has improved dramatically over the last 5 years. Liquid pipeline incidents impacting the public or the environment are down 19 percent since 2013. A subcategory of incidents impacting the public and the environment caused by corrosion, cracking, or pipe failure are down 35 percent in that period. Incidents impacting the public or the environment caused by operations or maintenance failures are down 24 percent. These key performance indicators were developed jointly by PHMSA, the Pipeline Safety Trust, and the liquids pipeline industry, in recommendation to a response by the NTSB to develop more meaningful metrics for tracking pipeline safety.

Each of these safety performance metrics are included in our annual pipeline safety excellence report we issue jointly with the American Petroleum Institute. Self-reporting on our industrywide performance is part of our effort to be transparent about our safety programs and invite a conversation on how we can best tackle remaining pipeline safety issues. We use performance data, recommendations from regulators and safety investigations, and lessons learned from incidents and near misses to guide our industrywide efforts. Based on this information, personnel from member companies participate in nearly two dozen industrywide pipeline groups to improve operations and safety.

We are also funding research and development on pipeline inspection technologies, enhancing our threat detection and response capabilities, expanding safety culture and management systems, and boosting our emergency response capabilities.

Through our pipeline safety excellence program, member companies have completed development of a number of recommended practices and technical reports to improve our ability to detect pipeline cracking, integrate safety data, manage safety efforts holistically, manage leak detection programs, and better plan for and respond to pipeline emergencies.

We are now actively engaged in implementation efforts to educate, encourage, and help members implement these best practices. A prime example is API Recommended Practice 1173 for Pipeline Safety Management Systems. Recommended by NTSB and developed in conjunction with PHMSA and State pipeline regulators, pipeline safety management systems are helping pipeline operators comprehensively and holistically manage all the safety efforts underway across a company.

Aviation, nuclear power, and chemical manufacturing have benefitted from safety management systems, and pipelines are, too. The NTSB said the response to the pipeline safety recommendation on safety management systems "exceeded expectations."

Pipeline operators within AOPL and API will complete updates of industrywide guidance on how to proactively inspect and when to perform preventive maintenance on pipelines, how to protect our companies and systems againstcyberattacks, and how to safely manage idled pipelines.

As we move closer to the reauthorization of the national pipeline safety program, our improved safety record is clear. Pipeline operators have learned the lessons of past pipelineincidents, and are developing new technologies and innovative safety methods to prevent the incidents of the future. Pipeline operators have implemented past mandates from Congress, including notification of incidents within 1 hour of confirmed discovery, sharing safety data sheets in the early hours of an incident, and more frequent inspections of inland deep-water pipelines.

Looking ahead there is great potential to harness the safety benefits of new technologies and innovative methods for keeping pipes safe. As the PHMSA Administrator said, we are on the verge of a pipeline safety technology renaissance. But a continuing challenge is to ensure that Federal oversight of pipeline safety keeps pace with technology and innovation. Federal pipeline safety regulations

developed 10 or 20 years ago sometimes do not reflect modern improvements to safety inspection technologies and capabilities.

We look forward to working with the committee on these issues, and I will be ready to answer any questions. Thank you.

Mr. MITCHELL. Thank you, Mr. Black, for your comments.

Mr. Rorick, you may now proceed.

Mr. RORICK. Good morning, Congressman Mitchell, Ranking Member Capuano, and members of the subcommittee. I am the midstream group director at the American Petroleum Institute, where I oversee the organization's efforts to promote and ensure the safety of our Nation's energy infrastructure, including pipelines, rail, and maritime assets.

We appreciate the subcommittee's focus on promoting the safety of our Nation's energy infrastructure, and appreciate the Pipeline and Hazardous Materials Safety Administration's efforts to continue to implement the Protecting our Infrastructure of Pipelines and Enhancing Safety Act of 2016.

However, in doing so, it is important that it be done in a way that helps ensure that practical and performance-based safety regulations are instituted. The development of efficient and effective pipeline safety regulations ensures that we are taking proper actions to protect the public and the environment, while at the same time continuing the U.S. energy renaissance that provides American consumers with access to affordable and reliable energy.

Right now, the United States is leading the world in the production and refining of natural gas and oil, and leading the world in the reduction of carbon emissions to the lowest levels in 25 years. Further, consumers are benefitting from our Nation's energy dominance throughout the world, with affordable American energy.

Pipelines are critical to ensuring that consumers keep feeling the benefits of our Nation's vast energy resources, and they are one of the most efficient ways to safely deliver the energy that Americans use every day, from the gasoline that fuels our transportation systems to the life-saving medical devices made from liquid petroleum products, to the clean natural gas that is used to generate much of the electricity for our Nation's homes, manufacturing plants, hospitals, and schools.

It is estimated that increased investment in our Nation's energy infrastructure, including pipelines, is a $1 trillion proposition that could support 1 million jobs per year through 2035, and add up to $100 billion to our GDP, annually.

At the direction of Congress, PHMSA has been working on the development of two significant pipeline safety regulations, one for oil and another for natural gas. Our industry has and will continue to proactively and collaboratively engage with the agency as they develop these rules to achieve our shared goal of ensuring the safe and efficient transportation of our oil and natural gas and their products.

For example, for the safety of hazardous liquids transmission rule, we encourage PHMSA to consider our recommendations, including repair criteria and the ability to use engineering analysis in examining pipeline anomalies. For the safety of gas transmission and gathering pipelines rule, we appreciate and support the collaborative discussions through the Gas Pipeline Advisory Com-

mittee, or GPAC, to produce consensus recommendations for new regulations.

We hope to see similar discussions through the GPAC for gathering pipelines, including the consideration of needed API Recommended Practice on the subject.

As an industry, we are committed to safety in all of our operations. API continues to develop and revise critical standards and recommended practices following the accreditation process of the American National Standards Institute, or ANSI.

Specifically, API has developed a number of standards to address pipeline safety in close coordination with subject matters from industry, Government, academia, and the broader stakeholder community. In fact, PHMSA has incorporated, by reference, many of these standards in their regulations. As API standards are updated or new ones are developed to incorporate the latest advances and best practices in safety within our industry, PHMSA should execute a timely review to incorporate by reference the latest edition or the first edition of appropriate standards.

Ensuring that pipeline operations can use the most recent and innovative technology will also help to bolster pipeline safety. Current regulations have no deadlines associated with PHMSA's review, notification, and issuance of special permits for new technology. This can result in inefficiencies and, more importantly, can prevent the industry from taking advantage of the latest safety equipment and practices.

Operators are required to conduct timely assessments of pipeline integrity, and that may often be done more effectively with new technologies. However, there is a hesitation to do so, given at times the burdensome special permit process. Requiring PHMSA to exercise their authority to issue a special permit to review alternative safety technology permit applications within 90 days will also provide greater certainty in the special permit process, but will also aid operators in utilizing the latest cutting-edge technologies to further pipeline safety.

In fact, at a more recent meeting of the Gas Pipeline Advisory Committee, members recommended including this concept in the proposed safety of gas transmission gathering lines rule, and PHMSA expressed agreement.

Let me close by once more emphasizing that the oil and natural gas industry is committed to promoting safety in all of its operations, while it strives to ensure that American families and businesses can safely and efficiently access affordable and reliable energy.

Again, thank you for the opportunity to appear before you today, and I am happy to answer any questions you may have.

Mr. MITCHELL. Thank you, Mr. Rorick, for your comments.

Mr. Zamarin, if you would like to begin, please, thank you.

Mr. ZAMARIN. Thank you, Congressman. My name is Chad Zamarin, and I am senior vice president of corporate strategic development at the Williams Companies.

Williams owns and operates critical energy infrastructure, including our Nation's largest natural gas pipeline system. We help to bring to market approximately one-third of the Nation's natural gas, gas that is used to heat our homes, cook our food, and increas-

ingly generate electricity in an environmentally responsible manner.

As mentioned by the chair, I am here today representing the Interstate Natural Gas Association of America's membership. I also serve on the Department of Transportation's Gas Pipeline Advisory Committee, or GPAC, which Mr. Rorick mentioned. The GPAC serves as an advisory committee to DOT and to PHMSA regarding matters of pipeline safety and regulatory oversight, and is comprised of equal representation from the gas industry, Government agencies, and members of the public.

There are four principal points that I wish to make in this testimony on behalf of the natural gas infrastructure industry.

First, operators will continue to incorporate new technologies and enhance safety practices, even in the absence of new regulations or legislation. Our pipeline infrastructure represents what is great about our country and is a unique American advantage.

Our pipeline network is the most vast and advanced in the world, with major portions built in times of greatest need, when many said it couldn't be done: pipelines built to fuel our Industrial Revolution, to avoid waterborne threats during times of great world wars, to fuel the growth and life quality of our great cities, and now to support the transition of our economy to cleaner fuels and renewable resources. In this spirit, in advance of PHMSA completing its pending rulemaking, INGAA [Interstate Natural Gas Association of America] members committed voluntarily to undertake significant efforts to enhance pipeline safety.

In one area alone, this work has supported an approximately 80-percent decrease in onshore gas transmission manufacturing-related incidents since 2010, which was the year that a manufacturing-related incident on a pipeline in San Bruno, California, spurred many of the mandates we are discussing today.

Second, operators support sensible regulations and the completion of the pending rulemakings in a timely manner. It is critical for an industry of our national importance to have regulatory certainty to support ongoing investment and safety enhancement. PHMSA continues to work towards addressing pipeline safety mandates delivered in the last two reauthorizations, and we strongly support PHMSA completing its work in a timely and transparent manner.

Implementing voluntary pipeline safety programs, as we have heard today, during the pendency of proposed regulations, presents business risk. These pending regulations are meant to facilitate safety advances. However, if they take too long or aren't developed in a transparent manner, we risk the unintended consequence of delaying voluntary implementation of safety measures.

Third, the GPAC, which we have mentioned before, provides a process that has proven effective in facilitating broad stakeholder review of pending rules, and the GPAC should remain an active participant in PHMSA's work. Early last year, PHMSA initiated a series of GPAC meetings to consider the proposed natural gas transmission and gathering rule, one of the most ambitious and complex pipeline safety rules ever proposed. Several public meetings were held to review and advise on the rulemaking, and broad consensus was reached around many challenging topics.

The GPAC's work, in collaboration with PHMSA and its staff, in my view, represents one of the most significant enhancements to pipeline safety since the original Federal regulations were promulgated in 1970.

Finally, there are several outdated regulations that do not reflect current leading practices, and should be updated or eliminated. These outdated regulations result from a Code of Federal Regulations that have been established over the past 50 years, one rulemaking at a time.

As an example, PHMSA has announced its intent to consider whether integrity management programs offer an effective alternative to outdated class location requirements. Due to these outdated requirements, our industry spends between $200 and $300 million a year replacing perfectly good pipe segments.

As another example, outdated inspection practices such as pressure testing and destructive material testing are required by code, yet can result in unnecessary outages and avoidable evacuation of methane to the atmosphere, while newer technologies can provide better safety practices and assurances without such negative effects. These are just a couple of the examples of the many practices that result from regulations issued as far back as 1970 with many based on technologies developed in the 1940s and 1950s. We have learned a lot in the past 70 years, and there are much more productive ways to invest these substantial resources.

In conclusion, the natural gas infrastructure industry fully supports the mission of PHMSA and its hard-working professionals. We will continue to be proactive in adopting advancements in technology and safety practices, while supporting the implementation of new regulations in a timely and transparent manner.

We urge the acceleration of new regulations through collaboration with the GPAC alongside the rapid review and retirement of outdated regulations that serve as an anchor dragging behind an economic and safety enhancement engine ready to fire on all cylinders.

Thank you again for the opportunity to be here today.

Mr. MITCHELL. Thank you, Mr. Zamarin, for your comments.

Mr. Weimer, you may proceed.

Mr. WEIMER. Good morning, and thank you for inviting me to speak about pipeline safety today.

Before I talk about the PIPES Act, let me give you a brief overview of where we stand today regarding the safety of pipelines in this country.

Everyone testifying today supports the goal of zero incidents. Yet, according to PHMSA data, since the President signed the PIPES Act 2 years ago, there have been 1,186 reportable pipeline incidents. Of those incidents, 544 were considered significant incidents under PHMSA's definition, and the number of significant incidents has been increasing over the past decade.

Also of concern is that over 70 percent of the failures on gas transmission and hazardous liquid pipelines are from causes the operators ought to have control over, such as corrosion, incorrect operations, and problems with the materials and equipment they use.

For the past 15 years, the emphasis on reducing pipeline incidents has been focused on integrity management programs in high-consequence areas. Unfortunately, significant incident rates within high-consequence areas also continue to climb for hazardous liquid and gas transmission pipelines.

We have also included in our testimony today how the pipeline safety system that Congress has created also plays a part in PHMSA's inability to get things done. One barrier to getting to zero pipeline incidents is the cost-versus-benefit analysis that both Congress and various administrations have required new pipeline safety regulations to meet.

With a large pipeline system where the probability of a failure is low, but the consequences can be huge, it is nearly impossible to pass regulations that move us toward the goal of zero incidents under the current cost-versus-benefit rules. We hope you will make appropriate changes.

Congress has also prioritized a system that uses industry-developed voluntary standards and recommended practices without at the same time creating a system to ensure broad participation in the development of those voluntary standards, or to even verify if companies are using those voluntary efforts, or using them properly. We hope you will change this, as well.

We believe that PHMSA has met the regulatory reporting requirements in the PIPES Act. Yet clearly, what is shown by PHMSA does not portray the true tortured nature of some of these rulemaking efforts.

For instance, the large rule meant to improve the safety of this country's hazardous liquid pipelines was started nearly 8 years ago, but that fact is not clear on the web page. What is also not mentioned is how many times the rule has bounced back and forth between PHMSA and OMB, and that even though the rule was ready for final publication, the current administration put a hold on it in January of last year for concerns yet to be stated publicly.

We suggest, to get a better idea of where the delay in the rules is actually occurring, that PHMSA's rulemaking chart include the date the rulemaking was begun, and for how long PHMSA, OST, and OMB each had the rule in their possession.

In sections 4 and 5 of the PIPES Act, Congress asked the GAO to produce important reports on the integrity management programs for both natural gas and hazardous liquid pipelines. The directive in the PIPES Act asks for these reports after the new gas and hazardous liquid rules are published. Since those rules have yet to be published, and the current integrity management rules have been in place for over a decade and are well understood, we ask that Congress direct GAO to produce these important reports as soon as possible, instead of waiting for the proposed rules.

In the PIPES Act Congress mandated that PHMSA issue minimum Federal safety standards for natural gas storage facilities within 2 years. There are still no final standards in place. PHMSA issued an interim final rule in December 2016. That interim rule essentially incorporated by reference two industry-developed recommended practices. Yet in January of 2017 a group of industry organizations filed a petition for reconsideration of the interim rule. PHMSA agreed to consider the petition and take further com-

ments on the interim rule, and hold off on any enforcement. No final rule or decision on the petition for reconsideration has yet been issued.

In the PIPES Act Congress also directed PHMSA to make it clear that the Great Lakes coastal beaches and marine coastal waters are considered unusually sensitive areas. This mandate is yet to be accomplished. The need to do this came as a surprise to us, since clearly these areas are unusually sensitive. We were also surprised to learn that PHMSA does not currently have a way to define and map all such areas. Congress should direct PHMSA to show how all such unusually sensitive areas are being mapped and identified, and set up a system so local and State governments that identify these areas in their jurisdictions all the time at least have an opportunity to review and comment on such PHMSA designations.

I see my time is about up, so I just want to thank you for allowing me to testify today.

Mr. MITCHELL. Thank you for your testimony, Mr. Weimer. As you are aware, votes have been called. We are going to put ourselves on the incentive system. If everyone keeps their questions and answers short, we can wrap this up before we go vote, and therefore, we can adjourn the hearing. Otherwise, we are going to have to come back.

I am going to yield to my ranking member, and not have any questions, to move this forward.

Sir?

Mr. CAPUANO. Thank you. And I appreciate the panel, and we are trying to be respectful of your time, as well.

Just quickly, Mr. Zamarin, as I understand it, you are the only one here who works for a private company. The others work for associations. As a member of a private enterprise, if your bosses told you to do something and you didn't do it for 8 years, how long do you think you would be employed?

Mr. ZAMARIN. Congressman, thank you for the question. I can't imagine long.

Mr. CAPUANO. I didn't think so.

Mr. Black and Mr. Rorick, you both work for associations. If your board told you to do something and you didn't do it for 8 years, how long do you think you would be employed by the association?

Mr. BLACK. It would be somebody else here.

Mr. RORICK. Yes, I would have to agree with that.

Mr. CAPUANO. That is what I thought. Because of timing, Mr. Weimer, I think you do a great job, thank you for your support.

Thank you, gentlemen, for being here, and I apologize for the shortness of this.

Mr. MITCHELL. Thank you. The Chair recognizes Ms. Esty for her questions, thank you.

Ms. ESTY. We appreciate you being here, and would urge you to continue to, as we move forward with possible—as you heard—reauthorization of PHMSA, if it is really complying with what needs to happen.

Just to flag concerns, I know I have some. And as a number of you have mentioned, new technologies, we can't embed old rules that rely on less useful technologies.

I have been working with other members of the committee on the corrosion issue. Obviously, there is huge opportunities for new sensors, for drones, and other kinds—you know, small robotics to make inspections more frequent, safer. So those of us both on this committee and the Committee on Science, Space, and Technology would be very interested in following up with you with some ideas on that front. The very fact that a number of these regulations have not been issued may allow us to potentially leap forward with better technologies. So we would ask for your help and support in thinking about that.

And for all of you, I do think it is really important that we look at the culture issue, the safety culture that we need to have within those who are implementing rules. You can have the best rules on the book, but if they are not implemented well, if they are not incorporated into the culture, nothing is going to matter, and people will continue to lose their lives.

So if you can follow back up with us—wanting to allow my colleagues to have a chance to ask their questions, but I am quite interested in your thoughts on how we ensure that, rather than adversarial attitude, that we actually are working hand in glove in a culture of safety that really is protecting workers and the public so we can ensure safe delivery of energy to the American people.

Thank you very much, and I appreciate your efforts.

Mr. MITCHELL. Thank you for your question and your brevity.

Mr. Lipinski, you are recognized.

Mr. LIPINSKI. Thank you. I want to make sure I get this done quickly. So thank you all for your testimony, and I thank the chairman.

When we were considering the PIPES Act, I called attention to a number of reports from TSA [Transportation Security Administration], GAO, and CRS [Congressional Research Service] that identify pipelines as increasingly a target of attempted cyberattacks. So at that time I had requested, along with Ranking Member DeFazio, that the GAO do a study of the adequacy of pipeline control system cybersecurity. GAO is in the process, I understand, of concluding this study right now.

Early this month two FERC commissioners published an editorial expressing their opinion that there should be mandatory cybersecurity for gas pipelines. I have more specific questions, but let me throw this out as a general question, just so we can—I can submit the other questions for the record, possibly.

But I just want to ask Mr. Rorick if you think that there needs to be mandatory guidelines, regulatory mandates, or is the current creation of industry consensus standards and recommended practices, is that enough, do you believe?

Mr. RORICK. Congressman Lipinski, we—there is an existing API Recommended Practice, 1164, that deals specifically with the issues that you are talking about on SCADA [supervisory control and data acquisition] systems, and industrial control systems. That recommended practice is currently being updated. We have invited TSA to participate in it, so they are well aware of it.

And in addition, that recommended practice also references the NIST [National Institute of Standards and Technology] framework,

which is broadly used by not only our industry, but multiple industries.

So we feel we are well aware of the threats, we are coordinating very closely with TSA, DOE [Department of Energy], DHS [Department of Homeland Security], and the other intelligence agencies. And we feel that we are very engaged and on top of these issues. But there is always more to learn, sir, and we would welcome the opportunity to discuss it further.

Mr. LIPINSKI. I thank you. With that, for time, I will yield back. Thank you.

Mr. MITCHELL. Thank you, Mr. Lipinski. Thank you, gentlemen, for being here. I am sorry that votes today have abbreviated the time people may have had for questions. Your comments have been helpful to today's hearing.

As there are no further questions, I would ask unanimous consent that the record of today's hearing remain open until such time as our witnesses have provided the answers to any questions that may be submitted to the record, unanimous consent that the record remain open for 15 days for any additional comments or questions from Members or witnesses that will be included in today's record.

Without objection, so ordered.

I would like to thank our witnesses again. Thank you for being here, and for your testimony.

If the other Members don't have anything to add, the subcommittee standards adjourned.

[Whereupon, at 11:55 a.m., the subcommittee was adjourned.]

WRITTEN STATEMENT OF THE HONORABLE HOWARD "SKIP" ELLIOTT ADMINISTRATOR PIPELINE AND HAZARDOUS MATERIALS SAFETY ADMINISTRATION

BEFORE THE U.S. HOUSE OF REPRESENTATIVES COMMITTEE ON TRANSPORTATION AND INFRASTRUCTURE, SUBCOMMITTEE ON RAILROADS, PIPELINES, AND HAZARDOUS MATERIALS HEARING ON PIPES ACT OF 2016 IMPLEMENTATION: OVERSIGHT OF PIPELINE SAFETY PROGRAMS

June 21, 2018

I. Introduction

Chairman Denham, Ranking Member Capuano, thank you for the opportunity to testify before the Railroads, Pipelines, and Hazardous Materials Subcommittee today.

The mission of the Pipeline and Hazardous Materials Safety Administration – PHMSA – is to protect people and the environment by advancing the safe transportation of energy and other products that are essential to our daily lives. After working for decades in the freight rail industry, a great deal of it working to improve public safety, I believe that safety is the result of effective, smart regulations that hold operators accountable for their systems – but I also know that it takes more than just regulations to improve safety performance.

PHMSA's mission, and my objectives, are inextricably linked to the Secretary's goals of safety, infrastructure, and innovation. While PHMSA executes its authority granted by Congress to oversee the safety of the pipeline industry, we also want to focus on finding innovative solutions to industry challenges; accommodate the fast pace of new and promising safety technology; ensure that our Nation's pipeline infrastructure can continue to provide safe, reliable energy; and improve our oversight to hold all operators accountable.

During my railroad career, I responded to, and often visited again afterwards, the sites of more derailments and other man-made and natural disasters than I can remember. To inspire commitment, as for many other things, there is no more effective means than first-hand observation. I remember many of those scenes, often in unsettling detail, and they are the reason why I left retirement in Florida to take the job as PHMSA's Administrator. But few of those tragedies I encountered in the railroad affected me any more deeply than a visit I made in April of this year to the site of a pipeline leak and resulting explosion that happened over 19 years ago in Bellingham, Washington.

As you may recall, on June 10, 1999, a ruptured gasoline pipeline leaked into to two creeks and floated downstream until it found an ignition source. An 18-year-old young man fishing in the creek collapsed from fumes and drowned. And two 10-year-old boys playing on the bank were caught in the explosion. As I listened to those who witnessed the incident unfold replay the events of that afternoon, the most heartbreaking detail was the concern of one boy that his mother not see how badly he was burned, completely unaware that it was so bad that he would not survive the next day. Tragedies like Bellingham underscore the criticality of PHMSA's safety mission. Our goal – which I believe is attainable – is zero pipeline incidents, and I know that when regulators, industry, and the public collaborate, we can find new paths forward to achieve that goal.

II. The Office of Pipeline Safety's Mission

PHMSA's Office of Pipeline Safety is responsible for the regulation and oversight of our Nation's energy pipeline systems. I want to take a moment to thank all our federal and state inspectors who are at the front lines of pipeline safety, supporting our oversight responsibility and enforcing our regulations. PHMSA's staff of 250 pipeline inspectors and investigators is complemented by over 300 state pipeline inspectors who oversee intrastate pipeline safety on behalf of the Secretary of Transportation.

Since Congress authorized over one hundred additional full-time positions in 2015, and six more in FY 2017 to help inspect underground natural gas storage facilities, PHMSA has established an aggressive hiring strategy to reduce a backlog of unfilled vacancies and ensure that PHMSA has the personnel needed to carry out necessary inspections and accident investigations.

The Office of Pipeline Safety's vision is straightforward: invest in our workforce – like our safety inspectors. Promote innovation. Strengthen oversight. And work with Congress and stakeholders to develop policies that advance the safe transportation of energy products and hazardous materials through America's pipeline system.

I would be remiss if I failed to thank all of our stakeholders – especially the public – for the success of the national Call-Before-You-Dig number, 811. Over the past 10 years, since 811 was

established, incidents caused by excavation damage – a leading cause of pipeline injury and death – have fallen 40 percent.[1] This decline would not be possible without the incredible outreach work of PHMSA, our state safety partners, and the public taking the time to call 811.

III. Mandates and Rulemaking

PHMSA has already made significant progress closing our Congressional mandates. Of the 42 mandates from the Pipeline Safety, Regulatory Certainty, and Job Creation Act of 2011, PHMSA has eight mandates outstanding. And, there are six outstanding mandates from the 19 identified in the Protecting Our Infrastructure of Pipelines Enhancing Safety Act of 2016.

Closing these mandates is a top priority, and I understand that the remaining mandates are critical to advancing pipeline safety. As members of the Subcommittee may be aware, of the 14 outstanding mandates from the 2011 and 2016 Acts, six are tied to reports and other actions,[2] and eight are tied to in-progress rulemaking efforts. PHMSA will continue to concentrate our efforts on the path forward, which means not just pushing to finalize our rules, but also coming up with innovative alternative approaches that can meet the safety goals of the mandates without solely relying on regulations and the rulemaking process.

As PHMSA Administrator, I plan to focus on three main rulemaking efforts – the safety of hazardous liquid pipelines, the safety of gas transmission and gathering pipelines, and pipeline rupture detection and automatic shutoff valves – in order to close the majority of PHMSA's open mandates, while also achieving the highest impact to pipeline safety.

Gas Rule

PHMSA has also made significant progress working toward the final gas transmission and gathering pipeline rulemaking efforts, which we believe will help close two very important open mandates[3] related to expanding integrity management requirements for gas transmission pipelines and requiring operators to confirm the maximum allowable operating pressure of certain pipelines. These changes are expected to allow operators to assess more pipelines in more areas and better understand their systems' conditions.

When finalizing the "Safety of Gas Transmission and Gathering Pipelines" NPRM, the rulemaking was under review for nearly 2 years.[4] I believe a large cause of these delays was that the rule became too big and unwieldy. Accordingly, PHMSA has made the strategic decision to

[1] PHMSA All Reported Incident 20 Year Trend data, https://www.phmsa.dot.gov/data-and-statistics/pipeline/pipeline-incident-20-year-trends
[2] Pipeline Safety Act of 2011: 5(e) IMP Expansion and Class Location Replacement, 6(a) Public Awareness and Education, 15 CO2
[3] 5(f) IMP Expansion and Class Location Replacement, 23 (c-d) Determination of MAOP and Testing Regulations
[4] From March 12, 2014, to February 29, 2016

split the initial proposed rule into three more manageable rulemaking actions. This split may help us to move each individual, smaller rule forward more quickly; and, most importantly, prioritize Congressional directives on gas pipelines.

Hazardous Liquid Rule

I also understand the importance of moving forward PHMSA's long-awaited Safety of Hazardous Liquid Pipeline rulemaking that dates back to the 2011 Act. This rulemaking would amend the Pipeline Safety Regulations to improve protection of the public, property, and the environment by closing regulatory gaps where appropriate, and ensuring that operators are increasing the detection and remediation of unsafe conditions, and mitigating the adverse effects of hazardous liquid pipeline failures. This rule is one of my highest priorities and with the intention to complete this rule as quickly as possible. I have had several substantive discussions with Departmental leadership, and I feel optimistic that, moving forward, we will get a final rule out quickly.

Valves and Rupture Detection Rule

Perhaps our biggest gap in both mandates and safety is our Shutoff Valve and Rupture Detection rule. We are currently developing a notice of proposed rulemaking to address this critical issue. The Shutoff Valve and Rupture Detection rule would meet the goals of several Congressional directives by proposing revisions to the Pipeline Safety Regulations related to newly constructed or entirely replaced natural gas transmission and hazardous liquid pipelines to improve rupture mitigation and shorten pipeline segment isolation times in high consequence and select non-high consequence areas. The proposals will also address recommendations from the National Transportation Safety Board and are necessary to reduce the serious consequences of large-volume, uncontrolled releases of natural gas and hazardous liquids.

Regulatory Reform

While PHMSA works to complete its regulatory agenda, the agency is also committed to reviewing the effectiveness of our regulatory program by conducting a comprehensive evaluation of current, in-progress, and planned regulations.

PHMSA is working within the Department of Transportation as part of a One-DOT approach to ensure that the regulatory budget meets the President's "two-for-one" Executive Order.[5]

As part of our regulatory reform agenda, PHMSA has identified opportunities to reduce regulatory burdens on public and private sector stakeholders. The agency is confident that the regulatory amendments we have identified as a part of our regulatory reform will fit the requirements of the executive order.

[5] Executive Order 13771 January 30, 2017, Reducing Regulation and Controlling Regulatory Costs

Our role as the nation's pipeline safety regulator is to establish minimum safety standards and develop rules that prioritize safety and balance resources. I want to emphasize that while the executive orders have focused on reducing regulatory burdens, it is not about sacrificing safety. Rather, it is about improving the way we *achieve* safety. I believe that our regulatory review efforts can help us simplify complex rules to make compliance less burdensome to operators without compromising safety.

In fact, PHMSA's review will help to ensure that its regulations are right-sized – which can allow operators put additional resources where they will have the maximum safety impact, such as greater investment in safety research and development and technology-based safety enhancements.

As always, our focus is ultimately on safety performance. It is the responsibility of the oil and gas industry to understand and manage the risks of their systems. The current regulatory climate gives us all a unique opportunity to work together to optimize our regulations for safety. As PHMSA Administrator, I will continue to push industry to not wait, but to invest in and accelerate their pipeline safety efforts now, making substantive safety improvements best suited to their systems and without specific direction from regulations.

Recently Completed Mandates: Underground Storage and Others

PHMSA has made progress on several Congressional directives, such as developing minimum standards for underground natural gas storage facilities. For example, last December, PHMSA published an interim final rule, which established minimum regulations in this area. In addition, PHMSA's Training and Qualifications Center in Oklahoma City (TQ) has already developed a program to ensure that federal and state inspectors can provide effective oversight in this area.

The TQ Center provides training for federal and state inspectors to understand how to apply the federal regulations and incorporated industry standards. The training includes classroom training, hands-on labs, and online training to keep inspectors current on updated regulations and practices.

The course instructs inspectors about the function and operations of underground natural gas storage; how to conduct an inspection of underground natural gas storage facilities; and how to evaluate an underground storage facility's operations, maintenance, and emergency response processes, including integrity and risk management.

The distance learning course went online in February of this year, and the first instructor-led class for federal and state inspectors was conducted in April. We have two more courses scheduled for this year, and both are already full.

In addition to our federal inspectors, the new course also serves our state partners. We have inspectors from Alaska, California, Illinois, and Kansas signed up to complete training as well.

We have also taken other steps to improve safety and address Congressional directives, including issuing the interim final rule for Emergency Order Authority in October 2016. Additionally, PHMSA issued an advanced notice of proposed rulemaking to solicit public comment on the marking of identification numbers on cargo tanks, and published an advisory bulletin to clarify the regulatory requirements that may vary depending on the operational status of a pipeline.

For transparency, PHMSA regularly updates its public website on the status of final rules.

IV. Enhancing Safety

Alternative Actions

But while some on the PHMSA staff work through the rulemaking process, others are aggressively pursuing our core safety mission of conducting comprehensive inspections, investigations and public and industry outreach. I have challenged the PHMSA staff to look past simply clearing our mandates through regulations and to look for other, innovative ways to improve safety, and we've already implemented processes outside of regulations that will result in tangible safety benefits.

I have not hesitated to issue Corrective Action Orders when PHMSA identifies safety concerns in pipeline systems, pushing operators to address issues before they lead to problems. PHMSA has also developed advisory bulletins to alert operators of more widespread safety concerns.

One way that we've seen advisory bulletins and collaboration result in widespread improvements is in enhancing the integrity of river pipeline crossings. After flooding caused a significant oil spill into the Yellowstone River in 2011, PHMSA published three advisory bulletins related to pipeline crossings of inland water bodies and has proactively focused on pipeline integrity at river crossings to encourage operators to use new technologies to better build and monitor these lines. Operators have since opted to install over 50 pipelines at greater depth to ensure that the lines are unaffected by flooding, while others are performing real-time monitoring of rivers.

Training and Qualifications Center

I mentioned PHMSA's Training and Qualification Center earlier, and have had the opportunity to visit the Center several times in person to witness the innovative ways they are making the important training that inspectors require more accessible and effective.

PHMSA's Training Center offers 58 on-site and distance-learning courses and provides classroom training to an average of over 1,700 state and federal inspectors from around the country annually. They have also been pulling out the stops to handle the increased training needs stemming from the increase in new federal and state inspection personnel. The Center is

conducting simultaneous instructor-led courses to increase capacity and exploring new learning approaches, curriculum improvements, and delivery efficiency to ensure relevancy.

A noteworthy commentary on the Training and Qualification Center's dedication to quality is the full accreditation they recently received from the International Association for Continuing Education and Training (IACET). The 15-month intense accreditation process consisted of a thorough audit and review of their operating practices related to training development, documentation, and delivery. Accreditation from IACET validates the Center's professional training efforts and allows PHMSA to issue continuing education credits to its students.

Grants

The financial support that we provide to our stakeholders through grants is another vital piece of the PHMSA safety mission.

Our State pipeline inspection partners oversee more than 80 percent of the Nation's pipeline infrastructure – much of it gas distribution pipelines – through certification with PHMSA. The State Base Grant program offered by PHMSA supports state pipeline safety programs by reimbursing a portion of each state's program expenses for a given calendar year based on their performance. Last year, we reimbursed $50.5 million to our state partners.

The consistent grant funding that we provide helps state programs purchase equipment and hire and maintain pipeline safety inspectors. As pipeline infrastructure continues to increase, this grant system is critical for our state partners to continue to inspect and oversee our nation's pipeline systems.

PHMSA's Technical Assistance Grants (TAGs) provide funding for technical assistance related to pipeline safety issues to local communities and non-profit organizations, where they make direct impacts to pipeline safety at the grassroots level. The TAGs can be used for engineering or other scientific analysis of pipeline safety issues and is also used to promote public participation in official proceedings. Since the program's inception in 2009, PHMSA has awarded almost $8 million for 178 individual technical assistance projects. We issued a Notice of Funding Opportunity for the fiscal year 2018 TAG grants in May and expect to award $1.5 million in grant funds, up to $100,000 for each recipient.

PHMSA's 811 One Call Grant Program provides funding to state agencies in promoting damage prevention awareness, including changes with their state underground damage prevention laws, related compliance activities, training and public education. This grant program is for states that have a certification or agreement with PHMSA to perform pipeline safety inspections. Last year, we awarded $1 million across 26 state agencies to assist in these efforts.

PHMSA recently restructured its grants program to improve program effectiveness and efficiency. We streamlined our Notices of Funding Opportunities, consolidated grants forms and

formats, and condensed the grants review processes. We are also in the process of reducing grants management systems that will save the agency money and centralize grants management functions.

And I am pleased to say that the PHMSA will soon award its fiscal year 2018 Underground Natural Gas Storage Grants – the first grant designed to support states' inspection and enforcement of underground natural gas storage facilities. The grants will be used to reimburse up to 80 percent of the costs a state incurs for inspectors, equipment, and safety activities for the oversight of underground storage facilities.

These awards signal the beginning of PHMSA's underground storage partnership with states and show our support for their efforts to protect the public from underground natural gas storage incidents, such as the one that occurred in Aliso Canyon, California, in 2015.

Research and Development

Of course, a key component of using innovation to drive safety beyond minimal federal regulations is a robust Research and Development program, and I am very proud of all the ways our R&D program supports new technology to further improve pipeline safety. Since its inception, PHMSA's R&D program has worked on implementing a collaborative and coordinated research strategy with stakeholders who share PHMSA's safety goals, and last year, PHMSA implemented additional safeguards against conflicts of interest in our R&D program, closing a mandate[6] from the PIPES Act of 2016.

PHMSA's pipeline R&D program is consistent with the Department's strategic goals of safety, infrastructure, innovation, and accountability and consistent with the DOT Five-Year Transportation Research, Development, and Technology Strategic Plan. The program's focus is addressing safety challenges that maximize impact. Our program sponsors research on projects that can provide near-term solutions that will improve safety, reduce environmental impacts, and enhance the reliability of the Nation's pipeline transportation system.

Since 2002, we have invested nearly $93 million dollars in 270 R&D projects. Among them, 22 patent applications and 28 new pipeline technologies have since hit the market, including above-ground, radar-based pipeline mapping and a nondestructive testing method for pipelines that cannot accommodate traditional in-line inspection tools.

Our research program funding strategy is driven by our R&D Forum, which is held periodically to generate a national research agenda focused on current technical gaps and challenges facing future research. The Forum includes representatives for the public, government, and industry, allowing all of our stakeholders to help identify the best direction of the program.

[6] Section 22 Research and Development

Specifically, our stakeholders identify technology and knowledge gaps within topic areas, which allow us to incorporate those gaps into our research solicitations. When all of our stakeholders work together to develop a consensus, we reduce research program duplication, leverage resources more efficiently, and ensure that our research agenda is aligned with the current needs of pipeline safety.

Our R&D program also takes a far-reaching view with our Competitive Academic Agreement Program (CAAP program), which funds academic research to provide tomorrow's pipeline safety workforce with an early opportunity to contribute safety solutions. The CAAP program, launched in 2013, funds university students to explore academic research focused on high-risk and high-pay-off solutions.

The program helps validate proof of concept for theories and theses that can be developed and further investigated by our core research program – but it also serves to expose the next generation of engineers to pipeline challenges and solutions, ensuring that the pipeline workforce can keep up with the growing needs of our nation's expanding pipeline infrastructure.

Damage Prevention

Pipeline safety is a shared responsibility and working with all of our stakeholders is at the heart of what PHMSA does. The Office of Pipeline Safety does its work by collaborating where possible to address serious pipeline safety issues and improve performance, and I think this is really illustrated by two recent strides that PHMSA has made toward improving safety.

The PIPES Act of 2006 mandated that PHMSA establish criteria to determine the adequacy of state enforcement of damage prevention laws. Through our implementation of this mandate and working with states, PHMSA has seen an improvement in how states implement their damage preventions laws.

Last year, PHMSA determined that 28 states had inadequate enforcement, and 24 states[7] had adequate enforcement of their state one-call damage prevention laws. Last month, PHMSA sent determination letters to state damage prevention law-enforcement programs for 2017. The number of states with inadequate enforcement procedure dropped from 28 to 16, an impressive 43 percent reduction. PHMSA will keep working with states to further close the gap and so that we see further reductions next year.

Inspections

Finally, I want to talk about the vital work that our inspectors – both federal and state – do to further safety through targeted oversight. We are in our sixth year of fully implemented "integrated inspections," a risk-based, data-driven approach where each inspection is specifically

[7] Includes DC and PR

designed to look at the risk profile of individual pipeline operators and focus on the greatest risks to safety. To roll out this new way of doing things, PHMSA has improved its inspection software and developed new training for inspectors.

However, our inspection process is adaptable – whether we have an emerging safety concern or receive new mandates or recommendations, we alert our inspectors to focus on those specific safety issues as a part of their general integrated inspection. This ensures that our inspectors are conducting inspections that are not just targeted to the operator, but to prevailing system-wide safety issues and concerns as well.

The work of our inspectors underscores the fact that we are proactive and do make tangible safety gains without waiting for rulemaking. Risk mitigation is generally viewed as a defensive function; but this kind of innovation gives us an offensive weapon to pursue safety improvements. In addition, our inspectors are meeting the PIPES 2016 mandate to provide timely inspection feedback to operators and keep them informed of any potential safety issues that they find, an important piece of the inspection process, that gives operators the safety information they need as quickly as possible.

Safety Management Systems (SMS)

The common thread that runs throughout every aspect of PHMSA's safety mission is a Safety Management Systems (or SMS) approach. SMS looks to prevent accidents and incidents from ever occurring as opposed to solely responding to yesterday's accident. To be effective, SMS requires PHMSA to move beyond the role of being just a regulator – to push operators to identify and target their own risks, and to encourage a company-wide culture that makes safety the number one priority, always.

For an SMS culture to permeate through all levels and areas of the pipeline industry, we need ways to share and analyze data, allowing all of us to see emerging trends to inform best practices. Just over a year ago, PHMSA established the Pipeline Safety Management System Working Group to tackle that problem – to identify SMS implementation performance metrics to measure both progress and challenges. The working group is made up of members of our gas and liquid pipeline advisory committees, and similarly includes representatives from each of our stakeholder groups.

Our Pipeline Safety Management Group will continue to work to encourage operators to implement SMS and support industry efforts to develop new SMS tools. We all share the same goal of zero pipeline incidents, and I believe that the more we collaborate, the safer our nation's pipelines will be.

V. Conclusion

I believe that first-hand experience is the best way to fully understand the impact of an event, which is why I've tried to personally visit as many of our own regional offices, pipeline facilities, construction sites, R&D centers, and incident sites as I can.

I've worked hard to get out of the office and meet with safety advocates to understand their needs and objectives. I've also met with many operators to engage their leadership and encourage them to address our own needs, such as better communication in emergencies and more open collaboration for SMS.

Of all my travels as Administrator, by far the most striking was the trip to Whatcom Falls in Bellingham, Washington, where I saw the pristine environment and heard the story of that tragic afternoon in June, 19 years ago. Adding that to my own experiences from 40 years in the railroad industry reinforced my steadfast commitment to doing everything possible to prevent these events from ever occurring again. There are many paths towards safety, and I know that we can ask the right questions now to get ahead of problems before they lead to incidents, and certainly before they become tragedies.

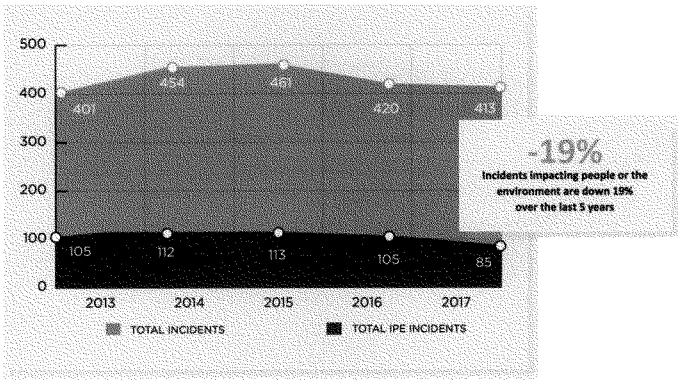
Testimony of Andrew J. Black
Association of Oil Pipe Lines, President & CEO
before the
U.S. House Committee on Transportation & Infrastructure
Subcommittee on Railroads, Pipelines and Hazardous Materials
June 21, 2018

Thank you. I am Andy Black, President and CEO of the Association of Oil Pipe Lines (AOPL). We represent transmission pipeline operators who deliver crude oil, refined products like gasoline, diesel fuel and jet fuel, and natural gas liquids such as propane and ethane. Our U.S. pipelines extend over 212,000 miles throughout the country, safely delivering more than 18 billion barrels of crude oil and energy products per year.

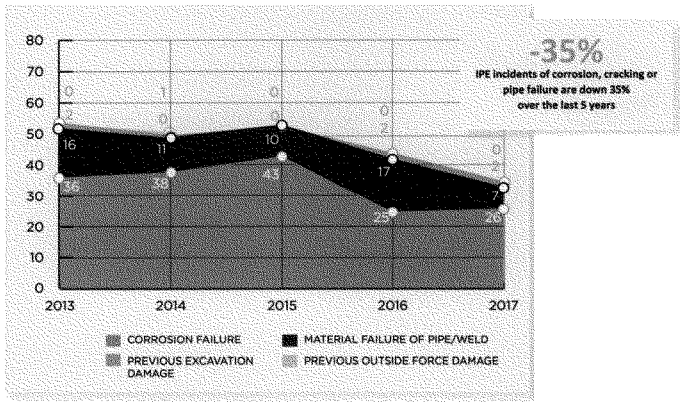
Pipelines play a critical role in delivering energy to American workers and families. Americans use the energy our pipelines deliver in their cars and trucks to commute to work or drive on the job. Our pipelines also transport products like propane that farmers use for rural heating and crop drying and raw materials such as ethane that American workers use for their good-paying manufacturing jobs.

Pipelines are an exceedingly safe way to deliver the energy America needs. The average barrel of crude oil or petroleum products reaches its destination safely by pipeline greater than 99.999 percent of the time. As Congress and the American people debate alternatives for transporting energy across the country from where it's produced, to where it's refined, to where it's consumed, you can know that pipelines are the safest way for the American people to get the energy they need.

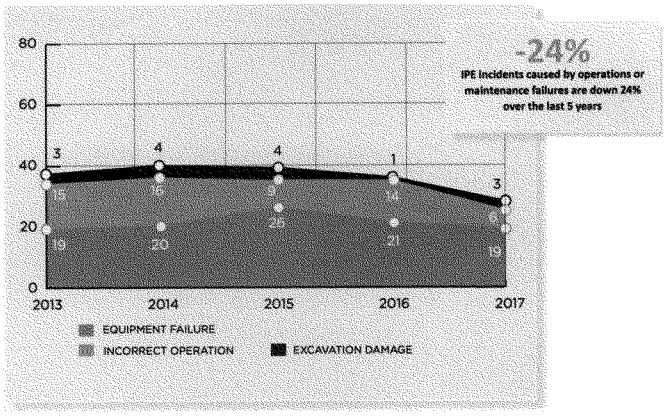
According to data collected by the U.S. Pipeline and Hazardous Materials Safety Administration (PHMSA), the safety of liquids pipelines has improved dramatically over the last 5 years.



Liquids pipeline incidents impacting the public or the environment are down 19% since 2013.



Incidents impacting the public or the environment caused by corrosion, cracking or pipe failure are down 35% over the last 5 years.



Incidents impacting the public or the environment caused by operations or maintenance failures are down 24% over the last 5 years.

This key performance indicator, Incidents Impacting the Public or the Environment, was recently developed jointly by PHMSA, the Pipeline Safety Trust and the liquids pipeline industry, in response to a recommendation by the U.S. National Transportation Safety Board (NTSB) to develop more meaningful metrics for tracking pipeline safety. NTSB recognized PHMSA collects hundreds of different data points on pipeline safety and pipeline incident causes. NTSB challenged the pipeline community to develop a finite set of metrics that would describe pipeline safety in a meaningful way. While there are many metrics available and PHMSA will continue to collect many data points, we support measuring our performance for consistency with our overriding mission -- protecting the public and the environment.

Each of these safety performance metrics are included in our annual performance report we issue jointly with the American Petroleum Institute. I encourage each member of the subcommittee to read through our *2018 API-AOPL Pipeline Safety Excellence Report* available at www.aopl.org[1]. In addition to discussing our progress reducing incidents impacting people or the environment, the annual report reviews incidents by location, size, commodity, and cause, with the raw data on each of these measures. Self-reporting on industry-wide safety performance is part of our effort to be transparent about our safety progress and invite a conversation on how we can best tackle remaining pipeline safety issues.

We use performance data, recommendations from regulators and safety investigations, and lessons learned from incidents and near misses to guide our industry-wide safety efforts. Based on this information, personnel from AOPL and API member companies participate in nearly two dozen industry-wide pipeline groups to improve pipeline operations and safety. We are also funding research and development on pipeline inspection technologies, enhancing our threat detection and response capabilities, expanding safety culture and management systems, and boosting our emergency response capabilities.

Through our Pipeline Safety Excellence program member companies working together through our industry associations have completed development of a number of industry-wide recommended practices and technical reports to improve our ability to detect pipeline cracking, integrate safety data, manage safety efforts holistically, manage leak detection programs, and better plan for and respond to pipeline emergencies.

[1] http://www.aopl.org/wp-content/uploads/2018/04/2018-API-AOPL-Annual-Pipeline-Safety-Report-small.pdf

We are now actively engaged in implementation efforts to educate, encourage and help member companies implement these best practices. A prime example is our effort to encourage and assist implementation of the API Recommended Practice (RP) 1173 for Pipeline Safety Management Systems. Recommended by NTSB and developed in conjunction with PHMSA and state pipeline regulators, Pipeline Safety Management Systems are helping pipeline operators comprehensively and holistically manage all the safety efforts underway across a company. Other industry sectors, such as aviation, nuclear power and chemical manufacturing, have benefited from safety management systems. Now, more pipeline operators are benefiting, too. The NTSB formally said the industry response to the recommendation "exceeded expectations."

In addition to these implementation activities, pipeline operators within AOPL and API will complete updates of industry-wide guidance on how to proactively inspect and when to perform preventive maintenance on pipelines, how to protect our companies and systems against cyber-attacks and how to safely manage idled pipelines.

As we move closer to the next reauthorization of the national pipeline safety program, our improved safety record is clear. Pipeline operators have learned the lessons of past pipeline incidents and are developing new technologies and innovative safety methods to prevent the incidents of the future. Pipeline operators have implemented past mandates from Congress, including: notification of incidents within 1 hour of confirmed discovery, sharing safety data sheets in the early hours of an incident, and more frequent inspections of inland deep-water pipelines.

Looking ahead, we look forward to working with the committee on how best to improve pipeline safety. There is great potential to harness the safety benefits of new technologies and innovative methods for keeping pipe safe. A continuing challenge is to ensure that federal oversight of pipeline safety keeps pace with technology and innovation. Federal pipeline safety regulations developed 10 or 20 years ago sometimes do not reflect modern improvements to safety inspection technologies and capabilities.

We look forward to working with the committee on these issues and I look forward to answering any questions you may have for me today. Thank you.

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U.S. House of Representatives
Committee on Transportation and Infrastructure
Subcommittee on Railroads, Pipelines and Hazardous Materials
"PIPES Act of 2016 Implementation: Oversight of Pipeline Safety Programs"

Testimony of Robin Rorick
Group Director, Midstream and Industry Operations
The American Petroleum Institute
June 21, 2018

Good morning Chairman Denham, Ranking Member Capuano, and Members of the Subcommittee. Thank you for the opportunity to speak today about implementation of the Protecting our Infrastructure of Pipelines and Enhancing Safety (PIPES) Act of 2016. The oil and natural gas industry proactively and collaboratively engages with the Pipeline and Hazardous Materials Safety Administration (PHMSA) to help ensure the safe and efficient transportation of our products. We recognize and appreciate PHMSA's efforts to implement the 2016 PIPES Act, but more work needs to be done to help ensure practical and performance-based regulations are instituted. The development of efficient and effective pipeline safety regulations ensures that we are taking proper actions to protect the public and environment while at the same time continuing the U.S. energy renaissance that provides American consumers with access to affordable energy.

The American Petroleum Institute (API) is the only national trade association representing all facets of the oil and natural gas industry, which supports 10.3 million jobs and 8 percent of the U.S. economy. API's more than 625 members include large integrated companies, as well as exploration and production, refining, marketing, pipeline, and marine businesses and service and supply firms. As Group Director of API Midstream and Industry Operations, I am responsible for all energy infrastructure issues, including those related to the gathering, processing, storage, and transportation of oil and natural gas.

The United States is leading the world both in the production and refining of oil and natural gas[1] and in the reduction of carbon dioxide emissions, which are at their lowest levels in 25 years.[2] Carbon dioxide emissions from electricity generation have declined 28 percent since 2005 and are at their lowest level in 30 years; more than 60 percent of the decrease in power generation-related CO2 emissions since 2005 was due to fuel switching to natural gas.[3] In the past decade, we have transitioned from an era of energy scarcity and dependence to one of energy abundance and security. In 2008, the U.S. was producing only 5 million barrels per day of oil. Just this April, the U.S. produced a record 10.5 million barrels per day[4], a doubling of production. Along with this growth in production, there's been a corresponding growth in U.S. crude and petroleum product exports, which reached a record high of 7

[1] https://www.eia.gov/beta/international/
[2] U.S. DOE, Energy Information Administration, Monthly Energy Review May 2018. Lowest since 1992
[3] http://energytomorrow.org/blog/2017/03/31/energy-and-declining-emissions
[4] U.S. DOE, Energy Information Administration, Weekly U.S. Field Production of Crude Oil

million barrels per day in April, primarily driven by growing exports of crude oil.[5] A similar transformation has occurred in natural gas production, which has grown by almost 50 percent since 2008.[6] This energy renaissance has helped U.S. families save on their energy bills, created greater job opportunities for American workers, bolstered U.S. manufacturing, strengthened our economy, and helped to enhance our national security interests abroad.

When taken together, the U.S. is the largest producer of oil and natural gas in the world. We have seen the benefits of being an energy superpower manifest themselves here at home in the form of energy security and reliability. And as global commodities, the oil and natural gas we have produced here in the U.S. have provided benefits far beyond our borders, throughout the world. None of this would be possible were it not for the midstream sector of our industry, which ensures that we can get the oil and natural gas from the areas where they are produced to where they are processed, refined and ultimately used. Our energy infrastructure is a critical component of the oil and natural gas supply chain, consisting of terminals, underground storage facilities, pipelines, railcars, trucks, ships, and barges. Ensuring we have a robust energy infrastructure system that keeps pace with growing production and demand is essential to helping provide American families and businesses with reliable access to affordable energy. A recent study found that the U.S. will need up to $1.3 trillion in energy infrastructure investment through 2035. This investment, on average, will support up to 1 million jobs annually and add up to $100 billion to GDP annually.[7] Whether it is powering our nation's electricity grid, delivering natural gas to heat homes during harsh winters, or providing emergency fuel for first responders during natural disasters, this investment will ensure that these critical fuels are delivered when and where they are needed most.

Safety is our industry's core value. Our operators are committed to enhancing the safety of our workers and protecting the community and environment. At API, we establish industry standards and disseminate best practices across the industry to ensure the highest level of safety and achieve our collective goal of operating with zero incidents. In fact, since 1924, API has been the leader in developing voluntary, consensus, internationally recognized, industry standards that promote safety and reliability. Our standards program is accredited by the American National Standards Institute (ANSI), the same organization that accredits similar programs at several national laboratories. In creating these industry consensus standards and recommended practices (RPs), API partners with the best and brightest technical experts from government, academia, and industry. This work supports the fulfillment of the National Technology Transfer and Advancement Act (NTTAA), which mandates that federal agencies use technical standards developed and adopted by voluntary consensus standards bodies, as opposed to using government-unique standards. Currently, API has more than 600 standards that are used globally by oil and natural gas operators. Here in the United States, these standards are referenced more than 430 times in federal regulations, covering multiple government agencies, including PHMSA. Additionally,

[5] U.S. DOE, Energy Information Administration, Weekly Petroleum Status Report
[6] U.S. DOE, Energy Information Administration, U.S. Natural Gas Marketed Production (monthly)
[7] ICF, "U.S. Oil and Gas Infrastructure Investment Through 2035" (2017)

API's standards are the most widely cited petroleum industry standards by state regulators, with 240 API standards cited over 4,130 times in state-based regulations. Finally, API's standards are also the most widely cited standards by international regulators in the 14 major producing regions.[8]

THE IMPORTANCE OF SCIENCE AND PERFORMANCE-BASED STANDARDS

To ensure that American consumers and workers continue to benefit from the U.S. energy renaissance and that infrastructure operates safety and efficiently, we need rational and science-based energy policies that recognize that the oil and natural gas industry is part of the solution to advancing U.S. economic and national security goals. Well-designed policies are predicated on following a formal process—established by the Administrative Procedures Act—that provides all stakeholders with the opportunity to provide input for consideration. Additionally, wherever possible, collaborative engagement by the public sector with the experts in the regulated community ensures that policies are using the latest information available. If done well, effective and efficient policies can be established that contribute to the economy without hindering growth while at the same time significantly advancing safety.

Historically, PHMSA has pursued performance-based regulations versus prescriptive ones. This is compliant with direction provided by the Office of Management and Budget (OMB) to give preference to performance-based standards. A performance-based regulatory model allows operators to utilize the latest advances in inspection and detection technologies as soon as it is practicable. Additionally, a performance-based approach regulation recognizes that there is great variability throughout the industry and that a one-size-fits-all approach could actually prevent companies from taking advantage of engineering assessment options that most effectively manage and advance safety in industry operations. For instance, PHMSA issued Integrity Management (IM) regulations that provide operators with the ability to use different in-line inspection (ILI) tools that are better at detecting a defect in specific types of pipe. This flexibility is essential given the continuous advances in tool technology, complexity of pipelines and differences in operating environment, which vary greatly from operator to operator and system to system. Therefore, as PHMSA continues to pursue rulemakings for gas and liquid pipeline safety, it is imperative that these rules incorporate a more comprehensive, risk-based approach that allows for consideration of all factors (previous integrity assessment results, pipe size, material, manufacturing information including seam type, coating type and condition, cathodic protection history, product transported, operating pressure, corrosivity of soil, susceptibility to subsidence, and geo-technical hazards) to ensure proper tools and engineering analysis are used to take preventive measures and, if necessary, make repairs. Although API and its members appreciate the emphasis PHMSA has placed on addressing mandates and National Transportation Safety Board (NTSB) recommendations, we strongly encourage PHMSA to act in a timely manner and not lose sight of the importance of a holistic, performance-based regulatory approach that maximizes the industry's ability to utilize the latest advances in new technologies and techniques to manage pipeline safety risk.

[8] OGP Report No. 426, Regulators' Use of Standards, March 2010

PIPELINE SAFETY

Pipelines safely and efficiently move crude oil, natural gas, and other products from production areas to consumers, delivering energy and feedstocks for everyday goods, affordable heat for homes, and fuel for power generation and motor vehicles. In addition to the benefits derived from the delivery of oil, natural gas and their products, pipeline companies support the economy during construction of the pipeline by hiring skilled construction and building trades workers to build and operate the pipeline. While these jobs provide salaries well above the national average, the tax revenue generated by the pipeline itself supports communities through which the pipelines pass.

Industry's commitment to safe operations is evident by the strong safety record of the pipeline system that delivers oil, natural gas and petroleum products. Protecting the public and the environment is the top priority for pipeline operators and a central component to pipeline design, construction and maintenance. Ultimately, the development of a comprehensive pipeline safety system is the product of a shared commitment from key entities in the stakeholder community. The first element involves the federal and state governments, which provide the safety regulations for the industry. Next, is the contribution of the industry trade associations that develop the industry guidance, recommendations and best practices. The third key entity is the individual company, which makes the commitment to develop and implement an effective safety program. While each individual function is critically important to advancing safety in the pipeline industry, the true effectiveness of the pipeline safety program exists because these three functions complement one another through the coordination and collaboration of all three of these entities.

API, our allied oil and natural gas trades and members are fully committed to maintaining the highest standards and establishing a strong foundation with the public by continually striving for improvement through enhanced safety operations. And while 99.999 percent of oil, natural gas and their products reach their destination without incident, pipeline companies are striving to address the remaining 0.001 percent to reach our shared industry-wide goal of zero incidents. To successfully achieve this objective, there is commitment to continually develop its (1) people and (2) equipment. The people component will enable the development and implementation of the right combination of prevention, mitigation, and response strategies based on several factors that are most appropriate for their unique assets. Education and training are constantly provided to ensure that a culture of safety is established in the individuals that operate a pipeline. Similarly, the equipment will depend on the effective use of state-of-the-art technology. The industry's commitment to continual development and implementation of the equipment and materials we use in the construction and operation of our nation's pipeline system is driven by a constant desire to maintain the safest systems possible in the most efficient and effective manner.

With a new DOT and PHMSA leadership has come a renewed interest in innovation and technology. The leadership of both organizations continues to articulate the importance they place on the use of inspection technology as a "transformative" tool to drive our industry's safety performance and address the remaining 0.001 percent of pipeline incidents. Our industry continues to place a great deal of emphasis and resources on research and development. Specifically, improvements to pipeline integrity

inspection capabilities are a strategic objective that has driven our industry to invest in furthering in-line inspection tool detection, ultimately preventing accidents from occurring. For example, API is facilitating a more dynamic and interactive process between pipeline operators and technology vendors to ensure there is a unified approach to addressing challenges and maintaining the focus on achieving safer pipelines. This effective application of technology in improving pipeline safety performance is a shared goal of PHMSA and the industry. As such, industry stands willing to explore opportunities to further strengthen collaboration with PHMSA on research and development, collectively shaping a longer-term strategy that drives innovation, informs regulations, and ultimately improves pipeline safety performance.

Absent certainty in the regulatory process, the industry is not standing idly by. API continues to develop and revise critical standards and recommended practices for prevention, mitigation, and response activities to address pipeline safety. Specifically, API has developed a number of standards to address pipeline safety in close coordination with subject matter experts from government, academia and industry. API Recommended Practice (RP) 1173, *Pipeline Safety Management Systems*, provides the framework for managing complex operations with safety as the top priority. It provides operators with established guidelines to manage risk, promote best practices, continuously improve safety performance and build a strong organizational safety culture from the leader of a company all the way to an individual working in the field. As U.S. production continues to grow and pipeline capacity advances to keep pace, operators are motivated to develop a management system that ensures new pipelines are built to the appropriate specifications, keeping safety a priority. API RP 1177, *Steel Pipeline Construction Quality Management Systems*, outlines the steps needed for constructing safe steel pipelines, from purchasing the correct material to completing the right inspections prior to initiating operation.

While pipeline operators are taking significant steps to meet the goal of zero incidents, they must have a comprehensive mitigation strategy to reduce the impact should a release occur. Developed with industry and regulator input, API RP 1175, *Pipeline Leak Detection - Program Management*, outlines how to use multiple leak detection tools -- such as aerial overflights, ground patrols, and computational pipeline monitoring -- to create a robust and holistic program to identify a leak as soon as it occurs. In addition, the RP encourages senior leaders within companies to enforce a leak detection culture that promotes safety. Properly trained employees will also aid in mitigating incidents. Pipeline operator qualifications (OQ) ensure companies properly prepare their personnel to perform high-risk duties. Continuous testing to verify the skills of qualified employees is a critical effort of operators. API has developed RP 1161, *Pipeline Operator Qualification*, to give operators direction on ensuring those individuals performing high-risk tasks are appropriately trained and competent.

Should an incident occur, pipeline operators are ready to respond. Through coordinated emergency response programs with federal, state and local first responders and agencies, operators ensure timely, seamless and effective responses. API RP 1174, *Onshore Hazardous Liquid Pipeline Emergency Preparedness and Response*, completed by operators, regulators, and first responders, seeks to improve emergency response capabilities by providing a framework for immediate notification and continued

coordination with first responders. These RPs are just a few of the available documents developed in collaboration with federal and state regulators, academics and interested stakeholders, which through effective implementation and training will help improve safety across the industry.

NATURAL GAS TRANSMISSION AND GATHERING LINE RULE

API members are dedicated to a risk-based approach to pipeline safety—one that strives for continuous improvement through addressing known, quantifiable risks. Importantly, that is the same approach that Congress has used over the decades in its directives to DOT and PHMSA for regulating pipeline safety.

In 2016, PHMSA published a Notice of Proposed Rulemaking (NPRM) - Safety of Gas Transmission and Gathering Pipelines. The NPRM responded to mandates set forth in the Pipeline Safety, Regulatory Certainty and Job Creation Act of 2011 and recommendations to PHMSA from the NTSB and the Government Accountability Office (GAO). The NPRM was the largest rulemaking issued by PHMSA to date. As published, the NPRM is unnecessarily burdensome and inefficient. It fails to follow a risk management approach, as directed by Congress, targeted toward eliminating the most significant risks posed to public safety and the environment. As an example, the PHMSA proposal could potentially add risk by requiring additional excavation at times when increased, non-intrusive monitoring will suffice. Further, the NPRM suggests that the implementation costs would only be $597 million and are greatly outweighed by an equally surprising high estimate of benefit, between roughly $3.2 billion and $3.7 billion. By PHMSA's own accounting however, roughly $3 billion of the benefits are cost savings to industry - not safety or environmental benefits. API sought an external party to further evaluate PHMSA's work, which evaluated the benefits and cost impacts of the proposed rule and found that when properly accounted for, the total cost of the proposed rule increases by almost two orders of magnitude from $597 million to $33.4 billion to achieve safety and environmental benefits of approximately $437 million.

Since the publication of the NPRM in 2016, API -- along with industry, the public, and PHMSA -- has made significant strides to improve the efficiency and effectiveness of the proposed rule through PHMSA's Gas Pipeline Advisory Committee (GPAC). The GPAC, which is comprised of members from the public, government, and industry, is charged with reviewing PHMSA's proposed regulations to assess technical feasibility, reasonableness, cost-effectiveness, and practicability. PHMSA held five separate meetings over the past two years to discuss and finalize the gas transmission proposals within the NPRM. These GPAC sessions on the transmission proposals were constructive and collaborative and allowed PHMSA and the public to fully understand how industry operates and how proposed changes in regulations impact industry operations. This information will be critical to the agency as it begins its review of the gathering line proposals within the NPRM later this fall.

API and its members strongly support the collaborative approach to review and finalize regulations through the GPAC process and encourage PHMSA to adopt the transmission proposals as discussed by the GPAC. As a part of the GPAC review process, PHMSA agreed to break up the NPRM into three separate rules—two on transmission and one on gathering lines. API agrees with this approach. PHMSA's NPRM, as written, improperly imposed new requirements on gathering lines that were

intended for transmission operations. By combining gathering and transmission into one rule, the agency applied the same rules to both pipelines. However, there are significant differences between the construction of gathering and transmission lines, and by breaking up the NPRM, operators will be able to more effectively implement safety measures that are appropriately designed for the construction type through a risk-based approach.

API, along with other industry trade associations, has provided substantial comments on the transmission proposals throughout the GPAC meetings, and we look forward to working with PHMSA as the industry begins to address the proposed regulations for gathering lines through the GPAC review process. This process is another example where the regulator has an opportunity to collaborate with stakeholders to adopt a performance-based RP. In the NPRM, PHMSA commented on concerns with an API document used for gathering line regulations. In response, API and its members are now in the process of modifying the RP to properly address those concerns. This work needs to be considered in upcoming GPAC meetings on gathering lines, as it will complement new regulations and provide a holistic, risk-based approach to the safety of gathering lines. Pipeline safety regulations should be based on sound data collection and risk analyses that support increases in safety for the public and minimize impacts to the environment. Further, PHMSA should issue focused and effective regulations that are workable and will allow for immediate improvements in pipeline safety.

HAZARDOUS LIQUID PIPELINES RULE

Industry shares PHMSA's goal of increasing pipeline safety and is supportive of completing the ongoing rulemaking process. We also appreciate PHMSA's desire to move liquid pipeline safety regulations that address Congressional mandates and NTSB recommendations that have lagged in some instances since 2011. However, as an industry that heavily relies upon the benefits of technology to advance safety, companies need the ability to implement the latest tools and methodologies to help them appropriately manage the safety risk associated with their assets. It is also important that operators are afforded flexibility to conduct engineering analysis to ensure proper tools—many of which contain technologies developed in recent years—and data integration are used to take appropriate preventive measures, including to defer the remediation of non-injurious repairs, or if necessary, make repairs based on industry recommended repair criteria. Also, a risk-based approach to repairs based on sound data and engineering analysis results in less disruption to landowners and a reduction in potential safety and environmental impacts due to low risk, unnecessary repairs. Therefore, as PHMSA continues to pursue liquid pipeline safety regulations through multiple rulemakings, it is imperative that PHMSA incorporate a comprehensive, risk-based approach that addresses industry's recommendations on repair criteria and use of engineering critical analysis.

UNDERGROUND NATURAL GAS STORAGE FACILITIES RULE

Underground natural gas storage facilities play a critical role in the reliable delivery of natural gas. They allow operators to store gas produced when demand is low, typically in the warmer months, and release it during periods of high demand, during the heating season in the winter. Prior to the Aliso Canyon storage facility incident in the fall of 2015, API along with the Interstate Natural Gas Association of America (INGAA) and the American Gas Association (AGA), published two recommended practices on

underground storage facilities. After the incident, API, INGAA, and AGA created a joint industry task force to cooperatively address storage safety. This task force has been working cooperatively with PHMSA and state agencies to further address ways to improve the safety of storage facilities. Unfortunately, PHMSA's interim final rule on underground natural gas storage facilities, released in December 2016, improperly incorporates by reference the RPs by "adopting the non-mandatory provisions of API RPs 1170 and 1171 in a manner that would make them mandatory (i.e., provisions containing the word 'should' or other non-mandatory language will be considered mandatory)" and by requiring compliance within 12 months of the issuance of the rule. This unwisely takes a performance-based standard and attempts to make it prescriptive. Under this model, industry could be required to divert their focus away from higher risk functions to instead focus on functions that pose little to no threat on the surrounding environment and communities. While PHMSA has tried to address some of the shortcomings of the rule via Frequently Asked Questions (FAQs), we believe that changes should be made to the final version of the rule to incorporate by reference RPs 1170 and 1171 without modification, codify the reasonable implementation periods outlined in the current PHMSA Underground Storage FAQs 5 and 6, and incorporate underground natural gas storage facilities into a new "Part 19X," separate from Part 192. While PHMSA is working on finalizing the rule, they have put a stay on enforcement of these contested sections.

ENHANCING PIPELINE SAFETY

While the oil and natural gas industry continues to work proactively, through our standards development process and through collaboration with regulators and other stakeholders, to achieve our goal of zero incidents, there are additional reforms that we believe will help to enhance pipeline safety. As previously noted, there are more than 430 API standards referenced in Federal regulation. As these standards are improved through the ANSI-certified process, Federal regulators may not be able to update these standards in a timely manner. For example, approximately 50 percent of the instances where PHMSA cites API standards are not referencing the most recent version of those standards. As API standards are updated, or new ones are developed, PHMSA should execute a timely review process that can utilize the existing rulemaking processes, to incorporate by reference the latest edition or the first edition of appropriate standards.

Ensuring that operators can use the most recent and innovative technology will also help to bolster pipeline safety. Current regulations have no deadlines associated with PHMSA's review, notification, and issuance of special permits for new technology, which does not provide for efficiency. Operators are required to conduct timely assessments of pipeline integrity, and that may often be done more effectively with a new technology. However, there is hesitation to do so, given the burdensome special permit process. Requiring PHMSA to carry out the special permit process to review alternative safety technology permit applications within 90 days will help provide more certainty in the special permit process and allow operators to utilize the latest cutting-edge technologies to further pipeline safety. The

GPAC recently recommended[9] including this proposal in the proposed Safety of Gas Transmission and Gathering Lines rule, and PHMSA expressed agreement[10].

We are also concerned about efforts by third-party activists to willfully disrupt or damage pipeline infrastructure, which poses a potential threat to communities, our workers, and the environment. While we respect individuals' rights to free speech and peaceful protest, we need pipeline safety reforms that will help deter these dangerous and illegal activities.

Let me reemphasize that the oil and natural gas industry is committed to promoting safety in all its operations and helping to ensure that American families and businesses can safely and efficiently access affordable and reliable energy. Again, thank you the opportunity to appear before you today, and I am happy to answer any questions that you may have.

[9] https://primis.phmsa.dot.gov/meetings/FilGet.mtg?fil=931
[10] https://primis.phmsa.dot.gov/meetings/FilGet.mtg?fil=927

TESTIMONY OF
CHAD ZAMARIN
SENIOR VICE PRESIDENT, CORPORATE STRATEGIC DEVELOPMENT
THE WILLIAMS COS., INC.

ON BEHALF OF
THE INTERSTATE NATURAL GAS ASSOCIATION OF AMERICA (INGAA)

BEFORE THE
SUBCOMMITTEE ON RAILROADS, PIPELINES, AND HAZARDOUS MATERIALS
COMMITTEE ON TRANSPORTATION AND INFRASTRUCTURE
U.S. HOUSE OF REPRESENTATIVES

REGARDING
PIPELINE SAFETY PROGRAM OVERSIGHT

JUNE 21, 2018

Mr. Chairman and Members of the Subcommittee:

Good morning. My name is Chad Zamarin, and I am Senior Vice President of Corporate Strategic Development at the Williams Companies. Williams owns and operates natural gas gathering, processing and transmission infrastructure, including the nation's largest-by-volume natural gas interstate transmission system in the country. All told, Williams owns and operates more than 30,000 miles of pipelines, including more than 15,000 miles of interstate natural gas pipelines. We help bring to market approximately one third of the nation's natural gas. That gas is used to heat our homes, cook our food, and increasingly generate electricity in an environmentally responsible manner. Williams is a member of the Interstate Natural Gas Association of America (INGAA), which is a trade association that represents the interstate natural gas pipeline industry. I am here today representing INGAA's membership.

INGAA's members transport the vast majority of the natural gas consumed in the United States through a network of approximately 200,000 miles of interstate transmission pipelines. These transmission pipelines are analogous to the interstate highway system; in other words, they are large capacity, critical infrastructure systems spanning multiple states or regions. In addition to my role at Williams, I also serve on the Department of Transportation's Gas Pipeline Advisory Committee (GPAC), having been appointed by the Secretary of Transportation to the GPAC in 2010. The GPAC serves as an advisory committee to the Department of Transportation and to the Pipeline and Hazardous Materials Safety Administration (PHMSA) regarding matters of pipeline safety and regulatory oversight. The GPAC is comprised of 15 members, with equal representation from the gas industry, federal and state government agencies, and the public.

Thank you for the opportunity to share my perspective at this hearing. There are four principal points that I wish to make in this testimony on behalf of the natural gas infrastructure industry.

First, INGAA members will continue to incorporate new technologies and enhanced business practices that improve our capabilities and performance even in the absence of new regulations or legislation. As an industry, we are relentlessly committed to transporting and delivering natural gas in a safe and environmentally responsible manner. Not only does this makes good business sense, but more importantly, it is core to our function as a critical infrastructure industry that is integrated in the communities we serve and in which we live.

Second, our members support sensible regulation and the completion of pending rulemakings in a timely and workable fashion. It is critical for an industry of our national importance to have regulatory certainty to support ongoing investment, fueling improving safety performance alongside job creation and the enhancement of the quality of life across our nation. As you know, PHMSA continues to work toward addressing the pipeline safety mandates that were the centerpieces of the last two reauthorizations of the Pipeline Safety Act.

Third, the PHMSA Gas Pipeline Advisory Committee process has proved effective in facilitating a broad stakeholder review of these rules and should remain an active participant in PHMSA's work. The GPAC is a transparent and balanced forum that has demonstrated the ability to accelerate achievement of consensus around complex regulatory issues.

Fourth, there are a number of outdated regulations that do not reflect current best practices and should be updated or eliminated. These outdated regulations result from a code of federal standards established over the past fifty years, one rulemaking at a time. While those regulations reflect the technology and best thinking available at the time of adoption, they have not kept up with technological advances and modern practices.

On the first point, in advance of PHMSA completing its pending rulemakings, INGAA members have committed voluntarily to undertake major efforts in these same areas. For example, INGAA members committed to utilize an existing American Society of Mechanical Engineers standard as the basis for expanding integrity management procedures beyond high consequence areas, to cover 90 percent of the people living near our pipelines by 2020. In addition, our operators have been re-verifying records for pipes constructed prior to 1970, and have committed to reconfirming maximum allowable operating pressure (MAOP) for certain segments for which adequate records are not available. This work, in part, has led to an approximately 80 percent decrease in onshore gas transmission manufacturing-related incidents since 2010, which was the year a manufacturing-related failure on a pipeline in San Bruno, California spurred one of the mandates we are discussing today. But implementing these voluntary commitments during the pendency of proposed regulations presents significant business uncertainty and therefore risk, since new regulations may require action already completed to be redone at significant cost, effort and disruption for pipeline customers.

Because our industry endeavors to keep pace with technological advancements, we have a vested interest in seeing pending rulemakings completed in a timely fashion. For example, for more than six years, PHMSA has been considering the promulgation of a comprehensive natural gas transmission and gathering rule that would encompass a wide range of issues. First floated as an advanced notice of proposed rulemaking in 2011, this comprehensive proposal grew to include a number of Congressionally-mandated rulemakings, including the expansion of the integrity management program beyond traditional high consequence (or populated) areas, the reconfirmation of MAOP for pipelines constructed before 1970, and more. The natural gas infrastructure industry is anxious to see this process come to a successful completion.

INGAA's members also are anticipating a final underground gas storage rule. The PIPES Act of 2016 directed PHMSA to issue minimum safety regulations for underground natural gas storage facilities, and to consider consensus technical standards to develop those regulations. INGAA's members committed publicly to implementing the consensus technical standards, which describe integrity management program requirements for underground natural gas storage facilities, in advance of PHMSA's rulemaking. PHMSA elected in late 2016 to fulfill the statutory mandate using an interim final rule (IFR), which allowed the rule to become effective without notice and comment. PHMSA has since issued a partial stay of enforcement and re-opened the comment period on this rulemaking as it considers what modifications may be necessary for the underground natural gas storage final rule. PHMSA also used an IFR to promulgate the regulation creating procedures for emergency orders.

We all want PHMSA to be an effective regulator, and that includes the ability to promulgate important regulations on a timely basis. Timely rulemakings that follow the Administrative Procedures Act are essential to PHMSA fulfilling its stated mission. Delays in completing important rulemakings slow improvements in pipeline safety and create uncertainty surrounding the industry's investment in the facilities and pipeline inspection tools that will be subject to anticipated regulations. This uncertainty not only affects pipeline operators, but also service and equipment providers, including companies that develop advanced technologies that enhance pipeline safety management. INGAA members stand ready to work with PHMSA to complete these important rules as expeditiously and prudently as possible.

As to my third point, GPAC can play an important role in completing our collective work. The time needed to complete a rulemaking is affected, in part, by the quantity and quality of dialogue with impacted stakeholders. Apart from satisfying the legal requirements of the Administrative Procedure Act, there is great value for all in the dialogue that occurs as part of the notice and comment rulemaking process. Furthermore, beyond formal rulemakings, a robust dialogue involving PHMSA, safety advocacy groups, the pipeline industry and others can advance the goals of pipeline safety regulation. Some of the greatest improvements in pipeline safety have occurred when government, industry, and other stakeholders have worked together. These include collaborative efforts around technology research and development, damage prevention, safety management systems, and cyber and physical security.

The GPAC membership is equally divided among stakeholders from the public (such as safety advocates and emergency managers), federal and state government agencies, and private industry. The stated role of the GPAC is to review PHMSA's proposed regulatory initiatives to ensure the technical feasibility, reasonableness, cost-effectiveness and practicability of each proposal. The committee also evaluates the cost-benefit analysis and risk assessment information of the proposals. Given its diverse membership, the GPAC is an important and useful forum for stakeholder outreach and input, and therefore should be involved early and often during the rulemaking development and drafting process.

Stakeholder dialogue is especially important when the subject of the rulemaking is a complex, technical topic such as pipeline safety regulation. The pending natural gas transmission and gathering rule provides a good example of why an appreciation of the capabilities of pipeline infrastructure and opportunities and limitations of the technologies and practices used to manage pipeline integrity is so important to achieving effective and technically workable rules. New rules should leverage stakeholder knowledge and expertise to facilitate the deployment of new technologies that are more effective, more efficient, and less disruptive than the legacy methods that may be reflected in existing regulations.

Collaboration in the rulemaking process is fully consistent with PHMSA's statutory mandate. The Pipeline Safety Act requires that a safety standard be "practicable" and designed to meet gas pipeline safety needs and protect the environment. Achieving this balance requires PHMSA to consider outside input.

Early last year, PHMSA initiated a series of GPAC meetings to consider the proposed natural gas transmission and gathering rule. In total, five multi-day meetings were held over an 18-month period to review the pending gas transmission regulations, including mandates from the 2011 Act and other enhancements to gas transmission pipeline safety regulations. Working through issues in phases, getting clarification and consensus, and then moving on to the next set of topics has been a logical and efficient process. PHMSA and the GPAC succeeded in building broad consensus around many important and challenging gas transmission pipeline safety topics. Certainly, GPAC's comprehensive body of work represents the most significant enhancement to gas transmission pipeline safety regulations since the original federal regulations were promulgated in 1970.

And finally on my fourth point, as PHMSA works through its backlog of pending rules and remaining mandates, it also makes sense to review older regulations, especially those where newer regulations address the same pipeline safety imperatives. The Department of Transportation now is reviewing existing regulations "to determine whether they are crafted effectively to solve current problems." INGAA believes this presents an opportunity to improve safety regulations by allowing the use of integrity management processes and technologies that did not exist when the first federal pipeline safety regulations were written in 1970.

As an example, PHMSA has announced its intent to issue an advanced notice of proposed rulemaking to consider whether integrity management and new pipeline inspection technologies offer an alternative to existing class location change requirements for natural gas pipelines. PHMSA should be commended for this effort, as operators currently spend $200-$300 million annually replacing perfectly good pipe segments due to a regulation issued in 1970, before most of the industry's inspection technology was invented. There are more productive ways to expend these substantial resources. With today's processes and technologies, pipeline safety can be managed effectively through actual inspection and maintenance, instead of arbitrary pipe replacement requirements. While PHMSA intends to use the ANPRM to collect additional comments from stakeholders, we note that several past reauthorization bills, including the PIPES Act of 2016,[1] directed PHMSA to review this issue.

In conclusion, let me reiterate that the natural gas infrastructure industry continues to support the fundamental mission of PHMSA, including completing the various statutory mandates for new regulations. Stakeholder outreach and involvement can improve the end product of PHMSA's rulemakings and the current GPAC process appears to be producing such results regarding the pending natural gas transmission and gathering rule.

[1] Section 4(b)(2) of the Act.

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Presented by:

Carl Weimer, Executive Director

FOR THE

SUBCOMMITTEE ON RAILROADS, PIPELINES AND HAZARDOUS MATERIALS
OF THE
COMMITTEE ON TRANSPORTATION AND INFRASTRUCTURE
UNITED STATES HOUSE OF REPRESENTATIVES

HEARING ON

PIPES Act of 2016 Implementation: Oversight of Pipeline Safety Programs

June 21, 2018

Good morning Chairman Denham, ranking member Capuano, and members of the Committee. Thank you for inviting me to speak today on the important subject of pipeline safety. My name is Carl Weimer and I am the Executive Director of the Pipeline Safety Trust. I am also a member of the Pipeline and Hazardous Materials Safety Administration's (PHMSA) Technical Hazardous Liquid Pipeline Safety Standard Committee.

The Pipeline Safety Trust came into being after a pipeline disaster that occurred nineteen years ago - the 1999 Olympic Pipeline tragedy in Bellingham, Washington that left three young people dead, wiped out every living thing in a beautiful salmon stream, and caused millions of dollars of economic disruption. While prosecuting that incident the U.S. Justice Department was so aghast at the way the pipeline company had operated and maintained their pipeline, and equally aghast at the lack of oversight from federal regulators, that they asked the federal courts to set aside money from the settlement of that case to create the Pipeline Safety Trust as an independent national watchdog organization over both the industry and the regulators. We have been trying to fulfill that vision ever since, but the increase in the number of significant incidents over the past decade, from causes well within an pipeline operators control, makes us sometimes question whether our message is being heard.

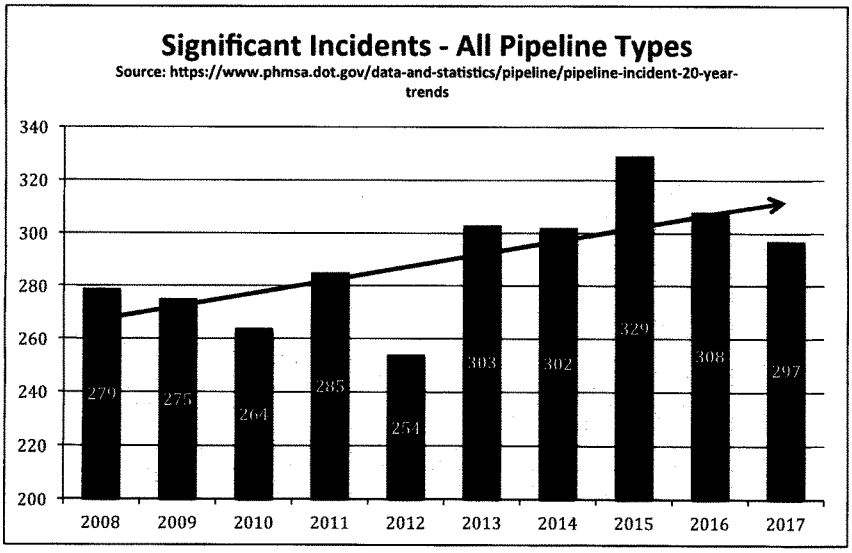
Today I would like to focus my testimony on:

- An overview of the safety of the current pipeline system in this country
- Issues external to PHMSA that impede improving safety
- The Following Sections of the PIPES Act of 2016
    - Sec. 3. Regulatory Updates
    - Sec. 4. Natural gas integrity management review
    - Sec. 5. Hazardous liquid integrity management review
    - Sec. 6. Technical Safety Standards Committees.
    - Sec. 10. Information-Sharing System.
    - Sec. 12. Underground gas storage facilities.
    - Sec. 19. Unusually Sensitive Areas.
    - Sec. 24. State Pipeline Safety Agreements.

Overview of the safety of the current pipeline system

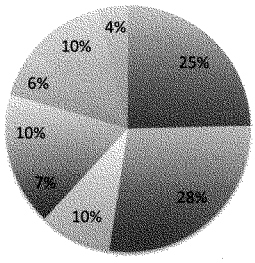
Before we get too far into the oversight of various pipeline safety programs I want to provide information regarding how well the current system is providing for safety.

While everyone testifying today supports the goal of zero incidents we still have a long way to go to reach that goal. According to data provided by the pipeline industry to PHMSA, in just the past two years, since the President signed the PIPES ACT of 2016, there have been 1186 reportable pipeline incidents. Of those incidents 544 are considered Significant Incidents under PHMSA's definitions. That amounts to an average of over 20 significant pipeline failures every month since PHMSA's pipeline safety program was last reauthorized. Even more concerning than the raw number of failures is that while we have all been saying the goal is zero incidents the number of significant incidents including all types of pipelines has been increasing over the past decade according to PHMSA data (See Graph below).

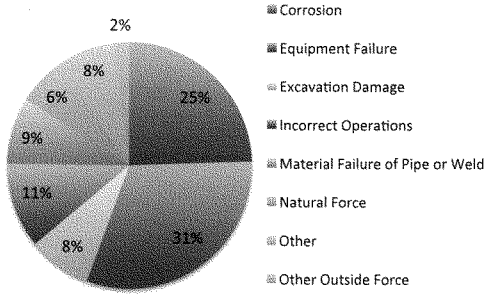


Also of concern is that for gas transmission and hazardous liquid pipelines over 70% of the failures since the last reauthorization are from causes the operators ought to have control over such as corrosion, incorrect operations, equipment failures, and problems with the materials they use and the welds they make. The pie charts below, generated from PHMSA data[1], demonstrates this problem.

Causes of Significant Incidents on Gas Transmission & Gathering Pipelines 6/22/16 - 5/31/18



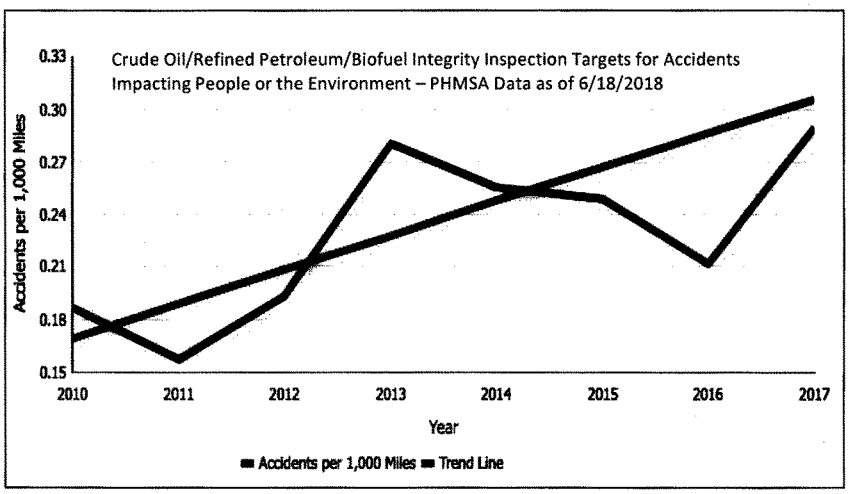
Causes of Significant Incidents on Hazardous Liquid Pipelines 6/22/16 - 5/31/18

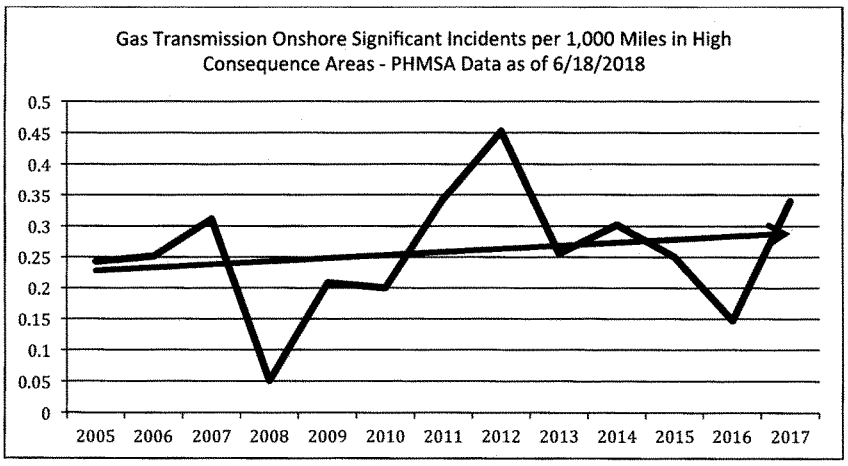


Also of concerns is that for the past fifteen years much of the emphasis in reducing pipeline incidents has been focused on Integrity Management efforts in High Consequence Areas. The theory behind Integrity Management programs makes perfect sense – focus efforts in those areas where the most harm to people and the environment may occur, work hard to identify the risks in those areas, put into place programs to test for and mitigate those risks, and implement a continuous improvement program to drive down the number of failures. Unfortunately for hazardous liquid pipelines and gas transmission pipelines it would appear that these integrity management programs have not yet lived up to their promise as incident rates within High Consequence Areas continue to climb. The following two graphs, generated

[1] https://www.phmsa.dot.gov/data-and-statistics/pipeline/pipeline-incident-20-year-trends

from PHMSA's National Pipeline Performance Measures[2], demonstrate this concern with current integrity management programs.





[2] https://www.phmsa.dot.gov/data-and-statistics/pipeline/national-pipeline-performance-measures

Issues external to PHMSA that impede improving safety

Often in these hearings on the oversight of pipeline safety programs the focus is on how PHMSA has failed to implement various mandates, moved too slowly on regulatory initiatives, not provided information to the public in a timely manner, or even lacks the will to make the pipelines in this country safer. While we agree that those things are all important and fair game at such hearings, and we will touch on some of those issues again today, we would like to include in our testimony today how the pipeline safety system that Congress has created also has much to do with PHMSA's inability to get things done. PHMSA can only adopt regulations to implement the statutes that Congress has enacted, and there are many things in the statutes that could be changed to help remove unnecessary barriers to more effective and efficient pipeline safety.

One barrier to getting to zero pipeline incidents is the cost versus benefit analysis that both Congress and various Administrations have required new pipeline safety regulations to meet. While the analysis required from Congress under 49 USC § 60102 does not state that the benefit of new regulations has to outweigh the cost that is often how the industry and PHMSA views these requirements. The estimated costs of new regulations, mainly being derived from information provided by the industry, are often viewed under a very expansive and broad lens, whereas the benefits are looked at in a relatively narrow view. With this sort of system you can see that trying to require new technologies, retrofits, pipeline replacements, or even better reporting requirements across 2.7 million miles of pipelines, where the chance of an incident happening along any particular section of pipeline is extremely small, makes it nearly impossible to justify such safety improvements under this cost versus benefit system. If we are all really serious about getting to zero incidents then this system needs to be changed and we would encourage you to make clear that the requirements in 49 USC § 60102 do not require the Secretary to find that the benefits outweigh the costs if the proposed regulatory changes are important to move this nation's pipeline safety system toward zero incidents. We also hope you will work with the Administration to relax the cost versus benefit requirements in Executive Orders[3] so we can get to our shared goal of zero incidents and move new regulations forward in a more efficient and timely manner.

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[3] https://www.archives.gov/files/federal-register/executive-orders/pdf/12866.pdf

There are also requirements in the statutes giving priority for the use of industry-developed standards in the regulations.[4] To their credit, the industry is very good at recognizing problem areas in the pipeline safety system and getting ahead of possible regulatory fixes to those problems by developing new voluntary standards and recommended practices. These voluntary standards and recommended practices are nearly always developed by committees dominated by industry members, and few that have ever participated in these committees would claim that the outcome is what is the best or safest way forward, but more likely the best a diverse group of industry folks could come to agreement on. These voluntary standards and recommended practices are often then incorporated into the regulations without a full and open public development process that would have been used if the agency developed the standards themselves.

Often the industry will argue that regulations are "one size fits all" and lack the flexibility to allow the industry to use the parts that may apply to them, but ignore parts that don't. They will argue that the implementation of their own industry-developed voluntary standards and recommended practices, without incorporating them into the regulations, is more cost effective and ultimately may be safer by allowing them the flexibility to focus their limited resources on the highest risks. The industry associations will often talk about the efforts they undertake to get their members to adopt these voluntary standards and recommended practices, and tout the high percentage of their member companies that have adopted various standards. Unfortunately there are two problems with this system. First, without being a regulation with an independent inspection process, there is no way to know how well or to what extent various companies have implemented these best practices or any clear way to track whether implementation is really reducing incidents. We have no doubt that some good pipeline operators adopt these standards and use best practices to drive down incidents, but how well is the industry as a whole using them? The incident data provided above seems to indicate that not enough companies are doing enough. Secondly, while perhaps a high percentage of companies that are members of the major industry associations may use these recommended

[4] Section 12(d) of the National Technology Transfer Act of 1995

practices, what about all the other pipeline operators? According to PHMSA's data[5] there are currently 1113 active gas transmission pipeline operators and 526 active hazardous liquid pipeline operators, yet INGAA only has 27 members, and AOPL only has 53 members. While some parent companies may operate multiple pipelines, that still leaves hundreds of pipeline operators that are not members of these associations, so do not receive the ongoing encouragement and tracking that member companies do. If Congress and PHMSA agrees with the pipeline industry that such voluntary standards and recommended practices are a cost effective way to move toward zero incidents, then some sort of basic verification system needs to be built into these efforts to show that operators are really using them, using them correctly, and that these efforts are having a positive impact on safety. Some progressive operators and industries already have a system that requires third party verification of the effectiveness of these voluntary efforts where aggregated data is shared with the public to demonstrate continual improvement towards reducing risk. Congress should encourage the industry associations to develop such a system and to ensure that any company claiming to use their voluntary safety standards is part of it.

Review of the PIPES Act of 2016 Implementation

Little in the PIPES Act required clear changes to the pipeline safety regulations. Instead much of the emphasis was toward asking PHMSA, the Inspector General, or the GAO to do various reports or studies to make recommendations for potential next safety steps. Most of these reports and studies have been produced on time, although sometimes in less than a comprehensive manner. Some of the most important reports have yet to be produced because of the slowness of pending regulations. Below we talk about the sections we had the most interest in.

SEC. 3. Regulatory Updates

Section 3 of the PIPES Act required PHMSA to report on a publicly available website on a regular basis the status of their rulemaking efforts. We supported this reporting requirement to hold PHMSA accountable and to make clear to the public and Congress where these various rulemaking efforts are at. We believe that PHMSA has met the letter of these requirements, yet

[5] https://primis.phmsa.dot.gov/comm/reports/operator/Operatorlist.html

clearly the status portrayed on PHMSA's Legislative Mandate page[6] does not portray the true tortured nature of some of these rulemaking efforts. For instance, the large rule meant to improve the safety of this country's onshore hazardous liquid pipelines was started in 2010 nearly 8 years ago, but that fact is not clear on the page. What is also not mentioned on the page is how many times the rule bounced back and forth between PHMSA and OMB, with OMB's reviews under the previous Administration being responsible for a good deal of the delay in getting this rule to conclusion. What also is not mentioned is that even though this rule was agreed to by every party involved through the congressionally mandated PHMSA Liquid Pipeline Advisory Committee process, and was ready for a final publication in the Federal Register, the current Administration put a hold on it in January of 2017 for concerns yet to be stated. The PHMSA page required under Section 3 of the PIPES Act now says it may finally get published in September of this year. We are not holding our breath, and we would suggest if the Committee is concerned with the slowness of implementation of Congressional mandates that a witness from OMB be included in future hearings. We also suggest, to get a better idea where the delay in rules is actually occurring, that PHMSA's rulemaking chart include the date the rulemaking was begun, and for how long PHMSA, OST, and OMB each had the rule in their possession. **While this important rule has languished for a variety of process reasons since 2010 there have been over 3000 reported incidents on hazardous liquid pipelines spilling over 25 million gallons of hazardous liquids into the environment.**

In the current rulemaking on hazardous liquid pipelines that has been 8 years in the making PHMSA has identified a number of important initiatives regarding the identification of High Consequence Areas, leak detection, valve placement, automated valves, and integrity verification that have not been addressed in that current proposed rule, but have been put off to "future" rulemakings. The current regulatory effort on gas transmission and gathering pipelines, which has been in process for nearly 7 years – often referred to by industry as the "mega" rule – has now been broken up into three separate rules to be enacted in a phased approach. Such a phased approach makes it more difficult for certain portions to meet the cost benefit hurdle, and we fear those parts originally embraced by a majority of the members of

[6] https://www.phmsa.dot.gov/sites/phmsa.dot.gov/files/docs/legislative-mandates/16626/updates-pipes-act-website-chart-04-26-2018.pdf

the Gas Technical Advisory Committee may fall by the wayside. We hope that Congress will soon refocus from efforts to streamline industry's abilities to build new energy infrastructure to streamlining the development and implementation of new rules that have been identified by the NTSB, PHMSA, the GAO, the industry itself, and the public as necessary to ensure the safety of such infrastructure.

Sec. 4. Natural gas integrity management review, and Sec. 5. Hazardous liquid integrity management review.

In sections 4 and 5 of the PIPES Act Congress asked the GAO to produce important reports on the integrity management program for both natural gas and hazardous liquid pipeline. To our knowledge neither report has yet been drafted since the directive in the PIPES Act asked for these reports "Not later than 18 months" after the large new gas and hazardous liquid final rules are published in the Federal Register. Since those rules have yet to be published, and may still be delayed for months or years, these important reports are not yet due. The current Integrity Management rules have been in place for over a decade and the proposed new rules have little in them that will produce major changes within 18 months of being published (especially since many new rules are phased in and do not take effect upon publication), so we ask that Congress direct GAO to produce these important reports as soon as is practicable instead of waiting for the proposed rules.

Sec. 6. Technical Safety Standards Committees.

We supported Section 6 of the PIPES Act particularly the part that requires the Secretary to fill vacancies of the Technical Advisory Committees in a timely manner. Often in the past there were vacancies for extended periods of time, but we believe the Secretary has met this obligation in recent years.

Sec. 10. Information-Sharing System.

The Secretary formed the Voluntary Information-Sharing (VIS) Working Group within the timeframe called for in the PIPES Act, and that working group has formed multiple sub-groups and met many times to hear other examples of successful information sharing in other industries. We look forward to their recommendations scheduled for the end of this year. We

hope this Committee will review the findings of the VIS Working Group in preparation for the forthcoming reauthorization of the pipeline safety program, and at that time make sure PHMSA has plans to implement the recommendations. We also ask that you ensure some platform that allows the public to understand and get summary information about these valuable information sharing efforts, without undermining the confidential and proprietary nature of some of this information.

Sec. 12. Underground Natural Gas Storage

In response to the Aliso Canyon storage facility leaks in Southern California as well as other gas storage incidents, Congress included in the PIPES act a mandate that PHMSA issue minimum federal safety standards for natural gas storage facilities within two years of the passage of the PIPES act of 2016. There are still no final standards in place. PHMSA issued an interim final rule IFR) in December 2016, effective in January of 2017, with comments due on the interim rule in February of 2017. That interim rule was essentially an incorporation by reference of two industry-developed recommended practices. Yet in January of 2017, a group of industry organizations filed a petition for reconsideration of the interim final rule, unhappy that PHMSA had altered the language of the recommended practices to make some provisions mandatory rather than leaving them to the discretion of the operator. In June 2017, PHMSA issued a notice that it was considering the petition for reconsideration and additional comments on the petition, and in the meanwhile *and for an additional period of at least one year after a final rule is issued,* would not issue any enforcement citations on provisions of the rule that made discretionary provisions of the industry standards into mandatory rules that provided an option for operators to deviate from the rules as long as they justified the deviations. Further, PHMSA announced it would not issue enforcement citations against operators who failed to provide those justifications for their deviations from those same provisions, for the same period of at least one year after the issuance of a final rule.

In that June 2017 notice, PHMSA indicated that a final rule, taking into account the comments on the interim rule, the petition for reconsideration and the comments on it, would be issued by January 2018. No final rule or decision on the petition for reconsideration has yet been issued, so we remain at least a year away from enforceable mandatory minimum safety

standards for these facilities. As Congressman Brad Sherman, a resident of the community where the Aliso Canyon failure occurred noted in his letter to PHMSA, that failure demonstrates that "a lack of federal standards for underground natural gas storage facilities can have disastrous consequences." We join him in "urging PHMSA to draft a final rule that contains protections at least as strong as those contained in the IFR."

Sec. 19. Unusually sensitive areas.

Part of the definition of what is and is not considered to be a High Consequence Area for hazardous liquid pipelines is whether a pipeline failure could impact an Unusually Sensitive Area. In the PIPES Act of 2016 Congress directed PHMSA to make it clear that the Great Lakes, coastal beaches and marine coastal waters are considered as Unusually Sensitive Areas. This directive is yet to be accomplished. The need to do this came as a surprise to us and many other public interest organizations since clearly these areas are unusually sensitive. We were surprised to learn that due to definitions used and narrow interpretations of those definitions that many of these areas were not being considered are unusually sensitive, and therefore were not being used for determining High Consequence Areas that would require greater scrutiny under Integrity Management requirements. We were also surprised to learn that PHMSA does not currently have an easy way to define and map all such Unusually Sensitive Areas, and that many of the databases used when the Integrity Management programs were being developed over a decade ago are not functional ways to define such areas. This makes us question how accurately pipeline companies are defining such areas, and how PHMSA can enforce these regulations. With it becoming increasingly apparent that PHMSA lacks the knowledge to define these areas it again is clear to us that many other federal agencies and state and local governments use such definitions all the time, and should be called upon to identify Unusually Sensitive Areas in their jurisdictions. To date PHMSA has never asked state and local agencies to review or verify that Unusually Sensitive Areas within their jurisdictions are accurately identified. We ask that in the upcoming reauthorization of the pipeline safety program that Congress direct PHMSA to show how such Unusually Sensitive Areas are being mapped and identified, and set up a system so local and state governments that deal with these issues in their jurisdictions all the time at least have an opportunity to review and comment on such designations.

Sec. 24. State Pipeline Safety Agreements.

The GAO recently produced the required report entitled Interstate Pipeline Inspections[7], which confirmed what we have believed all along, that "State involvement in interstate pipeline inspections can enhance oversight." While we agree with the recommendation of the report that better planning on PHMSA's part could enhance safety, we think GAO missed a huge opportunity by not considering the safety enhancements that could be made by allowing states operating under PHMSA interstate approvals to also regulate interstate pipelines within their states in ways that exceed the minimum federal requirements. There is a reason these rules are referred to as the MINIMUM requirements and as NAPSR and NARUC have demonstrated in their Compendium of State Pipeline Safety Initiatives and Requirements Providing Increased Public Safety compared to Code of Federal Regulations[8] there are many ways to exceed these minimums that provide for greater safety. The Compendium shows that as of 2013 states have enacted 1361 rules and initiatives that go beyond the federal minimums for intrastate pipelines to increase safety on the pipeline they oversee. There is no reason that many of these same enhancements could not also apply to interstate pipelines as long as they do not conflict with PHMSA minimum rules, and if state regulators are willing to draft and enforce them freeing up PHMSA for other responsibilities.

I thank you for the opportunity to provide this testimony today, and as always I am available to answer any additional questions you might have and to work with you further as the reauthorization of the national pipeline safety program approaches.

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[7] https://www.gao.gov/assets/700/692059.pdf

[8] http://www.napsr.org/compendium.html

CONGRESSMAN JOHN GARAMENDI

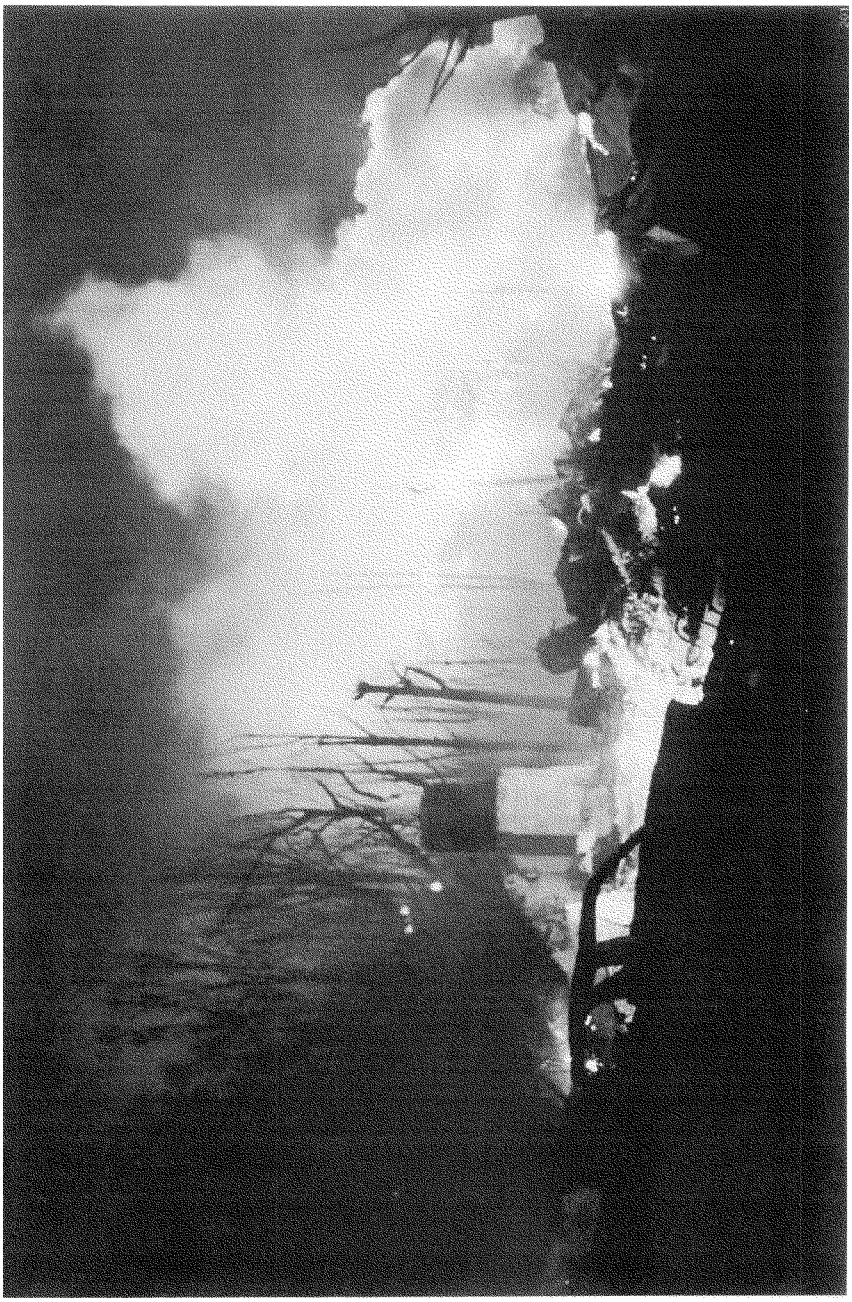
Date: June 21, 2018
To: CJG and Relevant Staff
From: Bradley Bottoms
Subject: NTSB Report on San Bruno Explosion

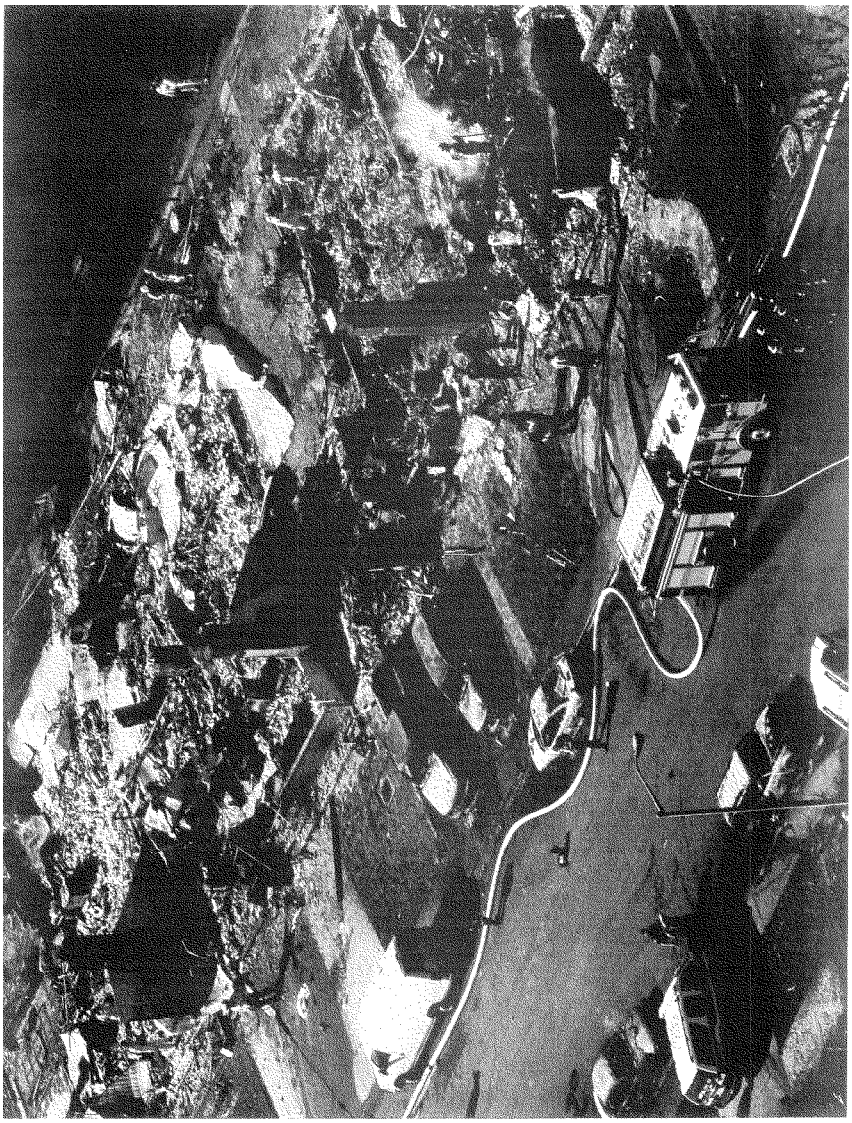
Quick Facts:

- 8 were killed
  - Jessica Morales, 29
  - Janessa Greig, 13
  - Jacqueline Greig, 44
  - Will Bullis, 17
  - Greg Bullis, 50
  - Lavonne Bullis, 82
  - Elizabeth Torres, 81
  - James Franco, 58
- 58 were severely injured
- Destroyed 58 homes, damaged 70 more

Executive Summary

On September 9, 2010, about 6:11 p.m. Pacific daylight time, a 30-inch-diameter segment of an intrastate natural gas transmission pipeline known as Line 132, owned and operated by the Pacific Gas and Electric Company (PG&E), ruptured in a residential area in San Bruno, California. The rupture occurred at mile point 39.28 of Line 132, at the intersection of Earl Avenue and Glenview Drive. The rupture produced a crater about 72 feet long by 26 feet wide. The section of pipe that ruptured, which was about 28 feet long and weighed about 3,000 pounds, was found 100 feet south of the crater. PG&E estimated that 47.6 million standard cubic feet of natural gas was released. The released natural gas ignited, resulting in a fire that destroyed 38 homes and damaged 70. Eight people were killed, many were injured, and many more were evacuated from the area.





Fiber Optic Sensing Association
Connect and Protect

June 21, 2018

Hon. Jeff Denham
Chairman
Subcommittee on Railroads, Pipelines, and Hazardous Materials;
Committee on Transportation and Infrastructure
Washington, DC 20515

Hon. Michael Capuano
Ranking Member
Subcommittee on Railroads, Pipelines and Hazardous Materials;
Committee on Transportation and Infrastructure
Washington, DC 20515

Dear Chairman Denham and Ranking Member Capuano,

The Fiber Optic Sensing Association ("FOSA") appreciates the opportunity to submit comments regarding the June 21, 2018 hearing entitled "PIPES Act of 2016: Oversight of Pipeline Safety Programs".

FOSA is a non-profit organization whose mission is to educate industry, government and the public on the benefits of distributed fiber optic sensing. FOSA members include Adelos, AFL, AP Sensing, Asymmetric Technologies, Corning, Ditch Witch, Dura-Line, Fotech Solutions, Frauscher Sensor Technology USA Inc., Hifi Engineering, Network Integrity Systems, NKT Photonics, OFS, Omnisens, OptaSense, OZ Optics, and Prysmian.

Through webinars, videos, white papers, public presentations and public policy advocacy, FOSA provides information on the use of fiber optic sensing to secure critical facilities, enhance public safety and protect the environment.

Fiber optic sensing is used to protect pipelines, railways, power cables, telecommunications networks, data centers, international borders and critical facilities in more than 75 countries around the world.

In the pipeline industry, fiber optic sensing is used to continuously monitor for leaks, vehicle movement, foot traffic, digging activity, seismic activity, structural integrity, and other hazardous conditions. In developing nations, many pipeline operators now routinely include fiber optic sensing in new construction to provide warnings of hot tapping, digging and seismic conditions. Argentina, Chile, Columbia, Ecuador, India,

Iraq, Kazahkstan, Mexico, Tunisia and Turkey are all home to pipelines hundreds of miles in length which are protected by fiber optic sensing.

Two North American pipeline operators – SoCalGas and Husky Midstream -- have recently announced the decisions to install fiber optic sensing on new pipeline deployments, and multiple other North American operators are conducting installations and trials of the technology.

Fiber optic sensing works by utilizing optical fiber as a sensing medium to detect minute changes in strain, acoustics and temperature. A laser interrogator unit sends a light beam through the fiber and reads the changes in the light beam caused by leaks or activity around the pipeline. When threatening conditions or activities occur, the technology alerts the operator with specificity as to location and nature of the threat. The efficacy of each interrogator unit exceeds 30 miles, and interrogator units can be linked together to extend coverage hundreds of miles. The technology is not constrained by line of sight or remote power access, and it can be integrated with cameras, drones, GPS, and other security equipment.

FOSA Recommendations regarding Pipeline Safety

FOSA would like to make four recommendations that we believe will help pipeline operators deploy advanced pipeline safety technologies.

1. Performance-Based Leak Detection Standards
The development of effective leak detection systems is critical to improving pipeline safety. We applaud PHMSA's work to encourage improved leak detection technology through its R&D program. An essential corollary of the R&D effort is the establishment of performance-based leak detection standards to set expectations and provide clarity to the pipeline industry and related technology companies.

2. Accommodations and Incentives for Operators Adopting Standards-Based Leak Detection Systems
FOSA recommends that Congress and PHMSA encourage the deployment of advanced leak detection systems by providing accommodations and incentives to operators adopting such systems. Such accommodations and incentives might include accelerated permitting, additional time to meet new regulatory requirements, reduced fines or monetary grants to help offset costs.

3. U.S. Pipeline Safety Testing Facility
FOSA recommends the creation of a facility dedicated to testing pipeline safety technology and techniques, similar to the Federal Railroad Administration's Transportation Technology Center and the National Highway Traffic Safety

Administration's Vehicle Research and Testing Center. Although the Canadian government has funded a leak detection testing facility - the External Leak Detection Experimental Research facility ("ELDER") in Alberta - no such center exists in the United States. A U.S. facility of this nature would serve multiple purposes, including reducing pipeline operators' cost of testing new technologies, facilitate certification of technology performance standards, and facilitate PHMSA's information gathering mandate.

4. Inclusion of Fiber Optic Sensing Information in PHMSA Leak Detection Guidance
PHMSA guidance to stakeholders regarding leak detection technologies should include fiber optic sensing as an option. For example, PHMSA's "Fact Sheet on Leak Detection Systems" currently contains no reference to or information about fiber optic sensing or any other external leak detection technology. To assist pipeline operators in deploying optimal leak detection technology, PHMSA should provide broader information in its publications and guidance.

FOSA Information for Pipeline Operators

On March 14, 2018, FOSA released an 11-page primer entitled, *Installation Considerations for Pipelines*, designed to assist pipeline operators, construction companies, technology integrators and others in deploying DFOS systems in the optimal manner. The primer is available at www.fiberopticsensing.org/page/installation-considerations.

FOSA also has created a webinar entitled, *Advancing Pipeline Safety with Fiber Optic Sensing* which provides additional insights gained from DFOS pipeline deployments around the world. The webinar is available at www.fiberopticsensing.org/p/cm/ld/fid=734&tid=310&sid=2387

D. Conclusion

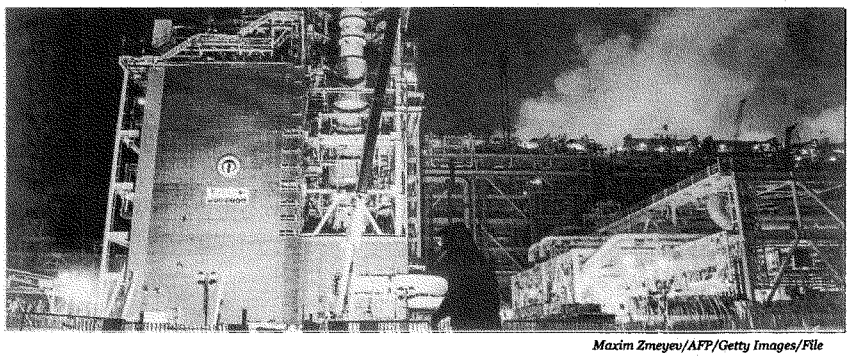
FOSA appreciates the opportunity to offer input to this important hearing. We believe that modern sensing technology can help meet the important goal of pipeline safety which is shared by Congress, PHMSA, the pipeline industry and the public. We look forward to working the subcommittee and the agency toward that goal. For additional information, I can be reached at [redacted] or muncapher@fiberopticsensing.org.

Sincerely

Mark Uncapher

Mark Uncapher
Director - FOSA

The Boston Globe



Maxim Zmeyev/AFP/Getty Images/File

The Yamal LNG plant is about 1,550 miles from Moscow. In December, it exported its first liquefied natural gas shipment, which ended up in Boston.

Our Russian 'pipeline,' and its ugly toll

By The Editorial Board,

February 13, 2018

To build the new $27 billion gas export plant on the Arctic Ocean that now keeps the lights on in Massachusetts, Russian firms bored wells into fragile permafrost; blasted a new international airport into a pristine landscape of reindeer, polar bears, and walrus; dredged the spawning grounds of the endangered Siberian sturgeon in the Gulf of Ob to accommodate large ships; and commissioned a fleet of 1,000-foot icebreaking tankers likely to kill seals and disrupt whale habitat as they shuttle cargoes of super-cooled gas bound for Asia, Europe, and Everett.

On the plus side, though, they didn't offend Pittsfield or Winthrop, Danvers or Groton, with even an inch of pipeline.

This winter's unprecedented imports of Russian liquefied natural gas have already come under fire from Greater Boston's Ukrainian-American community, because the majority

shareholder of the firm that extracted the fuel has been sanctioned by the US government for its links to the war in eastern Ukraine and Russia's illegal annexation of Crimea. Last week, in response to the outcry, a group of Massachusetts lawmakers, led by Senator Ed Markey, blasted the shipments and called on the federal government to stop them.

But apart from its geopolitical impact, Massachusetts' reliance on imported gas from one of the world's most threatened places is also a severe indictment of the state's inward-looking environmental and climate policies. Public officials, including Attorney General Maura Healey and leading state senators, have leaned heavily on righteous-sounding stands against local fossil fuel projects, with scant consideration of the global impacts of their actions and a tacit expectation that some other country will build the infrastructure that we're too good for.

As a result, to a greater extent than anywhere else in the United States, the Commonwealth now expects people in places like Russia, Trinidad and Tobago, and Yemen to shoulder the environmental burdens of providing natural gas that state policy makers have showily rejected here. The old environmentalist slogan — think globally and act locally — has been turned inside out in Massachusetts.

But more than just traditional NIMBYism is at work in the state's resistance to natural gas infrastructure. There's also the $1 million the parent company of the Everett terminal spent lobbying Beacon Hill from 2013 to 2017, amid a push to keep out the domestic competition that's ended LNG imports in most of the rest of the United States.

And there's a trendy, but scientifically unfounded, national fixation on pipelines that state policy makers have chosen to accommodate. Climate advocates, understandably frustrated by slow progress at the federal level, have put short-term tactical victories against fossil fuel infrastructure ahead of strategic progress on reducing greenhouse gas emissions, and so has Beacon Hill. They've obsessed over stopping domestic pipelines, no matter where those pipes go, what they carry, what fuels they displace, and how the ripple effects of those decisions may raise overall global greenhouse gas emissions.

The environmental movement needs a reset, and so does Massachusetts policy. The real-world result of pipeline absolutism in Massachusetts this winter has been to steer energy

customers to dirtier fuels like coal and oil, increasing greenhouse gas emissions. And the state is now in the indefensible position of blocking infrastructure here, while its public policies create demand for overseas fossil fuel infrastructure like the Yamal LNG plant — a project likely to inflict far greater near and long-term harm to the planet.

Maxim Zmeyev/AFP/Getty Images

The settlement of Sabetta on the Yamal Peninsula in the Arctic circle.

"ALL IS GLOOM AND ETERNAL SILENCE," wrote a 19th century English traveler in an awestruck account of the Kara Sea, then still a largely uncharted domain of ice floes and fog. Though more powerful vessels and melting ice have enabled more human activity in the Arctic, the area around Yamal, an indigenous name meaning "edge of the world," remains a refuge. An estimated 2,700 to 3,500 polar bears live in the Kara Sea region, along with the ring seals that form a crucial part of their diet.

Opening a gas export facility in such a harsh environment required overcoming both political obstacles — the US sanctions delayed financing — and staggering triumphs of industrial engineering by a workforce that reportedly reached 15,000 people. Dredgers scooped away 1.4 billion cubic feet of seabed to make room for the ships and built a giant LNG facility on supports driven into the permafrost, all in temperatures that can plunge to less than minus 50 degrees Fahrenheit.

The oil and gas industry poses serious threats, especially in an area like the Arctic that recovers slowly from damage, and in 2016 the Russian branch of the World Wildlife Fund issued a report warning of Yamal LNG's potential dangers. White toothed whales, a near-

threatened species, breed in the vicinity of the facility, and the noise from shipping and the presence of more giant vessels "may force toothed whales to leave this habitat, which is crucial for their living, feeding, and reproduction."

The giant "Yamalmax" icebreaking tankers, longer than three football fields and designed to mow through ice up to six feet deep, are also "extremely bad news for any ice-associated mammals that should be in the vicinity of their path," said Sue Wilson, who leads an international research group based at the University of Leeds in the United Kingdom. The group has recently published a paper in the journal Biological Conservation on the impact of icebreakers on seal mothers and pups in the Caspian Sea and is currently studying shipping impacts in the Arctic.

"The captain is unlikely to notice — or even be able to see — seals in the vessel's path ahead," she said. "Even if the captain does notice, the fact that the ship is designed to proceed at a steady pace means that it is unlikely to attempt to stop for seals or maneuver around them, even if the ship can be slowed or stopped in time."

Advocates also worry that increased Arctic production and shipping will hurt indigenous people; sever reindeer migration routes ; import invasive species to an environment ill-equipped to deal with them; and introduce the very remote, but potentially cataclysmic, danger of an LNG explosion.

Finally, the gas pumped there will contribute to global climate change. In some parts of the world, especially China, LNG may provide climate benefits by displacing dirtier coal. If LNG displaces gas carried by pipeline, however, the math works out differently: Liquefied natural gas generally creates more emissions, since the process of cooling it to minus 260 degrees Fahrenheit and then shipping and regasifying it requires more energy than pumping natural gas through all but the longest and leakiest pipelines.

"The bottom line is that because of the nature of the liquefaction process, LNG is fairly carbon intensive," said Gavin Law, the head of gas, LNG, and carbon consulting for the energy consulting firm Wood Mackenzie. The exact difference depends on factors like how much pipelines leak, carbon impurities in the gas, age of equipment, and distance shipped,

but generally LNG produces 5 to 10 percent more emissions over its whole life cycle from start to finish, he said.

From a planetary perspective, it doesn't matter where those emissions occur: Whether from the plant in Yamal, or the power plant in Everett, they have the same impact. The science should make the state's decisions straightforward.

"Natural gas has shown itself to be an important bridge to a clean energy future," said Ernest J. Moniz, the former secretary of energy in the Obama administration. "For New England, expanding the pipeline capacity from the Marcellus" — the area of shale gas production in Pennsylvania — "makes the most sense."

"Life cycle emissions for LNG imports to Boston certainly are higher than they would be for more Marcellus gas," he said.

But the upstream emissions typically don't show up on the books of states like Massachusetts, which judge the success of their climate efforts based only on how much greenhouse gas they emit within their own borders.

That's an accounting fiction. But it's a convenient one for lawmakers who've bowed to pressure to legislate based on what's visible inside the Commonwealth's own borders.

FROM MASHPEE TO SPRINGFIELD, Taunton to Sudbury, the message was clear: To fight climate change, the state shouldn't allow more fossil fuel pipelines or other infrastructure in Massachusetts.

That's what state senators Marc Pacheco and Jamie Eldridge, the heads of the state Senate's Committee on Global Warming and Climate Change, heard when they conducted a listening tour of the state — whose results they released on the same day the Russian gas was unloading in Everett — to help prepare a new energy bill.

The resulting legislation was introduced this Monday. It contained many fine ideas, including boosting the state's renewable energy requirements. But it also would raise obstacles to pipelines that would lock in the state's reliance on foreign gas, with its higher carbon footprint.

In an interview, Pacheco said "Obviously any fossil fuel investments are problematic," no matter where they occur, but that "we have no control over what happens in Russia or anywhere else in the world." Eldridge said, "I think this bill takes a big step to preventing pipelines," and also expressed concern about the LNG the state imports instead. "I think activists need to think about where a large amount of this gas is coming from, and that could be something the Legislature could take a look at" in the future, he said.

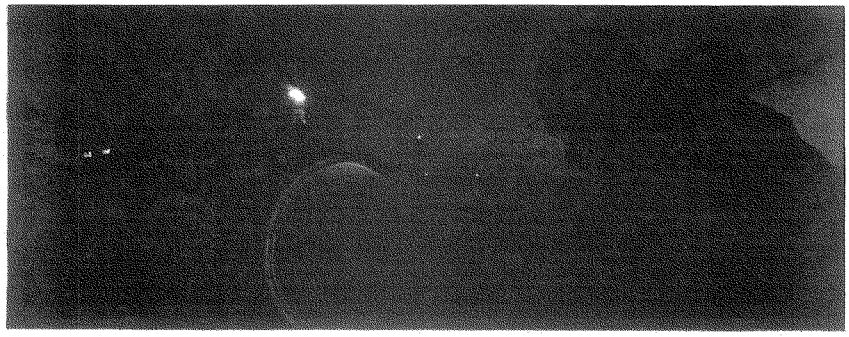
Theirs isn't the first analysis to miss the larger picture.

In 2015, the Conservation Law Foundation, a prominent environmental advocacy group in Boston, released a report dismissing the need for new pipeline capacity in New England, and called on the region to rely on a "winter-only LNG 'pipeline,' " including imported gas, to meet its winter energy needs instead.

After the first shipload of Russian gas arrived, David Ismay, a lawyer with the group, stood by the recommendation and shrugged off the purchase of Russian gas from the Arctic as simply the nature of buying on the worldwide market. "I think it's important to understand that LNG is a globally traded commodity," he said in an interview with the Globe.

The foundation, he said, hadn't compared the overall greenhouse gas emissions from LNG to pipeline gas from the Marcellus to determine which was worse for the climate, nor had it factored the impact on the Arctic of gas production into its policy recommendations.

But a state policy that doesn't ask any questions about its fuel until the day the tanker floats into the Harbor abdicates the state's responsibility to own up to all consequences of its energy use — and mitigate the ones that it can.



Maxim Zmeyev/AFP/Getty Images

A worker inspected a pipe in the port of Sabetta on the Kara Sea.

WHEN AN ICEBREAKER BEARS DOWN on a mother seal during the springtime breeding season, the terrified animal tries to scurry away with her pup. The two may leave a trail of urine and feces on the ice, telltale signs of their distress. Even if the animals survive the collision, the disruption may separate the mother and pup, leading to the pup's death.

Conscientious companies can minimize the cruel realities of global shipping — or conscientious governments can force them to. American law, for instance, requires ships to maintain a safe distance from seals and walruses in ice habitats. Wilson, the seal researcher, also suggested that icebreakers can change routes to avoid known seal habitats, especially during the breeding season, and carry trained observers onboard to advise vessel captains and record any adverse impact, particularly on mothers and young.

The Globe attempted to contact Sovcomflot, the Russian state-owned shipper in St. Petersburg that handled the first leg of the first shipment from Siberia to Everett, about what policies, if any, it employs to avoid killing seals and other wildlife, and whether it would halt LNG shipments during the spring as mother seals nurse their pups in the Arctic.

As of Monday night, it had not responded to e-mails.

The policy of Massachusetts, apparently, is to hope that the Russians are on top of it — and that the world beyond the state's borders manages the impacts of fossil fuel production and

transportation that the Commonwealth buys and uses, but considers itself too pure to handle itself.

As of Monday night, the next shipment of Russian gas was anchored about 70 miles off Gloucester.