THE STATE OF PIPELINE SAFETY AND SECURITY IN AMERICA

HEARING

BEFORE THE

SUBCOMMITTEE ON ENERGY

OF THE

COMMITTEE ON ENERGY AND COMMERCE

HOUSE OF REPRESENTATIVES

ONE HUNDRED SIXTEENTH CONGRESS

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C O N T E N T S

THE STATE OF PIPELINE SAFETY AND SECURITY IN AMERICA

WEDNESDAY, MAY 1, 2019

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON ENERGY,
COMMITTEE ON ENERGY AND COMMERCE,
Washington, DC.

The subcommittee met, pursuant to call, at 10:00 a.m., in the John D. Dingell Room 2123, Rayburn House Office Building, Hon. Bobby L. Rush (chairman of the subcommittee) presiding.

Members present: Representatives Rush, Peters, Doyle, McNerney, Loebsack, Butterfield, Welch, Schrader, Kennedy, Veasey, Kuster, Kelly, Barragán, O'Halleran, Blunt Rochester, Pallone (ex officio), Upton (subcommittee ranking member), Latta, Rodgers, Olson, McKinley, Griffith, Johnson, Bucshon, Flores, Hudson, Walberg, Duncan, and Walden (ex officio).

Staff present: Omar Guzman-Toro, Policy Analyst; Zach Kahan, Outreach and Member Service Coordinator; Rick Kessler, Senior Advisor and Staff Director, Energy and Environment; John Marshall, Policy Coordinator; Lisa Olson, FERC Detailee; Tuley Wright, Energy and Environment Policy Advisor; Mike Bloomquist, Minority Staff Director; Jordan Davis, Minority Senior Advisor; Peter Kielty, Minority General Counsel; Mary Martin, Minority Chief Counsel, Energy and Environment; Brandon Mooney, Minority Deputy Chief Counsel, Energy; Brannon Rains, Minority Staff Assistant; and Peter Spencer, Minority Senior Professional Staff Member, Environment and Climate Change.

Mr. RUSH. The subcommittee will now come to order.

The Chair now recognizes himself for 5 minutes for the purposes of an opening statement.

OPENING STATEMENT OF HON. BOBBY L. RUSH, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF ILLINOIS

I want to thank all the witnesses who are attending this very important hearing today on pipeline safety and security. And I want to welcome all of our distinguished panelists that will be appearing before us today on two separate panels.

I also want to express my disappointment and my deep-seated concern that we will not be hearing from one of the agencies responsible for oversight of pipeline safety, TSA, who actually presides over some of the most disturbing outstanding issues that need to be addressed by the members of this subcommittee.

While we did invite TSA to appear before us today, so that the members of this subcommittee could address many of the issues

that were spelled out in a December 2018 GAO report, TSA declined to send a witness. And frankly, I find it to be unacceptable and it will be addressed as we move forward. TSA needs to answer the questions that we have, that members of this subcommittee have and want to get answers to.

In the meantime, I look forward to engaging with the panelists that are present with us today, examining the state of pipeline safety and security as it currently stands before the Nation.

I have the pleasure of representing portions of Will County, Illinois, as part of the First Congressional District of Illinois. And Will County has the dubious distinction of accounting for 8 percent of all the pipelines in my State, and officials there were able to provide my office with critical insight into how pipeline safety and security protocols play out on the local level.

As we all know, local communities are always the ones most directly impacted when something goes wrong with America's pipeline, as we have, unfortunately, witnessed far too often in areas extending from the Merrimack Valley in Massachusetts to Aliso Canyon and San Bruno in California.

From county first responders, who are usually the initial actors on the scene, to local emergency management agencies, who are required to participate and carry out emergency preparedness exercises to plan and prepare for disasters, local agencies play a huge role in helping to mitigate disasters, and they are not always provided with the adequate funding or resources to do the job which we require of them.

Many times when private companies are mandated by Federal law to comply with consent decrees, they pull in local resources, such was the case with a recent spill in Romeoville, Illinois. Will County officials were required to contribute many hours of manpower and staff in order to help Enbridge meet its court-ordered decree, but they were not compensated any money for this huge responsibility that they had to accept.

While there is the Hazardous Materials Emergency Preparedness, HMEP, grant program, it appears that there are some severe limitations upon this program. The HMEP or TAG program operates with limited and unpredictable levels of funding and has burdensome restrictions on how that money may be utilized.

I look forward to today's hearing and to a robust discussion on both sides of the issue of this outstanding priority issue that is before us.

And with that, I yield back the balance of my time. And now, I recognize my friend and colleague, my friend from Michigan, Ranking Member Upton.

[The prepared statement of Mr. Rush follows:]

PREPARED STATEMENT OF HON. BOBBY L. RUSH

I want to thank you all for attending this very important hearing today on pipeline safety and security, and I want to welcome all of our distinguished witnesses that will be appearing before us on two separate panels.

I also want to express my disappointment and concern that we will not be hearing from one of the major agencies responsible for the oversight of pipeline security, the Transportation Security Administration (TSA) who actually preside over some the most disturbing outstanding issues that need to be addressed.

While we did invite TSA to appear before us today, so Members could address many of the issues that were spelled out in a December 2018 GAO report, they declined to send a witness, which I find to be unacceptable and must be addressed moving forward.

In the meantime, I look forward to engaging with the panelists that are here, to examine the state of pipeline safety and security as it currently stands.

I have the pleasure of representing portions of Will County as part of the First Congressional District of Illinois.

Will County accounts for 8-percent of all pipelines in my State, and officials there were able to provide my office with critical insight into how pipeline safety and security protocols play out on the local level.

As we all know, local communities are always the ones most directly impacted when something goes wrong, as we've unfortunately witnessed far too often in areas extending from the Merrimack Valley in Massachusetts to Aliso Canyon and San Bruno in California.

From county first responders who are usually the initial actors on the scene, to local Emergency Management Agencies (EMA) who are required to participate and carry out emergency preparedness exercises to plan and prepare for disasters, local agencies play a large role in helping to mitigate disasters and they are not always provided the adequate funding or resources to do so.

Many times, when private companies are mandated to comply with Consent Decrees, they pull in local resources such as was the case with a recent spill in Romeoville, Illinois.

Will County officials were required to contribute many hours of manpower and staff in order to help Enbridge meet its court-ordered decree but were not compensated any money for the role they played.

While there is the Hazardous Materials Emergency Preparedness (HMEP) grant program, it appears that there are some severe limitations with this program.

The HMEP, like the Technical Assistance Grants, or TAG program operates with limited and unpredictable levels of funding and has burdensome restrictions on how the funding may be used.

So I look forward to working together with my colleagues on both sides of the aisle, as we have done in the past, to examine the different types of grant programs available.

It is important that we look at all of the different funding mechanisms at our disposal in order to make sure that we are providing our first responders, emergency management agencies, and all of the other critical State and local stakeholders with the resources they need to effectively do their jobs and keep all of the Nation's pipelines, and the communities they traverse, safe and secure.

With that I yield the balance of my time, and now I would like to recognize my friend and colleague, Ranking Member Upton for his opening statement.

OPENING STATEMENT OF HON. FRED UPTON, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF MICHIGAN

Mr. UPTON. Thank you, Mr. Chairman, and also my friend for sure.

This is an important hearing as we begin our work to reauthorize the Nation's pipeline safety laws. I want to thank you for making this a bipartisan effort, for working with us to select the witnesses and prepare for the hearing. We have a great track record when we work together from the very start, especially when it involves public safety.

Throughout my time in Congress, I have especially prioritized pipeline safety. It is personal, as we had to deal with a bad pipeline accident in my home State. I recall the 2010 oil spill in the Kalamazoo River, not too far from my district, which led to the passage of the Upton-Dingell pipeline safety bill in 2012. And in response to the Kalamazoo spill specifically, we cut down on the incident reporting time, 24 hours now, and we upped the financial penalty for violations.

In 2016, we came together again to pass another bipartisan pipeline safety bill, which is now set to expire in October. I am proud of the work that we accomplished with that bill, particularly the language that I was able to include requiring mandatory annual inspections for certain pipeline crossings, such as the Enbridge Line 5, which crosses the Straits of Mackinac at a depth of more than 250 feet below the surface of the water, that was built some 60 years ago.

Mr. Chairman, as we turn to this upcoming reauthorization, I am grateful for the commitment from you to adopt the same bipartisan formula that worked so well the last two times as we did pipeline safety.

I am confident that today's hearing will provide us with a good start. We have two panels offering a diverse range of views, including the Administrator of PHMSA, the Commissioner from the Ohio Public Utility Commission, and a representative from the GAO, representatives of oil and gas pipeline operators, and pipeline safety advocates. As one can tell from the witness lineup, an effective pipeline safety and security program requires communication and cooperation among a wide array of stakeholders.

Today's hearing will also allow Members to examine GAO's recommendations to address significant weaknesses in TSA's Pipeline Security Program management. I will confess that I was most disappointed to learn that, while TSA was invited to participate in today's hearing, they officially declined to appear. And I guess you could say, like the Alamo, we are going to remember that.

We know from the committee's oversight that TSA staffing issues are a major limitation. TSA has some 50,000 employees. Only a handful—actually, it is a handful plus one, six—are assigned to pipeline safety. That is not very good.

Strengthening cybersecurity for pipelines is an issue that I care deeply about, and I believe that Congress does need to act in both the House and the Senate. I have introduced a bill, H.R. 370, the Pipeline and LNG Facilities Cybersecurity Preparedness Act, that would help address some of the vulnerabilities outlined in the GAO report. And although my bill is more focused on DOE's role, as the sector-specific agency for energy, I am committed to getting it over the finish line, and I am open-minded about ways to strengthen cybersecurity through our pipeline safety reauthorization bill. And I know that we can make it bipartisan.

So, at the end of the day, we cannot separate pipeline safety from pipeline security, and we cannot allow agencies to carry out a turf war over jurisdiction, especially if they are going to refuse to come before this important committee.

With that, Mr. Chairman, thank you again for holding the hearing, and I yield back.

[The prepared statement of Mr. Upton follows:]

PREPARED STATEMENT OF HON. FRED UPTON

Thank you, Mr. Chairman for holding this hearing to begin our work to reauthorize the Nation's pipeline safety laws. I would also like to thank you for making this a bipartisan effort, and for working with us to select the witnesses and prepare for this hearing. We have a great track record when we work together from the very beginning, especially when it involves public safety.

Throughout my time in Congress, I have especially prioritized pipeline safety. It's personal for me, as it is for those of us who have had to deal with a pipeline accident in our home State. I often recall the 2010 oil spill in the Kalamazoo River, near my district, which lead to the passage of our pipeline safety bill in 2012. In response to the Kalamazoo spill specifically, we cut down on the incident reporting time and upped the financial penalties for violations.

In 2016, we came together again to pass another bipartisan pipeline safety bill, which is set to expire at the end of this fiscal year. I am proud of the work we accomplished with that bill, particularly the language that I was able to include to require mandatory annual inspections for certain pipeline crossings, such as Enbridge's Line 5, which crosses the Straits of Mackinac at a depth of more than 250 below the surface of the water.

Mr. Chairman, as we turn to this upcoming reauthorization, I hope that we can receive a commitment from you to adopt the same bipartisan formula that worked so well the last two times we did pipeline safety reauthorization.

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As one can tell from the witness lineup, an effective pipeline safety and security program requires communication and cooperation among a wide array of stakeholders.

Today's hearing will also allow Members to examine GAO's recommendations to address significant weaknesses in TSA's pipeline security program management. I was disappointed to learn that while TSA was invited to participate in today's hearing, the agency declined to appear. Going forward, I encourage the administration and TSA to take this matter seriously and cooperate with the committee.

We know from the committee's oversight that TSA staffing issues are a major limitation. Even though TSA has over 50,000 employees, only a handful are assigned to pipeline security. I understand that TSA only had 6 full time equivalent staff assigned to pipeline security in 2018. Only 6 out of 50,000 employees!

Strengthening cybersecurity for pipelines is an issue I care deeply about, and I believe Congress needs to act. I have a bill, H.R. 370—the Pipeline and LNG facility Cybersecurity Preparedness Act, that would help address some of the vulnerabilities outlined in the GAO report.

Although my bill is more focused on DOE's role as the sector-specific agency for energy, I am committed to getting it over the finish line, and I am open-minded about ways to strengthen cybersecurity through our pipeline safety reauthorization bill.

At the end of the day, we cannot separate pipeline safety from pipeline security, and we cannot allow agencies to carry out a turf war over jurisdiction. Especially if they are going to refuse to testify before the Energy and Commerce Committee.

With that, Mr. Chairman, thank you for holding this hearing and I will yield back.

Mr. RUSH. I want to thank the gentleman.

The Chair now recognizes the chairman of the full committee, Mr. Pallone, for 5 minutes for his opening statement.

OPENING STATEMENT OF HON. FRANK PALLONE, JR., A REPRESENTATIVE IN CONGRESS FROM THE STATE OF NEW JERSEY

Mr. PALLONE. Thank you, Mr. Chairman.

There are millions of miles of pipeline transporting natural gas, oil, and other commodities across the country. And when a pipeline fails, it can be destructive, and even deadly. Late last year, a failure in Massachusetts' Merrimack Valley caused one death, 21 injuries, and damaged over 130 homes. In February, a gas field explosion at a residence in Dallas, Texas, killed a 12-year-old and injured his family. And these tragic events underscore the need for a strong Federal safety pipeline program.

And I want to welcome Skip Elliott, Administrator of the Pipeline and Hazardous Materials Safety Administration, pronounced PHMSA, to the committee. Administrator Elliott, I wish you success in your effort to manage an agency notorious for its inability to meet congressionally mandated deadlines and carry out its mission in an efficient and effective way. And certainly, there are dedicated career staff at PHMSA who work hard to make our pipelines safer, but there are too many outstanding mandates from the 2011 and 2016 pipeline safety reauthorizations that PHMSA has failed to finalize, and that is unacceptable.

As part of the 2011 reauthorization, Congress required the use of automatic or remote-controlled shutoff valves on newly constructed transmission pipelines to limit damage when a rupture occurred. The National Transportation Safety Board recommended use of this technology 25 years ago, after a pipeline explosion in my congressional district in Edison, New Jersey. I was in Congress then, and yet, here we are still discussing the same issue.

The 2011 law also required operators to install leak detection systems on hazardous liquid pipelines, but 8 years later PHMSA still has not finalized the rule. And in what I consider to be the most important provision of the 2016 reauthorization, Congress gave PHMSA emergency order authority to address imminent industrywide safety hazards that pose a threat to life or significant harm to property or the environment. Yet, PHMSA has failed to implement this, too.

And it is not all PHMSA's fault. The prescriptive cost-benefit analysis required by the '96 reauthorization hamstrung the agency. If we want PHMSA to finalize more rulemakings, we must remove or adjust this overly burdensome requirement.

We also need to restore the mechanisms for citizens to pursue legal action to compel PHMSA to fulfill its statutory duties. If the Federal Government can't or will not carry out its mandated responsibilities, citizens should have the right to take legal action.

In the aftermath of the 2010 San Bruno pipeline explosion that killed eight people, San Francisco sued the Federal Government for having abjectly failed to enforce safety standards. Unfortunately, the court dismissed that suit because it found that the law did not permit mandamus-type citizen suits against the Government, and that was never Congress' intent and it must change.

I am also extremely disappointed, as my colleague from Michigan said, that the Transportation Security Administration Administrator David Pekoske refused to testify or even send a witness today. And on a bipartisan basis, we invited TSA to testify on its pipeline security program, which the Government Accounting Office has criticized for having significant weaknesses. I am concerned that TSA lacks the resources, expertise in energy delivery systems, and, frankly, the commitment to keep up its obligations under the law. And so, Fred, I want to thank you for pointing that out, too.

There was a serious security breach last week when someone shot at the Magellan pipeline in Minnesota, causing a release of over 8,000 gallons of diesel fuel. If TSA can't be bothered to be here to discuss this security breach and justify its performance to Con-

gress, then perhaps it is time we look for another Federal agency other than TSA to handle this critical responsibility.

And finally, I would like to thank Carl Weimer for all of his help over the years to this committee and Congress because I am told he will soon step down as the Executive Director of the Pipeline Safety Trust. Twenty years ago next month, the Olympic Gasoline Pipeline exploded in Bellingham, Washington, and that killed 18-year-old Liam Wood and two 10-year-olds, Wade King and Steven Tsiorvas. And I say their names because it is critical that we not forget these kids. Since then, Carl and the Trust have taken the outrage of that event and used it to improve the pipeline safety landscape, to the benefit of all of us.

You know, again, the role of citizens, the role of individuals in drawing attention to what needs to be done here is very important, and I certainly want to highlight that.

The Pipeline Safety Act reauthorization has typically been a bipartisan effort, and we look forward to continue working with colleagues on both sides of the aisle to update and improve this critical Federal program.

Thank you, Mr. Chairman.

[The prepared statement of Mr. Pallone follows:]

PREPARED STATEMENT OF HON. FRANK PALLONE, JR.

There are millions of miles of pipeline transporting natural gas, oil and other commodities across the country. When a pipeline fails, it can be destructive and even deadly. Late last year, a failure in Massachusetts' Merrimack Valley caused one death, 21 injuries and damage to over 130 homes. In February, a gas-fueled explosion at a residence in Dallas, Texas killed a 12-year old and injured his family. These tragic events underscore the need for a strong Federal safety pipeline program.

I want to welcome Skip Elliott, Administrator of the Pipeline and Hazardous Materials Safety Administration (PHMSA) to the committee. Administrator Elliott, I wish you success in your effort to manage an agency notorious for its inability to meet congressionally mandated deadlines and carry out its mission in an efficient and effective way. Certainly, there are dedicated career staff at PHMSA who work hard to make our pipelines safer, but there are too many outstanding mandates from the 2011 and 2016 Pipeline Safety reauthorizations that PHMSA has failed to finalize and that's unacceptable.

As part of the 2011 reauthorization, Congress required the use of automatic or remote-controlled shut-off valves on newly constructed transmission pipelines to limit damage when a rupture occurs. The National Transportation Safety Board recommended use of this technology 25 years ago after a pipeline explosion in my Congressional District in Edison, New Jersey. Yet, here we are, still discussing this issue.

The 2011 law also required operators to install leak detection systems on hazardous liquid pipelines—but 8 years later, PHMSA still has not finalized a rule. And in what I considered to be the most important provision of the 2016 reauthorization, Congress gave PHMSA emergency order authority to address imminent, industry-wide safety hazards that pose a threat to life or significant harm to property or the environment. Yet PHMSA has failed to implement this, too.

It's not all PHMSA's fault. The prescriptive cost-benefit analysis required by the 1996 reauthorization hamstrings the agency. If we want PHMSA to finalize more rulemakings, we must remove or adjust this overly burdensome requirement.

We also need to restore the mechanism for citizens to pursue legal action to compel PHMSA to fulfill its statutory duties. If the Federal Government cannot or will not carry out its mandated responsibilities, citizens should have the right to take legal action.

In the aftermath of the 2010 San Bruno pipeline explosion that killed eight people, San Francisco sued the Federal Government for having abjectly failed to enforce safety standards. Unfortunately, the court dismissed that suit because it found that

the law did not permit mandamus-type citizen suits against the Government. That was never Congress' intent and it must change.

I am also extremely disappointed that Transportation Security Administration Administrator David Pekoske refused to testify or even send a witness today. On a bipartisan basis, we invited TSA to testify on its Pipeline Security Program, which the Government Accountability Office has criticized for having "significant weaknesses." I'm concerned that TSA lacks the resources, expertise in energy delivery systems and, frankly, commitment, to keep up its obligations under the law.

There was a serious security breach last week when someone shot at the Magellan pipeline in Minnesota causing a release of over 8,000 gallons of diesel fuel. If TSA can't be bothered to be here to discuss this security breach and justify its performance to Congress, then perhaps it's time we looked for another Federal agency to handle this critical responsibility.

Finally, I'd like thank Carl Weimer for his all of his help over the years to this committee and Congress because, I am told, he will soon step down as Executive Director of the Pipeline Safety Trust. Twenty years ago next month, the Olympic Gasoline Pipeline exploded in Bellingham, Washington killing 18-year-old Liam Wood and two 10-year-olds: Wade King and Stephen Tsiorvas. I say their names because it is critical we not forget these children. Since then, Carl and the Trust have taken the outrage of that event and used it to improve the pipeline safety landscape to the benefit of all of us.

Pipeline Safety Act reauthorization has typically been a bipartisan effort, and I look forward to continuing to work with my colleagues on both sides of the aisle to update and improve this critical Federal program this year.

Mr. RUSH. I want to thank the gentleman.

The Chair now recognizes the ranking member of the full committee, Mr. Walden, for 5 minutes for his opening statement.

Mr. WALDEN. Good morning, Mr. Chairman.

Mr. RUSH. Good morning.

OPENING STATEMENT OF HON. GREG WALDEN, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF OREGON

Mr. WALDEN. Thanks for having this hearing. I think it is really important that we work together to reauthorize and modernize the Nation's pipeline safety program.

This is really an important hearing, and I am pleased that we are beginning this process on a bipartisan basis, Mr. Chairman, which is the tradition of the Energy and Commerce Committee on matters relating to pipeline safety and security.

The Federal Government, acting through the Pipeline and Hazardous Materials Safety Administration, known as PHMSA, has an important responsibility to develop and enforce regulations for the safe, reliable, and environmentally sound operation of the Nation's 2.7 million miles of pipelines.

Pipelines are among the safest and most efficient ways to transport critical fuels and feedstocks, such as natural gas and petroleum, to our homes and businesses. And simply put, the safe operation of our Nation's pipeline and safety system is essential to help keep prices low for consumers and drive our economy forward in a positive direction.

PHMSA cannot do this important job by itself. It must coordinate effectively with other Federal agencies, such as the Department of Energy, FERC, and TSA, and especially with the States. In fact, it is important to recognize that much of the responsibility for pipeline safety falls on the States. It is often State pipeline safety workers who are on the front lines inspecting and enforcing safety requirements. And in many cases, it is also the States' responsibil-

ities to regulate rates and ensure the adequate investments are made in pipeline maintenance and modernization.

As Members of Congress, it is our responsibility to ensure that PHMSA and the States have enough resources and the appropriate tools to get the job done. With PHMSA's authorization expiring at the end of this fiscal year, it is time for us to get our work done.

As we turn to reauthorization, I will remain focused on protecting public safety and consumers. These are not mutually exclusive goals, and I am optimistic we can find bipartisan agreement, as we always have when it comes to pipeline safety.

Mr. Chairman, I hope we can get a commitment to work together on the drafting process from the very beginning. That would really be consistent with our practice from the last round of reauthorization, and I think it would contribute toward a better quality work product. So, I hope we can do that.

There are many areas where I believe we can update and strengthen the law to drive innovation and lower the barrier of entry for new technologies. New technologies for pipeline construction and integrity management can help improve efficiency and safety at the same time.

I also believe we should examine recent pipeline safety incidents and incorporate lessons learned in our work. We should also make sure to provide PHMSA with clear directions, recognizing they already have a backlog of congressional mandates. They are working on two high-priority rules for both gas and liquid pipelines.

PHMSA must also finish its work on other important safety rules relating to pipelines valves and rupture detection, integrity management, class location, and public education and awareness. I believe PHMSA is on the right track, and I look forward to the agency completing this important work.

At this point, I will close by thanking our witnesses for appearing before us today. We are going to hear a range of perspectives to help inform our work, including PHMSA, the State of Ohio, pipeline operators, and safety advocates.

We are also going to examine the findings of a recent GAO report which raises numerous serious concerns about the effectiveness of the Transportation Security Administration's Pipeline Cybersecurity Program. As the committee of jurisdiction for energy and interstate commerce—and let me say this very clearly—I am very disappointed that TSA refused to provide a witness for today's hearing, and I would urge this administration in the strongest terms possible to cooperate with our committee and respond to what I believe are legitimate oversight requests relating to pipeline safety and security.

With that, Mr. Chairman, thanks again for holding the hearing, and I yield back the balance of my time.

[The prepared statement of Mr. Walden follows:]

PREPARED STATEMENT OF HON. GREG WALDEN

Thank you, Mr. Chairman for holding this hearing to begin our work to reauthorize and modernize the Nation's pipeline safety program. This is an important hearing, and I am pleased that we are beginning this process on a bipartisan basis, which is the tradition of the Energy and Commerce Committee on matters relating to pipeline safety and security.

The Federal Government, acting through the Pipeline and Hazardous Materials Safety Administration, known as PHMSA has an important responsibility to develop and enforce regulations for the safe, reliable, and environmentally sound operation of the Nation's 2.7 million miles of pipelines. Pipelines are among the safest and most efficient ways to transport critical fuels and feedstocks such as natural gas and petroleum to our homes and businesses. Simply put, the safe operation of our Nation's pipeline system is essential to help keep prices low for consumers and drive our economy forward.

PHMSA cannot do this important job by itself. It must coordinate effectively with other Federal agencies, such as DOE, FERC and TSA, and especially with States. In fact, it is important to recognize that much of the responsibility for pipeline safety falls on the States. It is often State pipeline safety workers who are on the front lines inspecting and enforcing safety requirements. In many cases, it is also the States' responsibility to regulate rates and ensure that adequate investments are made in pipeline maintenance and modernization.

As Members of Congress, it is our responsibility to ensure that PHSMA and the States have enough resources and the appropriate tools to get the job done. With PHMSA's authorization expiring at the end of this fiscal year, it's time for us to get to work.

As we turn to reauthorization, I will remain focused on protecting public safety and consumers. These are not mutually exclusive goals, and I am optimistic that we can find bipartisan agreement as we always have when it comes to pipeline safety.

Mr. Chairman, I hope we can get a commitment to work together on the drafting process from the very beginning. That would be consistent with our practice from the last round of reauthorization, and I think it would contribute toward a better-quality work product.

There are many areas where I believe we can update and strengthen the law to drive innovation and lower the barrier of entry for new technologies. New technologies for pipeline construction and integrity management can help improve efficiency and safety at the same time. I also believe we should examine recent pipeline safety incidents and incorporate lessons-learned.

We should also make sure to provide PHMSA with clear directions, recognizing that they already have a backlog of Congressional mandates and they are working on two high priority rules for both gas and liquid pipelines.

PHMSA must also finish its work on other important safety rules relating to pipeline valves and rupture detection, integrity management, class location, and public education and awareness.

I believe PHMSA is on the right track, and I look forward to the agency completing this important work.At this point, I will close by thanking our witnesses for appearing before us today. We are going to hear a range of perspectives to help inform our work, including PHMSA, the State of Ohio, pipeline operators, and safety advocates.

We are also going to examine the findings of a recent GAO report, which raises numerous, serious concerns about the effectiveness of the Transportation Security Administration's pipeline cyber security program.

As the committee of jurisdiction for energy and interstate commerce, I am very disappointed that TSA refused to provide a witness for today's hearing. I would urge the administration—in the strongest terms—to cooperate with our committee and respond to what I believe are legitimate oversight requests relating to pipeline safety and security.

With that, Mr. Chairman, thank you for holding this hearing. I yield back the balance of my time.

Mr. RUSH. The Chair wants to thank the gentleman for his opening statement and reassure him that our side is eager to work with him on a bipartisan basis to address all of the issues which we are recently concerned about. I want to thank you.

The Chair would like to remind Members that, pursuant to committee rules, all Members' written opening statements shall be made part of the record.

And now, we will proceed to the witnesses' opening statements, beginning with panel one. I would now like to introduce our first panel of witnesses for today's hearing.

The individual to my left is the distinguished Honorable Howard R. Elliott, Administrator for the Pipeline and Hazardous Materials Safety Administration, PHMSA. And next to Mr. Elliott is Mr. W. William Russell, the Acting Director of GAO. And next to him is Commissioner Lawrence Friedeman, the Public Utilities Commissioner for the great State, the Buckeye State, the State of Ohio.

And I want to say that we thank all of our witnesses for being with us today, and we look forward to your testimony.

Let me take a moment just to let you know that I will recognize you for 5 minutes to provide an opening statement. Before we begin, I would like to explain the lighting system that is before you. In front of you is a series of lights. The light will initially be green at the start of your opening statement. The light will turn yellow when you have 1 minute remaining. Please begin to wrap up your testimony at that point. The light will turn red when your time expires.

And so, with that said, Mr. Elliott, welcome, and we recognize you for 5 minutes for the purposes of an opening statement.

STATEMENTS OF HOWARD "SKIP" ELLIOTT, ADMINISTRATOR, PIPELINE AND HAZARDOUS MATERIALS SAFETY ADMINISTRATION; WILLIAM RUSSELL, ACTING DIRECTOR, HOMELAND SECURITY AND JUSTICE, GOVERNMENT ACCOUNTABILITY OFFICE; AND LAWRENCE FRIEDEMAN, COMMISSIONER, PUBLIC UTILITIES COMMISSION OF OHIO

STATEMENT OF HOWARD "SKIP" ELLIOTT

Mr. ELLIOTT. Thank you, Mr. Chairman.

Ranking Member Walden, Chairman Rush, Ranking Member Upton, and esteemed members of this subcommittee, thank you for the opportunity to testify here today. I look forward to updating this subcommittee on the Pipeline and Hazardous Materials Safety Administration's progress in closing open congressional mandates and in executing our broader safety mission.

Let me first say that I understand the frustrations that have been expressed regarding the outstanding congressional mandates on pipelines and hazardous materials safety. We are working hard to ensure our Nation's pipeline system remains safe and finalizing the mandates remains a top priority for PHMSA.

Of the 11 remaining mandates from the 2011 and 2016 Pipeline Safety Act—there were 61 in total—three are tied to reports and other actions, and the remaining eight are tied to in-progress rulemaking efforts. Those mandates from the 2011 Act, the ones that have been opened the longest, are being addressed by three of PHMSA's current rulemakings for gas transmission pipelines, hazardous liquid pipes, and rupture detection in valves.

PHMSA continues to make progress on these rules. The liquid pipeline safety rule moved out of DOT for final review several months ago. We have also completed our work on the gas transmission pipeline final rule and the valve and rupture detection rule. And these rules are both undergoing internal review at DOT.

I understand that many of you and many of our stakeholders may feel like we are not moving fast enough on our rulemakings. As a safety practitioner, I appreciate and I fully share those com-

ments. As PHMSA Administrator, it is my responsibility to prioritize and pursue those rulemakings that will provide the greatest safety impact and have the highest likelihood of preventing events that could negatively impact people and the environment.

To that end, I refer the members of this subcommittee to my written testimony regarding details of two completed safety congressional mandates dealing with comprehensive oil spill response plans for railroads and the transport of lithium ion batteries by air. In addition, we issued a final rule to modernize technologies for plastic pipelines that we hope will further accelerate aging distribution gas line replacements, which is one of the greatest concerns we have at PHMSA. In addition to congressional mandates, many of PHMSA's rules must also address recommendations from the National Transportation Safety Board, the Government Accountability Office, and our own safety concerns.

PHMSA is working to meet the needs of our expanding domestic energy production as well. In August of 2018, PHMSA established a new Memorandum of Understanding with the Federal Energy Regulatory Commission that eliminates unnecessary and duplicative regulatory reviews by both agencies.

Going forward, PHMSA will operate as the Federal Government's LNG safety authority. To date, PHMSA has issued approximately letters of determination for new LNG facilities. PHMSA has also established a team of cross-agency experts that are updating the LNG facilities safety standards that date back to 1980.

In addition, PHMSA continues to work to ensure that the agency has a full complement of field inspectors and headquarters staff to meet the demands of our safety mission. Safety is the highest priority for the U.S. Department of Transportation and for all of us at PHMSA. I am pleased to say that, while making progress on mandates, PHMSA's oversight role is to continuing to have a positive impact on safety. Our integrity management requirements have led pipeline operators to conduct over 90,000 repairs in high-consequence areas.

Our field efforts are having an impact, too. Last year, PHMSA conducted over 12,000 days of inspections and investigations of pipeline systems. These field activities are helping to improve safety, as evidenced in the number of reported pipeline incidents which for 2018 was below the 5-year average, even with PHMSA's expanded regulatory oversight of underground natural gas storage facilities.

Additionally, both pipeline-related fatalities and the net volume spilled from hazardous liquid pipelines was also below the 5-year average, down 33 percent and 20 percent, respectively, although we know that even one pipeline casualty is one too many.

These facts, while notable, do not give me reason to pause during our ongoing safety mission at PHMSA. And even though we use statistics to help us measure improvements in safety, it is the vivid reminder in places like Bellingham, Marshall, San Bruno, Aliso Canyon, Merrimack Valley, and most recently, Durham, North Carolina, that serve as our motivation and commitment for working even harder to improve pipeline safety.

Thank you again for inviting me to today's hearing, and I look forward to your questions. Thank you.

[The prepared statement of Mr. Elliott follows:]

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

BEFORE THE U.S. HOUSE OF REPRESENTATIVES
COMMITTEE ON ENERGY AND COMMERCE
SUBCOMMITTEE ON ENERGY
THE STATE OF PIPELINE SAFETY AND SECURITY IN AMERICA

May 1, 2019

I. Introduction

Chairman Rush, Ranking Member Upton, members of the Subcommittee, thank you for inviting me to testify today on the U.S. Department of Transportation's Pipeline and Hazardous Materials Safety Administration's (PHMSA) pipeline safety program. I appreciate this Committee's strong support for strengthening pipeline safety across our country.

Our nation's infrastructure keeps this great nation moving and helps to raise the standard of living for all Americans. The natural gas and hazardous liquid pipelines PHMSA regulates are an essential component of our national infrastructure, safely transporting the energy products that are essential to our daily lives. Like all DOT modes, PHMSA is guided by Secretary Chao's four strategic goals of safety, infrastructure enhancements, innovation, and accountability.

A. PHMSA's Mission

The mission of PHMSA is to protect people and the environment by advancing the safe transportation of energy products and other hazardous materials that are essential to our daily lives. The need for safe and reliable energy infrastructure is growing. Our nation is experiencing an energy renaissance, propelled largely by innovative production technologies and global demand for U.S. energy.

PHMSA's pipeline safety program is responsible for the regulation and oversight of over 2.7 million miles of energy pipeline systems. The vision of the pipeline safety program is straightforward: update or develop new regulations, policies, and guidance; improve our oversight to hold pipeline operators accountable; find innovative solutions to promote safety; and accommodate and encourage research into new and promising technologies. Each of these goals ensure that pipeline infrastructure can continue to provide safe and reliable energy to our communities, homes, and businesses.

After working for decades in the freight rail industry, a great deal of it leading efforts to improve public safety and incident response, I have learned that safety is the result of effective, smart regulations that hold industry accountable, and reduce costs, when possible.

PHMSA's safety goal is zero pipeline accidents and its oversight philosophy is based on three fundamental tenets:

1. Establish minimum safety standards and take enforcement actions against operators not in compliance with these standards.
2. Ensure operators understand and manage the risks associated with their pipelines, including taking actions to prevent pipeline accidents and minimizing the impact of any accidents that occur.
3. Continually encourage and expect pipeline operators to improve their performance beyond minimum compliance with the regulations and continuously build a strong safety culture.

II. Progress on Mandates

Finalizing outstanding Congressional mandates remains a top priority. PHMSA recognizes the concerns of this Subcommittee and is continuing to make progress on critical safety mandates. Since June 2018, PHMSA completed and submitted reports to Congress on the Nationwide Integrated Pipeline Safety Regulatory Database, as well as a report on the Study on Propane Gas Pipeline Facilities. Both reports were mandated in the Pipeline Safety, Regulatory Certainty, and Job Creation Act of 2011.

Over the past year, PHMSA prioritized the rules it thought it could move quickly such as those for lithium batteries, plastic pipelines, and oil spill response plans for trains carrying crude oil. These regulations are intended to advance public safety, while encouraging innovation and greater stakeholder awareness and collaboration. These key rulemakings are detailed below.

Of the mandates from the Pipeline Safety, Regulatory Certainty, and Job Creation Act of 2011, PHMSA has seven of 42 mandates remaining. Additionally, of the mandates from the Protecting Our Infrastructure of Pipelines and Enhancing Safety Act of 2016, PHMSA has four of 19 mandates remaining.

Together, of the 11 remaining mandates from the 2011 and 2016 Acts, three are tied to reports and other actions, and eight are tied to rulemaking efforts that PHMSA is continuing to make progress on under its established rulemaking process.

As Administrator, I am committed to doing everything I can to complete all the remaining rulemakings that address Congressional directives related to pipeline safety. I believe completing these mandates will result in significant positive impacts to pipeline safety.

Completing rulemakings takes time simply because it is an iterative process that is designed to encourage maximum participation by all stakeholders, thus ensuring comprehensive rules that protect the public and stand up to cost/benefit scrutiny. PHMSA holds public meetings and workshops prior to rulemakings, using the information gathered to craft the most effective rules possible. Such collaboration, well in advance of the rulemaking process, allows PHMSA to identify concerns and potential solutions to allocate its scarce resources where they are needed most.

In addition to mandates, many of PHMSA's rulemakings underway address important recommendations from the National Transportation Safety Board (NTSB), resulting from safety issues identified during accident investigations. PHMSA's rules also address recommendations from the U.S. Government Accountability Office (GAO) and the DOT Inspector General (IG), and the agency's own safety findings. PHMSA must make sure that its regulations account for known safety issues, technological feasibility, and cost effectiveness.

In short, a lot of work goes on behind the scenes to get a rule ready for publication, and PHMSA is making positive movement towards completing the safety critical mandates and addressing recommendations from Congress, the NTSB, GAO, and IG, as well as our own safety findings.

A. Hazardous Liquid Rule

PHMSA understands the importance of moving forward its long-awaited Safety of Hazardous Liquid Pipelines rulemaking, which was included in 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. In addition, this rule is intended to ensure 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 PHMSA's highest priorities and is on track to be completed and published in 2019.[1]

B. Gas Transmission Rule

PHMSA is also making significant progress toward finalizing its gas transmission and gathering pipeline rulemaking efforts. This is intended to help close two very important open mandates related to the expansion of integrity management principles and requirements for operators to confirm the maximum allowable operating pressure of certain gas pipelines. These changes are expected to allow operators to assess more pipelines and better understand their systems' conditions.

When finalizing the "Safety of Gas Transmission and Gathering Pipelines" notice of proposed rulemaking (NPRM), the proposed rule was under review for nearly 2 years. Delays were largely due to the proposed rule being too big and unwieldy to move through the administrative process.

[1] Per the DOT March 2019 Significant Rulemaking Report, the projected publication date for the final rule is 6/28/19.

Accordingly, PHMSA made the strategic decision to split the initial proposed rule into smaller, more manageable rulemaking actions. The split will help PHMSA manage each individual rule more efficiently; and, most importantly, prioritize Congressional directives on gas pipelines. Additionally, while working to complete the Congressional mandates this rulemaking will address, PHMSA is also using its resources to incorporate and advance several recommendations from the NTSB and GAO as part of the rule.

PHMSA's goal is to publish the final rule addressing Congressional directives this year,[2] and will continue working to ensure that the other rules follow closely behind.

C. Valve and Rupture Detection Rule

PHMSA is developing an NPRM to address leak and rupture detection.[3] The Shutoff Valve and Rupture Detection rule will meet the goals of two Congressional directives. It proposes revisions to the pipeline safety regulations for newly constructed or entirely replaced natural gas transmission and hazardous liquid pipelines. In doing so, the rule is intended to improve rupture mitigation and shorten the time it takes to shut down a pipeline segment. The rule will also address recommendations from the NTSB and is expected to help reduce the serious consequences of large-volume releases of natural gas and hazardous liquids.

PHMSA is proposing standards for operators to utilize rupture detection metrics for valve placement to improve incident response in populated or environmentally sensitive areas. Rupture response metrics would focus on mitigating large release events that have a greater potential consequence. This rulemaking is currently under comprehensive review at the Department and we are working to move it forward as expeditiously as possible.

D. Plastic Gas Pipe Rule

This rule, published in November 2018, updated pipeline safety regulations to allow for the modernization of plastic pipe material, design, and construction standards. This final rule also responds to plastic pipe installation and operational safety concerns identified by federal and state field inspectors. With this rule, new or replaced local gas distribution systems will be built and maintained with the most advanced pipeline technology, which is expected to greatly improve public safety for local communities.

E. Hazardous Materials Transportation Directives from Congress

PHMSA also regulates the safety of hazardous materials by all modes of transportation, including by highway, railroad, vessel, and airways. Although PHMSA's two program offices are authorized separately, we are one PHMSA. We share resources, knowledge, and most importantly, we share the same safety goals.

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[2] Per the DOT March 2019 Significant Rulemaking Report, the projected publication date for the final rule is 8/20/19.

[3] Per the DOT March 2019 Significant Rulemaking Report, the projected publication date for the NPRM is 8/7/19.

On February 28, 2019, PHMSA, in coordination with the Federal Railroad Administration, issued a final rule that amends the Hazardous Materials Regulations requirements for comprehensive oil spill response plans and information sharing. This rule was requested by Congress in the fiscal year 2016 Consolidated Appropriations Act. The rulemaking sets safety standards for rail operator response to incidents involving crude oil transported by rail.

Additionally, on March 6, 2019, PHMSA, in collaboration with the Federal Aviation Administration (FAA), published an interim final rule (IFR) for the safe transport of lithium batteries by aircraft. The IFR is first of PHMSA's completed actions in addressing directives included in the FAA Reauthorization Act of 2018. This IFR prohibits the transport of lithium ion cells or batteries as cargo on passenger aircraft. In addition, the IFR requires lithium ion cells and batteries to be shipped at not more than a 30 percent state of charge aboard cargo-only aircraft. The IFR is intended to strengthen safety for the traveling public by addressing the unique challenges lithium batteries pose in transportation.

F. Regulatory Reform

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

PHMSA's rulemaking efforts are driven by the belief, consistent with Executive Orders 13771, 13777, and 13783 and other legal authorities, that there should be no more regulations than necessary, and those regulations should be straightforward, clear, and designed to minimize burdens, consistent with safety. We also believe that public input is a critical part of the rulemaking process and have proactively sought public comments on our regulatory review and rulemaking efforts. PHMSA is using public input to decide on the best approach, consistent with our regulatory philosophy, to meeting the Department's statutory obligations.

PHMSA's review will help to ensure that its regulations are right-sized – which can allow operators to 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. The pipeline industry should continue to invest in and accelerate their pipeline safety efforts and make substantive safety improvements best suited to their systems and without specific direction from regulations.

III. Other Actions

In addition to completing the important mandates given to it by the Congress, PHMSA continues to aggressively pursue its core safety mission through grants to states and communities, research and development initiatives, and additional safety programs.

A. Support for States

PHMSA's state pipeline safety partners oversee more than 80 percent of the nation's pipeline infrastructure – much of it gas distribution pipelines – through annual certification with PHMSA.

An important part of these partnerships is that PHMSA stands ready to support states in times of crisis. In the wake of hurricanes Harvey, Florence, Irma, Maria, and Michael, PHMSA worked with impacted states and pipeline operators to remove obstacles that could delay safe and rapid recovery efforts. PHMSA coordinated and provided periodic updates to Federal partners during the response and recovery phases of each natural disaster to assist with the movement of hazardous materials and energy products. For pipelines, PHMSA issued emergency stays of enforcement for affected operators, temporarily halting its enforcement of compliance with operator qualification and pre-employment and random drug testing requirements to allow affected interstate gas and hazardous liquid pipeline operators to use personnel for urgent response and recovery activities. PHMSA also notified impacted state pipeline safety partners that PHMSA would not object to them issuing similar temporary waivers for affected intrastate pipeline operators, in the interest of prompt and efficient pipeline safety activities related to response and recovery efforts. Expediting pipeline repairs and restoration of service to those areas was our top priority.

In addition, PHMSA provides help to facilitate investigation and recovery following major incidents. In the wake of the tragic September 13, 2018 natural gas accident involving Columbia Gas of Massachusetts, PHMSA quickly dispatched a team of inspectors to Massachusetts to provide technical assistance to the Massachusetts Department of Public Utilities (MA DPU) and the NTSB.

PHMSA's pipeline inspectors played an instrumental role in the investigation, helping to determine the cause of the incident, and explaining the mechanics of how such an accident could occur. The Governor of Massachusetts, the mayors of the three affected towns, the NTSB, the incident commander, our state partners in the MA DPU, and members of the Massachusetts Emergency Management Agency all expressed their appreciation of the help provided by PHMSA's pipeline safety team and cited their professionalism, experience, and knowledge as being crucial to the success of the overall response to the incident.

PHMSA also supports state programs by providing essential technical training. Our state-of-the-art Training and Qualifications (T&Q) program has full accreditation from the International Association for Continuing Education and Training (IACET). The T&Q Center trains an average of 900 state and federal inspectors annually, ensuring that all are current on updated regulations, technology, and best practices.

PHMSA's T&Q Center is committed to developing innovative ways to be more accessible and effective, including the exploration of long-distance proctored classes, curriculum improvements, and more efficient delivery to ensure relevancy. The T&Q Center is also working to develop an effective and efficient distance delivery system that does not sacrifice the high quality of PHMSA's training curricula. PHMSA's goal is to make it easier for state and federal inspectors to access the courses they need quickly and at a lower cost.

B. Grants

The financial support PHMSA provides to its state partners through grants is another vital part of its partnerships. In total, PHMSA provided over $63 million in grant funding in fiscal year 2018 for pipeline inspection, enforcement, and safety awareness activities.

PHMSA's State Base Grant program[4] reimburses a portion of each partner state's program expenses. The grants partially cover the cost of any personnel, equipment, and activities reasonably required for the conduct of the pipeline safety program. Most importantly, PHMSA's grants provide state programs a consistent source of funding to hire and maintain adequate pipeline safety inspectors. For fiscal year 2018, PHMSA awarded $56 million to participating state programs.[5] As the number of miles of pipeline infrastructure continues to grow and as the older pipes age, this grant program is critical to the oversight of the nation's distribution 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 are also used to promote public participation in official proceedings. Since the program's inception in 2009, PHMSA has awarded over $10 million for 200 individual technical assistance projects. PHMSA issued a Notice of Funding Opportunity for its fiscal year 2019 TAG grants in March and expects to award $1.5 million in grant funds to several recipients (up to $100,000 each) by September 2019.

PHMSA's 811 One Call Grant Program provides funding to state agencies for 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, PHMSA awarded $1.1 million across 31 state agencies to assist in these efforts.

Finally, I am pleased to say that in 2018 PHMSA awarded its first ever round of Underground Natural Gas Storage Grants – first authorized in 2016 – in support of states' inspection and enforcement of underground natural gas storage facilities.

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[4] The State Base Grant is a formula grant that authorizes awards to state pipeline safety programs under the authority of 49 U.S.C. § 60107 - State Pipeline Safety Grants.

[5] All states except Alaska and Hawaii participate in PHMSA's pipeline safety program.

The grants are 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.

C. Damage Prevention

Excavation damage continues to be a leading cause of pipeline incidents. This year, PHMSA began issuing enforcement actions against excavators who damage pipelines in states that do not adequately enforce their own excavation damage prevention laws. PHMSA continues to support states with efforts to improve their own enforcement programs. PHMSA has seen marked improvements since 2016 in 14 states that have changed from inadequate to adequate programs per the PIPES Act of 2006 and our regulatory criteria. PHMSA continues to work with the 13 remaining states with inadequate programs to bring all programs up to an adequate level.

I would also like to thank all PHMSA stakeholders – especially the public – for the continued success of the national Call-Before-You-Dig number, 811. Over the past 10 years, since 811 was established, pipeline incidents caused by excavation damage have fallen 40 percent. This decline would not have been possible without strong collaboration from all stakeholders.

D. Advancing Domestic Energy

In August 2018, PHMSA established a new Memorandum of Understanding (MOU) with the Federal Energy Regulatory Commission (FERC) that eliminates unnecessary and duplicative regulatory reviews by both agencies when permitting new Liquefied Natural Gas (LNG) export facilities. Going forward, PHMSA will operate as the Federal Government's LNG safety expert for Federal regulations covering the safety of LNG facilities and will be solely responsible for conducting the necessary safety analysis for new LNG facilities that may be permitted by FERC.

PHMSA assesses each LNG facility application for FERC on a case-by-case basis to determine whether the application meets the minimum Federal Pipeline Safety Standards for the location of a new LNG facility. So far, PHMSA has issued ten Letters of Determination to FERC under the MOU.[6] This agreement may help reduce the time it takes to obtain a new LNG export permit by as much as one year.

E. Integrity Management

PHMSA continues to require integrity management programs that ensure operators are adequately identifying and addressing the greatest risks. Under integrity management, operators are required to conduct integrity assessments of gas transmission and hazardous liquid pipeline systems in high consequence areas and apply lessons learned across their entire system. Thanks to integrity management, gas transmission and hazardous liquid pipeline operators have identified and conducted over 90,700 repairs in high consequence areas between 2004 and 2017.

[6] As of April 24, 2019.

F. Research and Development

PHMSA's Research and Development (R&D) program supports new technology to further improve pipeline safety. The R&D program sponsors research on projects that can provide near-term solutions to improve safety, reduce environmental impacts, and enhance the reliability of the Nation's pipeline transportation system.

Since 2002, PHMSA has invested nearly $125 million dollars in 304 R&D projects and, in the past six months, two new technologies for methane leak detection and one to prevent excavation damage threats have been commercialized. Since the program's inception, 31 patent applications and 31 new pipeline technologies have hit the market, including above-ground, radar-based pipeline mapping and a robotic nondestructive testing method for pipelines that cannot accommodate traditional in-line inspection tools.

PHMSA's pipeline safety program also takes a far-reaching view with its Competitive Academic Agreement Program (CAAP), 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, helps validate proof of concept for theories and theses that can be developed and further investigated. The program also serves to expose the next generation of engineers to pipeline challenges and solutions. In September 2018, PHMSA awarded more than $3.8 million to 11 universities via the CAAP.

IV. Conclusion

Safety remains the highest priority for the U.S. Department of Transportation and for PHMSA. The agency is continuing to work hard to publish the rules and reports that will close Congressional mandates, and is also committed to addressing safety matters on all fronts.

As pipeline mileage across our country continues to grow, the need for strong pipeline safety standards and programs is ever more important.

Thank you again for inviting me to today's hearing. I look forward to your questions.

Mr. RUSH. I want to thank you, Administrator Elliott.

And now, the committee will recognize Mr. Russell for 5 minutes for purposes of an opening statement.

STATEMENT OF WILLIAM RUSSELL

Mr. RUSSELL. Good morning, Chairman Rush, Ranking Member Upton, Ranking Member Walden, and members of the subcommittee. Thank you for the opportunity to testify today about the state of pipeline safety and security in America and TSA's pipeline security program. My statement is based primarily on our recent December 2018 report.

As you know, more than 2.7 million miles of pipelines transport oil, natural gas, and other hazardous liquids that we all depend on to heat homes, generate electricity, and manufacture products. Pipelines serve as the veins of our economy and run through both remote and highly populated urban areas. As a result, our pipeline network is a prime target for terrorists, foreign nations, and others with malicious intent to do physical and cyberattacks. A successful pipeline attack could have dire consequences on public health and safety as well as the U.S. economy.

The Transportation Security Administration, TSA, is the lead agency to ensure the security of our pipeline network. And in our recent report, we found that TSA provided pipeline operators with voluntary guidelines to enhance the security of their facilities. Pipeline operators and industry associations also reported they effectively coordinate and exchange security information with TSA.

That said, we identified a number of weaknesses in TSA's management of its pipeline security program, and I would like to highlight four key areas for improvement.

First, pipeline security guidance itself. It is important for TSA to ensure that its security guidelines, which were updated in 2018, March of 2018, that they clearly define how to determine the criticality of a pipeline facility. As a result, pipeline operators may not be fully reporting all of their critical facilities, so that TSA can apply appropriate oversight and ensure that any vulnerabilities have been addressed.

Second, workforce planning. TSA also needs to better evaluate the number of staff and resources that it devotes to pipeline security. For example, in our review we found the staffing was as low as one person in 2014 and has since increased to a total of six FTEs.

Establishing a strategic workforce plan could help TSA ensure that it has identified the necessary skills, competencies, and staffing allocations that the Pipeline Security Branch needs to carry out its full responsibilities, including conducting necessary reviews of pipeline companies and facilities.

Third, assessing risk. TSA uses throughput and risk to identify the top 100 most critical pipeline operators for review, but has not updated the assessment methodologies since 2014 to account for changes in the threat environment. For example, threats to cybersecurity were not specifically accounted for, making it unclear if cybersecurity threats were considered.

Last, effective monitoring. While we found that TSA does conduct pipeline operator and facilities security oversight reviews and

makes recommendations to address issues found, it has not tracked and documented the implementation of those recommendations for over 5 years. Until TSA monitors and records the status of pipeline operator progress to implement needed changes, it will be hindered in its efforts to determine whether its reviews are, in fact, leading to a significant reduction in risk.

We made a total of 10 recommendations to address these issues. I am happy to report that TSA agreed with all of them and has actions underway to address them, largely in this fiscal year.

In conclusion, robust security of our pipeline system is vital to our economic interests and to mitigate the risks of a malicious attack. TSA has an important role in this process, and by implementing the changes, can more effectively carry out this mission.

Chairman Rush, Ranking Member Upton, and Ranking Member Walden, this concludes my prepared remarks, and I look forward to any questions you may have.

[The prepared statement of Mr. Russell follows:]

United States Government Accountability Office

GAO

Testimony

Before the Subcommittee on Energy, Committee on Energy and Commerce, House of Representatives

For Release on Delivery
Expected at 10:00a.m EST
Wednesday, May 1, 2019

CRITICAL INFRASTRUCTURE PROTECTION

Actions Needed to Address Weaknesses in TSA's Pipeline Security Program Management

Statement of William Russell, Acting Director, Homeland Security and Justice

GAO Highlights

Highlights of GAO-19-321T, a statement before the Subcommittee on Energy, Committee on Energy and Commerce, House of Representatives

Why GAO Did This Study

More than 2.7 million miles of pipeline transport and distribute natural gas, oil, and other hazardous products throughout the United States. Pipelines are through remote areas and highly populated urban areas, and are vulnerable to accidents, operating errors, and malicious physical and cyber-based attack or intrusion. Pipeline system disruptions could result in commodity price increases or widespread energy shortages. Several federal and private entities have roles in pipeline security. TSA is primarily responsible for the federal oversight of pipeline physical security and cybersecurity.

This statement summarizes previous GAO findings related to TSA's management of its pipeline security program. It is based on a prior GAO product issued in December 2018, along with updates as of April 2019 on actions TSA has taken to address GAO's recommendations from the report. To conduct the prior work, GAO analyzed TSA documents, such as its Pipeline Security Guidelines, and visited TSA pipeline risk assessment efforts, and interviewed TSA officials, 19 of 27 pipeline operators—a non-generalizable sample selected based on volume, geography, and material transported—and representatives from the pipeline industry associations. GAO also reviewed information on TSA's actions in response to prior recommendations.

What GAO Recommends

GAO made 10 recommendations in its December 2018 report to strengthen TSA's management of its pipeline security program. DHS agrees and has described planned actions or timeframes for addressing these recommendations.

View GAO-19-321T. For more information, contact William Russell at (202) 512-8777 or russellw@gao.gov.

May 1, 2019

CRITICAL INFRASTRUCTURE PROTECTION

Actions Needed to Address Weaknesses in TSA's Pipeline Security Program Management

What GAO Found

The Department of Homeland Security's (DHS) Transportation Security Administration (TSA) has developed and provided pipeline operators with voluntary security guidelines, and also evaluates the vulnerability of pipeline systems through security assessments. However, GAO's prior work, reported in December 2018, identified some weaknesses and made recommendations to strengthen TSA's management of key aspects of its pipeline security program.

Pipeline security guidelines. GAO reported that TSA revised its voluntary pipeline security guidelines in March 2018 to reflect changes in the threat environment and incorporate most of the principles and practices from the National Institute of Standards and Technology's (NIST) Framework for Improving Critical Infrastructure Cybersecurity. However, TSA's revisions do not include all elements of the current NIST framework and TSA does not have a documented process for reviewing and revising its guidelines on a regular basis. GAO recommended that TSA implement a documented process for reviewing and revising TSA's *Pipeline Security Guidelines* at defined intervals. TSA has since outlined procedures for reviewing its guidelines, which GAO is reviewing to determine if they sufficiently address the recommendation.

Workforce planning. GAO reported that the number of TSA security reviews of pipeline systems has varied considerably over time. TSA officials stated that staffing limitations within its Pipeline Security Branch have prevented TSA from conducting more reviews. Staffing levels for the branch have varied significantly, ranging from 1 full-time equivalent in 2014 to 6 from fiscal years 2015 through 2018. Further, TSA does not have a strategic workforce plan to help ensure it identifies the skills and competencies—such as the required level of cybersecurity expertise—necessary to carry out its pipeline security responsibilities. GAO recommended that TSA develop a strategic workforce plan, which TSA plans to complete by July 2019.

Pipeline risk assessments. GAO identified factors that likely limit the usefulness of TSA's risk assessment methodology for prioritizing pipeline security reviews. For example, TSA has not updated its risk assessment methodology since 2014 to reflect current threats to the pipeline industry. Further, its sources of data and underlying assumptions and judgments regarding certain threat and vulnerability inputs are not fully documented. GAO recommended that TSA update its risk ranking tool to include up-to-date data to ensure it reflects industry conditions and fully document the data sources, assumptions and judgments that form the basis of the tool. As of April 2019, TSA reported taking steps to address these recommendations. GAO is reviewing documentation of these steps to determine if they sufficiently address the recommendations.

Monitoring performance. GAO reported that conducting security reviews was the primary means for TSA to assess the effectiveness of its efforts to reduce pipeline security risks. However, TSA has not tracked the status of key security review recommendations for the past 5 years. GAO recommended that TSA take steps to update information on security review recommendations and monitor and record their status, which TSA plans to address by November 2019.

Chairman Rush, Ranking Member Upton, and Members of the Subcommittee:

Thank you for the opportunity to discuss our work on the Transportation Security Administration's (TSA) efforts to manage its pipeline security program. The security of the nation's pipeline systems is vital to public confidence and the nation's safety, prosperity, and well-being. More than 2.7 million miles of pipelines transport and distribute the natural gas, oil, and other hazardous liquids that U.S. citizens and businesses depend on to operate vehicles and machinery, heat homes, generate electricity, and manufacture products. A minor pipeline system disruption could result in commodity price increases, while prolonged pipeline disruptions could lead to widespread energy shortages.[1] A disruption of any magnitude may affect other domestic critical infrastructure and industries that are dependent on pipeline system commodities.

The interstate pipeline system runs through both remote and highly populated urban areas, and it is vulnerable to accidents, operating errors, and malicious attacks. In addition, pipelines increasingly rely on sophisticated networked computerized systems and electronic data, which are vulnerable to cyber-attack or intrusion. Given that many pipelines transport volatile, flammable, or toxic oil and liquids, and given the potential consequences of a successful physical or cyber-attack, pipeline systems are attractive targets for terrorists, hackers, foreign nations, criminal groups, and others with malicious intent.

New threats to the nation's pipeline systems have evolved to include sabotage by environmental activists and cyber-attack or intrusion by nations. For example, in October 2016 environmental activists forced the shutdown of five crude oil pipelines in four states.[2] In March 2018, the Federal Bureau of Investigation and the National Cybersecurity and Communications Integration Center (NCCIC) reported that a nation-state had targeted organizations within multiple U.S. critical infrastructure

[1]Transportation Security Administration, Biennial National Strategy for Transportation Security: Report to Congress (Washington, D.C.: Apr. 4, 2018).

[2]Congressional Research Service, Pipeline Security: Recent Attacks, IN106103 (Washington, D.C.: Apr. 11, 2017).

sectors, including the energy sector, and collected information pertaining to Industrial Control Systems.[3]

TSA, within the Department of Homeland Security (DHS), has primary oversight responsibility for the physical security and cybersecurity of transmission and distribution pipeline systems.[4] TSA's Security Policy and Industry Engagement's Pipeline Security Branch is charged with managing its pipeline security program. The Pipeline Security Branch first issued its voluntary *Pipeline Security Guidelines* in 2011 and released revised guidelines in March 2018. The Pipeline Security Branch is responsible for conducting voluntary security reviews—Corporate Security Reviews (CSR) and Critical Facility Security Reviews (CFSR)—which assess the extent to which the 100 most critical pipeline systems are following the intent of TSA's *Pipeline Security Guidelines*. CSRs are voluntary on-site reviews of a pipeline owner's corporate policies and procedures. CFSRs are voluntary on-site inspections of critical pipeline facilities, as well as other select pipeline facilities, throughout the nation.

My testimony today summarizes findings from our December 2018 report examining TSA's management of its pipeline security program.[5] In addition, this statement contains updates from TSA as of April 2019 about actions it has taken to address the recommendations made in our December 2018 report. For this report, we reviewed and analyzed relevant documents from TSA and other federal entities, evaluated TSA pipeline risk assessment efforts, and interviewed TSA officials, including officials within TSA's Pipeline Security Branch. We also interviewed representatives from five major industry associations and security personnel from 10 pipeline operators to collect a range of perspectives on

[3]Federal Bureau of Investigation and National Cybersecurity and Communications Integration Center, Russian Government Cyber Activity Targeting Energy and Other Critical Infrastructure Sectors, TA18-074A (Washington, D.C.: Mar., 16, 2018 (revised)). Industrial control systems include software-based systems used to monitor and control many aspects of network operation for pipeline networks

[4]Pursuant to the Aviation and Transportation Security Act, TSA is the federal entity with responsibility for security in all modes of transportation, which includes the nation's interstate pipeline systems. See Pub. L. No. 107-71, 115 Stat. 597 (2001); 49 U.S.C. § 114(d).

[5]GAO, *Critical Infrastructure Protection: Actions Needed to Address Significant Weaknesses in TSA's Pipeline Security Program Management*, GAO-19-48 (Washington, D.C.: Dec. 18, 2018).

topics relevant to pipeline security.[6] While the information gathered during the operator interviews cannot be generalized to all pipeline operators, it provides a range of perspectives on a variety of topics relevant to pipeline security. Additional details on the scope and methodology are available in our published report.

The work upon which this statement is based was conducted in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

Actions Needed to Address Weaknesses in TSA's Pipeline Security Program Management

In our December 2018 report, we found that TSA provides pipeline operators with voluntary security guidelines that operators can implement to enhance the security of their pipeline facilities. TSA also evaluates the vulnerability of pipeline systems through security assessments. Pipeline operators and industry association representatives who we interviewed also reported exchanging risk-related security information and coordinating with federal and nonfederal entities, including TSA. However, we also identified weaknesses in several areas of TSA's pipeline security program management, including: (1) updating and clarifying pipeline security guidelines; (2) planning for workforce needs; (3) assessing pipeline risks; and (4) monitoring program performance.

Exchanging Security Information and Coordinating with Federal and Nonfederal Entities

We found in our December 2018 report that all of the pipeline operators and industry association representatives that we interviewed reported receiving security information from federal and nonfederal entities. For example, DHS components including TSA's Intelligence and Analysis and NCCIC share security-related information on physical and cyber threats and incidents. Nonfederal entities included Information Sharing and

[6]We selected the 10 pipeline operators from TSA's list of the top 100 critical pipeline systems and chose them to ensure a mixture of the following characteristics: (a) type of pipeline commodity transported (i.e. natural gas and hazardous oil and liquids); (b) volume of product transported, and (c) whether or not the pipeline operators' critical facilities had been the subject of a TSA security review. We also considered the location of selected operators' pipeline systems to ensure that a single state or region was not overrepresented in our sample.

Analysis Centers, fusion centers, industry associations, and subsector coordinating councils.[7]

Pipeline operators also reported that they share security-related information with TSA and the NCCIC. For example, TSA's *Pipeline Security Guidelines* requests that pipeline operators report physical security incidents to the Transportation Security Operations Center (TSOC) and any actual or suspected cyberattacks to the NCCIC. According to TSA officials, TSOC staff analyzes incident information for national trends and common threats, and then shares their observations with pipeline operators during monthly and quarterly conference calls.

Updating Pipeline Security Guidelines

In our December 2018 report, we found that the pipeline operators we interviewed reported using a range of guidelines and standards to address their physical and cybersecurity risks. For example, all 10 of the pipeline operators we interviewed stated they had implemented the voluntary 2011 TSA *Pipeline Security Guidelines* that the operators determined to be applicable to their operations.[8] Five of the 10 pipeline operators characterized the guidelines as generally or somewhat effective in helping to secure their operations, 1 was neutral on their effectiveness, and 4 did not provide an assessment of the guidelines' effectiveness. Pipeline operators and industry association representatives reported that their members also use the Interstate Natural Gas Association of America's Control Systems Cyber Security Guidelines for the Natural Gas Pipeline Industry,[9] the American Petroleum Institute's Pipeline SCADA Security standard,[10] and the National Institute of Standards and Technology's (NIST) Cybersecurity Framework as sources of

[7]Sector coordinating councils are self-organized, self-run, and self-governed private sector councils that interact on a wide range of sector-specific strategies, policies, and activities The membership can vary from sector to sector, but is meant to be representative of a broad base of owners, operators, associations, and other entities—both large and small—within the sector. For example, the Pipeline Modal Sector Coordinating Council has been established to represent pipeline operators.

[8]Transportation Security Administration, *Pipeline Security Guidelines* (April 2011).

[9]Interstate Natural Gas Association of America, *Control Systems Cyber Security Guidelines for the Natural Gas Pipeline Industry Version 1.3* (Washington, D.C.. September 17, 2015).

[10]American Petroleum Institute, *Pipeline SCADA Security*, API Standard 1164 (June 2009).

cybersecurity standards, guidelines, and practices that may be scaled and applied to address a pipeline operator's cybersecurity risks.[11]

We found that TSA's Pipeline Security Branch had issued revised *Pipeline Security Guidelines* in March 2018, but TSA had not established a documented process to ensure that revisions occur and fully capture updates to supporting standards and guidance. The guidelines were revised to, among other things, reflect the dynamic threat environment and to incorporate cybersecurity principles and practices from the NIST Cybersecurity Framework, which was initially issued in February 2014. However, because NIST released version 1.1 of the Cybersecurity Framework in April 2018, the guidelines that TSA released in March 2018 did not incorporate cybersecurity elements that NIST added to the latest Cybersecurity Framework, such as the Supply Chain Risk Management category.[12] Without a documented process defining how frequently TSA is to review and, if deemed necessary, revise its guidelines, TSA cannot ensure that the guidelines reflect the latest known standards and best practices of physical security and cybersecurity.

We recommended that TSA implement a documented process for reviewing, and if deemed necessary, revising TSA's *Pipeline Security Guidelines* at regular defined intervals. DHS agreed and estimated that this effort would be completed by April 30, 2019. In April 2019, TSA provided us with documentation outlining procedures for reviewing these guidelines. We are currently assessing this information to determine if it sufficiently addresses this recommendation.

We also found that TSA's *Pipeline Security Guidelines* lacked clarity in the definition of key terms used to determine critical facilities. TSA initially identifies the 100 highest risk pipeline systems based on the amount of material transported through the system. Subsequently, pipeline operators are to use criteria in the *Guidelines* to self-identify the critical

[11]NIST, *Framework for Improving Critical Infrastructure Cybersecurity, Version 1.0* (Feb. 12, 2014).

[12]NIST Special Publication 800-161, Supply Chain Risk Management Practices for Federal Information Systems and Organizations (April 2015). Supply chains begin with the sourcing of products and services and extend from the design, development, manufacturing, processing, handling, and delivery of products and services to the end user. Cyber supply chain risk management entails identifying, assessing, and mitigating "products and services that may contain potentially malicious functionality, are counterfeit, or are vulnerable due to poor manufacturing and development practices within the cyber supply chain."

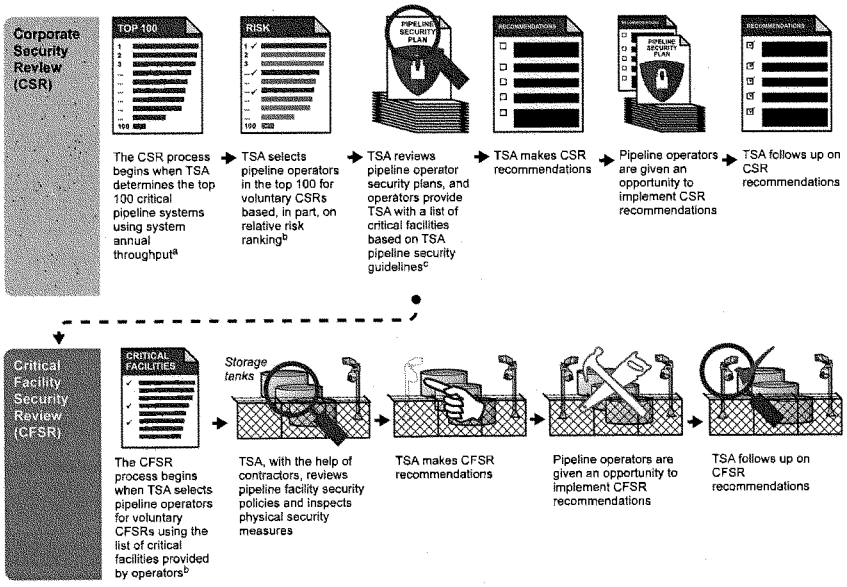
facilities within those higher risk systems and report them to TSA. TSA's Pipeline Security Branch then conducts CFSRs at the critical facilities identified by pipeline operators. However, our analysis of TSA's data found that at least 34 of the top 100 critical pipeline systems TSA deemed highest risk indicated that they had no critical facilities. Three of the 10 operators we interviewed stated that some companies that reported to TSA that they had no critical facilities may possibly be taking advantage of the guidelines' lack of clarity. For example, one of TSA's criteria for determining pipeline facility criticality states that if a facility or combination of facilities were damaged or destroyed, it would have the potential to "cause mass casualties or significant health effects." Two operators told us that individual operators may interpret TSA's criterion, "cause mass casualties or significant health effect," differently. For example, one of the operators that we interviewed stated that this criterion could be interpreted either as a specific number of people affected or a sufficient volume to overwhelm a local health department, which could vary depending on the locality.

Without clearly defined criteria for determining pipeline facilities' criticality, TSA cannot ensure that pipeline operators are applying guidance uniformly, that all of the critical facilities across the pipeline sector have been identified, or that their vulnerabilities have been identified and addressed. We recommended that TSA's Security Policy and Industry Engagement's Surface Division clarify TSA's *Pipeline Security Guidelines* by defining key terms within its criteria for determining critical facilities. DHS agreed and estimated that this effort would be completed by June 30, 2019.

Planning for Workforce Needs

TSA conducts pipeline security reviews—CSRs and CFSRs—to assess pipeline vulnerabilities and industry implementation of TSA's *Pipeline Security Guidelines*. However, the number of reviews conducted has varied widely from fiscal years 2014 through 2018. These reviews are intended to develop TSA's knowledge of security planning and execution at critical pipeline systems and lead to recommendations for pipeline operators to help them enhance pipeline security. For an overview of the CSR and CFSR processes, see Figure 1 below.

Figure 1: Overview of the Transportation Security Administration's (TSA) Voluntary Security Review Processes with Pipeline Operators



Source: GAO analysis of TSA information. | GAO-19-542T

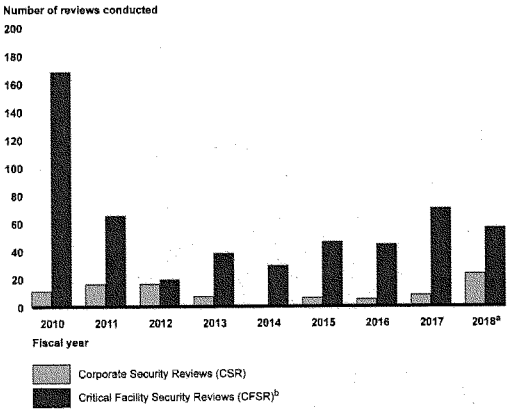
[a]TSA uses system annual throughput in determining the top 100 critical pipeline systems, which is based on the amount of hazardous liquid or natural gas product transported through a pipeline in 1 year (i.e., annual throughput measured in therms). Also, some pipeline operators own or operate more than one of the 100 most critical systems.

[b]Because of the voluntary nature of TSA's pipeline security program, TSA requests selected operators to participate in its pipeline security reviews—the CSR and CFSR. An operator may choose not to participate in these reviews. However, according to TSA officials, no operator has declined to participate in a CSR or CFSR as of June 2018.

[c]Under TSA's *Pipeline Security Guidelines*, pipeline operators are to self-identify the critical facilities within their pipeline system and report their critical facilities to TSA However, operators may identify no critical facilities in their systems .

We found that the number of CSRs and CFSRs completed by TSA has varied during the last five fiscal years, ranging from zero CSRs conducted in fiscal year 2014 to 23 CSRs conducted in fiscal year 2018, as of July 31, 2018 (see Figure 2 below).[13] TSA officials reported that staffing limitations had prevented TSA from conducting more reviews.

Figure 2: Transportation Security Administration (TSA) Pipeline Security Reviews Conducted, Fiscal Year 2010 through Fiscal Year 2018 Year-to-Date



Source: GAO analysis of Transportation Security Administration-reported figures. | GAO-19-542T

[a]Fiscal year 2018 data are through July 31, 2018.

[b]Fiscal years 2010 and 2011 represent Critical Facility Inspections, which were the predecessor to CFSRs.

TSA Pipeline Security Branch staffing levels (excluding contractor support) also varied significantly over the past 9 years ranging from 14 full-time equivalents in fiscal years 2012 and 2013 to one in fiscal year 2014 (see Table 1 below). TSA officials stated that, while contractor

[13]According to TSA officials, the decline in CSRs from 2013 to 2015 was caused by travel restrictions during sequestration, as well a reorganization which moved the assessment function.

support has assisted with conducting CFSRs, there were no contractor personnel providing CSR support from fiscal years 2010 through 2017, but that contractors increased to two personnel in fiscal year 2018. TSA officials stated that they expected to complete 20 CSRs and 60 CFSRs per fiscal year with Pipeline Security Branch employees and contract support, and had completed 23 CSRs through July 2018 for fiscal year 2018.

Table 1: TSA Pipeline Security Branch Staffing Levels, Fiscal Years 2010 through 2018

Fiscal Year	TSA Pipeline Security Branch Staffing[a]
2010	13
2011	13
2012	14
2013	14
2014	1
2015	6
2016	6
2017	6
2018	6

Source: Transportation Security Administration (TSA) documents.

[a]TSA pipeline staffing numbers are in full-time equivalents.

In addition, pipeline operators that we interviewed emphasized the importance of cybersecurity skills among TSA staff. Specifically, 6 of the 10 pipeline operators and 3 of the 5 industry representatives we interviewed reported that the level of cybersecurity expertise among TSA staff and contractors may challenge the Pipeline Security Branch's ability to fully assess the cybersecurity portions of its security reviews.

We found that TSA had not established a workforce plan for its Security Policy and Industry Engagement or its Pipeline Security Branch that identified staffing needs and skill sets such as the required level of cybersecurity expertise among TSA staff and contractors. We therefore recommended that TSA develop a strategic workforce plan for its Security Policy and Industry Engagement Surface Division, which could include determining the number of personnel necessary to meet the goals set for its Pipeline Security Branch, as well as the knowledge, skills, and abilities, including cybersecurity, that are needed to effectively conduct CSRs and

CFSRs. DHS agreed and estimated that this effort would be completed by July 31, 2019.

Pipeline Risk Assessments

The Pipeline Security Branch has developed a risk assessment model that combines all three elements of risk—threat, vulnerability, and consequence—to generate a risk score for pipeline systems. The Pipeline Security Branch developed the Pipeline Relative Risk Ranking Tool in 2007 for use in assessing various security risks to the top 100 critical pipeline systems based on volume of material transported through the system (throughput).[14]

The risk ranking tool calculates threat, vulnerability, and consequence for each pipeline system on variables such as the amount of throughput in the pipeline system and the number of critical facilities using data collected from pipeline operators, as well as other federal agencies such as the Departments of Transportation and Defense. The ranking tool then generates a risk score for each of the 100 most critical pipeline systems and ranks them according to risk, which was information used by TSA to prioritize pipeline security assessments.

However, in our December 2018 report we found that the last time the Pipeline Security Branch calculated relative risk among the top 100 critical pipeline systems using the ranking tool was in 2014. Since the risk assessment had not changed since 2014, information on threat may be outdated and may limit the usefulness of the ranking tool in allowing the Pipeline Security Branch to effectively prioritize reviews of pipeline systems. We recommended that the Security Policy and Industry Engagement's Surface Division update the Pipeline Relative Risk Ranking Tool to include up-to-date data to ensure it reflects industry conditions, including throughput and threat data. DHS agreed and in March 2019 TSA officials reported taking steps to update the data in the Pipeline Risk Ranking Tool to reflect current pipeline industry data. We are currently reviewing those actions to determine if they sufficiently address our recommendation.

[14]According to DHS, a risk assessment is a product or process which collects information and assigns values to risks for the purpose of informing priorities, developing or comparing courses of action, and informing decision-making. A risk assessment is also considered the appraisal of the risks facing an entity, asset, system, network, geographic area or other grouping.

We also found that some of the sources of data and vulnerability assessment inputs to the ranking tool were not fully documented. For example, threats to cybersecurity were not specifically accounted for in the description of the risk assessment methodology, making it unclear if cybersecurity threats were part of the assessment's threat factor. We recommended that the Security Policy and Industry Engagement's Surface Division fully document the data sources, underlying assumptions, and judgments that form the basis of the Pipeline Relative Risk Ranking Tool, including sources of uncertainty and any implications for interpreting the results from the assessment. In March 2019, TSA officials stated that they had taken steps to document this information. We are currently reviewing those steps to determine if they sufficiently address our recommendation.

Monitoring Program Performance

In our December 2018 report, we also found that TSA developed three databases to track CSR and CFSR recommendations and their implementation status by pipeline facility, system, operator, and product type. TSA officials stated that the primary means for assessing the effectiveness of the agency's efforts to reduce pipeline security risks was through conducting pipeline security reviews—CSRs and CFSRs. However, while TSA does track CFSR recommendations, we found that TSA had not tracked the status of CSR recommendations for security improvements in over 5 years—information necessary for TSA to effectively monitor pipeline operators' progress in improving their security posture. We recommended that TSA take steps to enter information on CSR recommendations and monitor and record their status. DHS agreed and estimated that this effort would be completed by November 30, 2019.

Chairman Rush, Ranking Member Upton, and Members of the Subcommittee, this completes my prepared statement. I would be pleased to respond to any questions that you may have at this time.

GAO Contact and Staff Acknowledgments

If you or your staff members have any questions about this testimony, please contact me at (202) 512-8777 or russellw@gao.gov. Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this statement. Other individuals making key contributions to this work include Ben Atwater, Assistant Director; Steve Komadina, Analyst-in-Charge; Nick Marinos, Michael Gilmore, Tom Lombardi, and Susan Hsu.

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Mr. RUSH. I thank the witness for his opening statement.

And now, the Chair recognizes Commissioner Friedeman for 5 minutes for the purposes of an opening statement.

STATEMENT OF LAWRENCE FRIEDEMAN

Mr. FRIEDEMAN. Good morning. Chairman Rush, Chairman Pallone, Vice Chair McNerney, Republican Leader Upton, Republican Leader Walden, thank you. I appreciate the opportunity to be here this morning, as well as thanks to the other members of the subcommittee.

My name is Larry Friedeman. I am a commissioner at the Public Utilities Commission of Ohio, known as the PUCO. Each day as I pass through the PUCO's lobby, I am reminded of our mission statement. And that is, to provide adequate, safe, fairly priced, and reliable utility services to the Ohio citizens. In short, we are to promote the general welfare by assuring the provision of essential services to all Ohioans.

Implicit in the mandates is not only the need to establish service, but, just as importantly, to maintain the provision of safe utility services over time. Pipeline safety integrity is a foundational element of utility service upon which all Ohio citizens rely, and there is no higher consideration within the context of pipeline transmission and distribution than that of public safety.

Ohio has a robust pipeline safety program dedicated to ensuring the safety and reliability of natural gas service to Ohioans. We have 113 natural gas pipeline operators and more than 71,000 miles of transmission, distribution, and gathering lines. Ohio is one of eight States that act as interstate agents for the Pipeline and Hazardous Materials Safety Administration, PHMSA, and has done so since 1973. We have 12 interstate pipeline operators with over 8,500 miles of regulated interstate transmission lines.

While these pipelines are located within the boundaries of the State of Ohio, the PUCO does not exercise jurisdiction over them. But, pursuant to an agency agreement with PHMSA, the PUCO inspects interstate natural gas pipeline systems based on an inspection plan agreed to with PHMSA. It investigates incidents and refers any rules of enforcement identified to PHMSA for disposition.

Ohio also receives funding from PHMSA pursuant to the State Pipeline Safety Program Base Grant. This is a reimbursement-based grant authorized to support up to 80 percent of a State's cost to administer a gas pipeline safety program. In order to qualify, each State's program must comply with PHMSA requirements.

We are proud to say that for the last 2 years Ohio's program has received the maximum score available on those annual audits conducted by PHMSA. Yet, in 2018, notwithstanding the maximum score, Ohio received not 80 percent, but 72.16 percent of expenses incurred.

The Ohio program has 10 inspectors, performs over 150 audits annually, and they are primarily focused on pipeline distribution facilities. Ohio has built and maintained its pipeline safety program in no small measure because of the assistance received pursuant to the PHMSA Pipeline Safety Program Base Grant. Through the years, the program has enabled the PUCO to hire, re-

tain, and train properly its staff. The training occurs at a PHMSA training center in Oklahoma City, Oklahoma.

Now, complementary to the PHMSA-related activities, the State of Ohio has undertaken some independent initiatives that I think worth mentioning. More than a decade ago, the PUCO, in cooperation with Ohio's major natural gas utilities, embarked on a capital investment program to replace bare steel and cast iron distribution pipes. The purpose of the program is replace the pipes with upgraded materials which not only enhance the structural integrity of the system, but prolong the useful life of the system. It is not only remedial, but preventative in nature.

Since the inception of the program, Ohio's four largest investor-owned natural gas utilities have invested over $3.6 billion in replacement and have replaced over 5,000 miles of distribution main line and more than 1 million service lines. The progress and value of the program is perhaps best manifested by the fact that, at the end of 2010, about 20 percent of the total pipeline fell within categories targeted for replacement; at the end of 2018, that percentage has been reduced to 12. It is an inescapably long program in duration, but the PUCO has ordered accelerated cost recovery to incentivize accelerated replacement rather than authorizing recovery at more typical regulatory paradigm structures.

In conclusion, I recount the Ohio State's specific activities. In addition to the PHMSA-related activities, to help demonstrate the sheer magnitude of the compelling importance and desirability of Federal-State cooperation and coordination, and enhancing the structural integrity of the natural gas transmission and distribution system, deliverability, reliability, and, most importantly, safety are wholly dependent on effective pipeline safety measures. I would strongly urge the subcommittee's continuing support for safety reauthorization. And more specifically, I would urge your consideration of increasing the total reimbursement to the full 80 percent, as authorized by Congress.

Thank you so very much for your time. I would be happy to answer any questions you have.

[The prepared statement of Mr. Friedeman follows:]

Public Utilities Commission of Ohio

Larry Friedeman, Commissioner

Testimony before the House Subcommittee on Energy

Wednesday, May 1, 2019

Ohio | Public Utilities Commission

Introduction

Good morning Chairman Rush, Vice Chair McNerney, Republican Leader Upton, and Members of the Subcommittee. My name is Lawrence K. Friedeman. I am a Commissioner and serve on the Public Utilities Commission of Ohio (PUCO). I am testifying today in support of pipeline safety reauthorization.

Each day as I pass through the PUCO's lobby I am reminded of our mission statement; that is, to assure the delivery of adequate, reliable, safe and fairly priced utility services to our citizens. That statement succinctly underscores our mandate as state regulators—to promote the general welfare by assuring the provision of essential services to all Ohioans.

Implicit in that mandate is the need not only to establish service, but just as importantly, to maintain the provision of utility services over time. Pipeline system integrity is a foundational element of utility service upon which Ohio citizens rely; and, there is no higher consideration within the context of pipeline transmission and distribution than public safety.

Ohio Gas Pipeline Safety Program

Ohio has a robust gas pipeline safety program dedicated to ensuring the safety and reliability of natural gas service to its residents and businesses. In Ohio, we have 113 natural gas pipeline operators, and more than 71,000 miles of transmission, distribution and gathering lines.

Ohio is one of eight states that act as interstate agents for the Pipeline and Hazardous Material Safety Administration (PHMSA) and has done so since 1973. Currently, Ohio has 12 interstate pipeline operators with 8,522 miles of regulated interstate transmission lines. The PUCO inspects interstate natural gas pipeline systems based on an inspection plan agreed to with PHMSA and will also investigate natural gas related incidents that occur on these lines. If there are any enforcement issues identified by our inspectors, they are forwarded to PHMSA for disposition.

Ohio also receives funding from PHMSA pursuant to the State Pipeline Safety Program Base Grant. This is a reimbursement based grant to support up to 80 percent of a state's costs to administer a gas pipeline safety program. In order to qualify, each state's program must be audited every year by PHMSA representatives to ensure that the program complies with PHMSA's requirements. We are proud to say that for the last two years, Ohio's program has received the maximum score available on those audits. In 2018, Ohio received the maximum rate of reimbursement, which was 72.16 percent of expenses incurred.

This program allows states to assume safety authority over intrastate gas pipelines within their respective jurisdictions on the condition that those states adopt the minimum federal pipeline safety regulations. However, states may pass more stringent regulations through legislation.

The Ohio program has 10 inspectors who work throughout the state performing safety audits of Ohio's pipeline operators as well as physical inspections of facilities. In fact, the program

performs over 150 audits annually. These audits are primarily focused on pipeline distribution facilities over which the PUCO exercises jurisdiction. However, at times our inspectors also act as "boots on the ground" for PHMSA performing interstate audits each year; and, if necessary, incident investigations, the findings of which are referred back for enforcement action as PHMSA deems warranted. Additionally, PUCO staff participates in the performance of incident investigations on intrastate pipelines and will take action where appropriate.

Ohio has built and maintained its pipeline safety program, in no small measure because of the assistance received pursuant to the Pipeline Safety Grant Program. Through the years, the program has enabled the PUCO to hire and retain qualified personnel and have that personnel properly trained at PHMSA's training center under the grant. All pipeline incidents are unfortunate and it is imperative that a thorough and measured investigation of causality is conducted to learn from the event so that future incidents can be avoided.

Ohio Initiatives

Accelerated Pipeline Replacement

More than a decade ago, the PUCO, in cooperation with Ohio's natural gas distribution utilities, embarked on significant capital investment campaigns in the form of accelerated main replacement programs. These programs are designed to replace aging bare steel and cast iron distribution pipes with new assets comprised of upgraded materials, which will not only enhance the structural integrity of the distribution system but also prolong the useful life of those system replacements.

Since the inception of the program, Ohio's four largest investor-owned natural gas utilities have invested over $3.6 billion, replacing over 5,000 miles of distribution main lines and more than 1 million service lines. The progress and value of these programs is perhaps best manifested by the fact that at the end of 2010, about 20 percent of Ohio's total pipe was in the pipe categories targeted for replacement, and at the end of 2018, the percentage of pipe remaining in this category was reduced to 12 percent.

As you would expect, these programs are inescapably long in duration. But in order to incentivize expeditious replacement of deteriorating assets, the PUCO has ordered accelerated cost recovery for the replacements rather than authorizing recovery at more typical timelines. In a sense, these programs are preventive as well as remedial in that replacement efforts are more comprehensive than piecemeal, thus promoting a more cost effective approach to replacement.

Gas Gathering

As mentioned earlier, states may pass regulations that incorporate or exceed federal requirements as a matter of legislative policy. In 2012, Ohio passed legislation to adopt portions of the federal pipeline safety code for certain unregulated natural gas gathering lines. Gathering lines are pipelines used to collect and transport raw natural gas or transmission quality gas to

the inlet of a gas processing plant, the inlet of a distribution system, or to a transmission line. Gathering lines located in rural areas are not currently regulated under federal gas pipeline safety laws. The Utica and Marcellus Shale fields have come to play an important role in Ohio's economy. A number of these gathering lines have many of the characteristics of transmission lines – meaning they are large diameter pipes, operate under high pressure, and move large quantities of natural gas. The state of Ohio recognized the need to assure safe installation and operation of gathering lines. Consequently, the state passed legislation requiring that natural gas gathering pipelines constructed to transport Utica and Marcellus shale field production be constructed, operated and maintained pursuant to a number of the requirements of the Federal Code. These requirements include establishing a maximum allowable operating pressure, corrosion control, damage prevention and public education, among others.

Conclusion

I recount Ohio state specific activities to demonstrate the sheer magnitude of pipeline related activity, which I believe underscores the importance and desirability of federal/state coordination and cooperation in enhancing the structural integrity of the natural gas transmission and distribution systems which exceed 2 million miles of pipeline nationally. Deliverability, reliability and safety are wholly dependent on effective pipeline safety measures. I would strongly urge the Subcommittee's continuing support for pipeline safety reauthorization. Specifically, I would suggest your consideration of increasing total state reimbursement and authorization levels for the State Pipeline Safety Programs BASE GRANT to the full 80 percent, as is authorized by Congress. The percentage of total reimbursement from PHMSA to the collective State programs has been averaging approximately 67 to 68 percent since 2016 (approximately $50 to $53 million dollars). FY 2018 and FY 2019 reimbursements are estimated to be $50 to $56 million dollars each but this has been accomplished by PHMSA repurposing dollars rather than placing them in the appropriate State program line item. If undertaken, full 80 percent funding projects to approximately $70.8 million for FY 2020, increases to $75 million in FY 2021, increases to $79.5 million in FY 2022, and increases to $84.3 million for FY 2023.

I thank you for the opportunity to address the Subcommittee today and would be happy to respond to any questions.

Mr. RUSH. The Chair thanks all the witnesses for their opening statements, and we have now concluded the opening statements.

We will now move to Members' question. And each Member will have 5 minutes to ask questions of our witnesses. We will start by recognizing myself for 5 minutes.

Administrator Elliott, there are quite a few issues that I would like to discuss with you, but, as I say, I only have 5 minutes to do so. And therefore, I will send additional questions in writing to you regarding the timeline for when PHMSA expects to complete its congressionally mandated rulemaking. That letter, that transmittal will be coming to you soon.

And I would also like to hear back from your agency on some of its workforce issues. Specifically, I would like to hear whether or not PHMSA does, indeed, have all the sufficient number of professional staff with the right expertise to handle all those responsibilities that fall under the agency's jurisdiction, including conducting timely pipeline inspections and finalizing its rulemaking.

One timely matter that I would like to discuss with you at this time is the issue I spoke about in my opening statement. How do we get more funding and assistance to the State and local level in order to help emergency management agencies and first responders with the resources they need desperately to fully and effectively carry out their duties? Also, is there a defined obligation on the part of pipeline operators to work with county-level emergency managers to develop and maintain an emergency preparedness plan before an event or an exercise occurs?

Mr. ELLIOTT. Well, Mr. Chairman, thank you for those questions, and I will try to answer them in the order they were given.

Let me first start by addressing, if you don't mind, the issue of mandates. I am the Administrator. I am responsible for ensuring that we work quickly to complete the mandates. I can't attest to actions by previous Administrators. I am the Administrator now; it is my responsibility. I understand that.

But I think we have made good progress. The three rules that we have heard, going back to a Railroads, Pipelines, and HAZMAT Subcommittee meeting last June, really made it clear from both sides of the aisle that we need to move these mandates.

As I indicated in my comments, I went back to the staff and I said, "We need to do better than we are doing now." And I looked at the oil spill plan for railroads because that was close to being done and was a very, very important rule, as well as the prohibition of lithium batteries in passenger aircraft, which was another great concern.

But the pipeline bills were equally important. We finished our work on the liquid pipeline rule. And again, as I had mentioned, that has been over at OMB now for about 50 days, and we are hoping to get a response back fairly soon.

The two other rules that were of greatest concern, the gas transmission pipeline, we have completed our work there. It has been done for a while and it is going through the internal review process at DOT. We have been very responsive to questions that are coming back from the Office of the Secretary. So, we are being as responsive as we can to respond.

The one bill that I think seems to have obtained the most, and probably rightfully so, the most focus is the rupture and automatic valve rule. And that wasn't in a final rule stage. That one was in a Notice of Proposed Rulemaking. So that one, agreeably, has languished the most. Our team has finished the writing of that Notice of Proposed Rulemaking. That, too, is also being reviewed by the Secretary's Office.

So, all three of those we really hope to see two final rules completed and a Notice of Proposed Rulemaking moving forward. We have several other mandates behind that that we are working equally hard on.

To address the question about staffing, we have 581 employees at PHMSA. About 310 are assigned to the pipeline side. I have mentioned before it is tough for us to compete with industry to hire good, qualified, as you said, pipeline engineers.

Interesting, I was in Atlanta yesterday, and my Director of Human Resources was over at Virginia Tech trying to figure out how we can create a better recruiting bed at colleges and universities that put out good engineers. I think part of the problem is we need to make people more aware of the important safety mission of PHMSA, because I think once they understand that, we are going to be more attractive to be in a place to hire. But, right now, we have done a great job in filling the gaps, the voids that we had in our hiring, and it has given me a better position to see how effective are we with the current staff.

I especially appreciate your comments about emergency responders. In my 40 years in the railroad, I was responsible for emergency response. And during that time, I lived in New Jersey and was actually the part-time emergency management coordinator for the town that I lived in in south Jersey. So, I fully appreciate the fact that we need to do more to help emergency responders. And you are absolutely correct, it is a responsibility of the oil and gas industry to make sure that they work with emergency responders, especially on drills and exercises.

Mr. RUSH. I want to thank you. And I want to just remind you that we will be submitting additional questions for the record.

The Chair now recognizes Mr. Upton for 5 minutes for the purposes of asking questions.

Mr. UPTON. Well, thank you, Mr. Chairman.

And again, I want to appreciate the testimony that you all provided us today. I know that we have a good number of questions.

I particularly want to thank Mr. Elliott, the Administrator, for his personal review of the Nation's pipelines. I know you have been to Michigan a number of times. You have met with Republicans and Democrats, as we all care about these issues. And I just really appreciate your hands-on experience and your willingness to come and help us here.

It is been clear for a long time that pipelines are really the safest way to transport oil and gas as it relates to incidents. But, of course, as you said in your testimony, it just takes one bad issue to really blow up and make a mess, a big mess of things in a major way.

As you heard in my opening statement, yes, we are disappointed that TSA is not here. And I guess some could suggest that TSA has

really increased by sixfold their inspectors, because it has gone from one to what I thought was six, but I am now told that it is now less than a handful; it is actually four. Is that correct?

Mr. RUSSELL. That is correct.

Mr. UPTON. So, there I was giving them the benefit of the doubt that it was a handful plus one, but it is actually less than a handful of folks around the country, which I don't think is a very good trend.

This committee has worked a long time on cyber protections. God help us if somebody gets into one of these systems and does something bad, that would really pose a problem. We are all aware of public events the FBI and others have talked about. But I guess I want to refer this to Mr. Russell, as the GAO.

In your report, what type of emphasis has TSA, knowing that they have these massive resources to look at the potential for a cyberattack on any of our pipelines, what have they done to address that, knowing that, in fact, there are published incidents of collusion? Let me put it that way. State-sponsored.

Mr. RUSSELL. That is correct. So, as DNI Coats recently acknowledged in the last intelligence assessment, you have nation states with the full capability to do harm to our pipeline network. And as you mentioned, with TSA's resources, it was six when we concluded our report in December. So, if it is down to four, that is, as you mentioned, less than a handful.

And one of the concerns that we found in our review was the pipeline security officials did not necessarily have the requisite expertise and skills when it came to cybersecurity. And that is one of the things that we recommended that TSA try to account for when it does its workforce plan, as part of one of our recommendations.

Mr. UPTON. On page 6 of the GAO report, it says, and I will quote this to you, "Our analysis of TSA's data found that at least 34 of the top 100 critical pipeline systems TSA deemed highest risk indicated that they had no critical facilities." Can you dive a little deeper into that? What are they missing? Where should they be?

Mr. RUSSELL. Sure. So, the way it works now is it is a voluntary process. So, the pipeline operators——

Mr. UPTON. Should it be mandatory?

Mr. RUSSELL. One of the first steps, I think, and where we went with the recommendation, was for TSA to clarify their guidelines first, to make it more clear what is the definition of a critical facility. And that is what we found, is that there is some confusion around that, such that a full third of the top 100 most critical pipeline operators had not identified any critical facilities, which, then, affects which reviews that you do.

Mr. UPTON. I am sorry to interrupt, but what wouldn't be critical? I mean, we had this Kalamazoo Enbridge line that went in the Kalamazoo River. It was a billion dollars for Enbridge to clean that up. They didn't report it for what turned out to be a couple of days, and it was a pretty major—in Michigan, so, you know, it crosses your hand here. But a billion dollars, just a small—I mean, what is not critical that they would look at?

Mr. RUSSELL. Well, these are self-reported, so it is up to each of the pipeline operators to self-identify what is their critical facility.

And that brings it around, I think, to one of the other points in the opening statement, around the recommendation followup. So, as TSA does their corporate security reviews, they may ask questions of the pipeline operators, hey, it looks like you may have a critical facility here. That may even be a recommendation. But if they don't go back to follow up to see if it is implemented, then you are continuing to have that risk.

Mr. UPTON. Knowing that my time is expired, let me just make a quick comment, not a question. And that is, for that particular pipeline, good news, it was completely replaced, replaced at the new standards that this committee pushed through. I want to say it was about $4.5 million per mile as it crossed the State. But we took care of it the right way.

Thank you very much for your testimony.

Mr. RUSSELL. Sure.

Mr. UPTON. I yield back.

Mr. RUSH. The Chair now recognizes Mr. Peters from the great State of California for 5 minutes.

Mr. PETERS. Thank you, Mr. Chairman. Thank you for having this hearing today.

I had a couple of questions, maybe to follow up on the issue of resource constraints. I heard requests over the years for the increased use of technology to expedite gas pipeline inspections and safety monitoring. It might be a little bit of a double-edged sword with respect to cyber, but I will get to that with Mr. Russell.

But, Mr. Elliott, are there technologies that you think need to be incorporated so that industry and regulators can better evaluate pipeline safety, particularly given the resource restraints we see at TSA?

Mr. ELLIOTT. Congressman, thank you for the question. The short answer is yes. If I can elaborate, I will tell you that in my year and a half as the Administrator of PHMSA, but backed by many years in the rail industry, where we saw technology move in leaps and bounds, I have seen the same thing in the use of technology to help quickly expand the capabilities of in-line pipeline inspection technology.

One concern that I have with that is, even as good as it is, it is still not perfect. And much of the in-line inspection tools that are in place today—and again, the level of sophistication is amazing—really focus on three purposes. One is to extend the usable life of the infrastructure. The second actually is to help reduce the amount of actual physical inspections that have to be done, thereby reducing cost. And the third is an absolute tangible improvement in safety.

At PHMSA, we focus on trying to encourage the research and development both with the dollars that we have that go into R&D and what we encourage industry to do, to really focus, first and foremost, on the absolute safety value there. One of the criticisms we get is PHMSA's inability to move quickly to get out of the way of industry to implement this new safety technology. And I would agree with that. I think our special permitting process is a bit slow. Part of the language that we are trying to look at in reauthorization will help speed that up. But I do think that technology will

continue to expand at a rapid pace and will continue to improve pipeline safety.

Mr. PETERS. And you think that is something that is being taken care of by industry? Or do you think that Congress needs to take action?

Mr. ELLIOTT. Congressman, I do believe that is something that industry is taking care of themselves, because it benefits the ability to, as I have mentioned, to extend the life of the infrastructure and help reduce inspection cost. I will tell you that, as PHMSA, we spend our R&D dollars more on what we consider to be step-change R&D, maybe not the safe R&D. For example, one of the R&D efforts that recently has been successful in dollars that we put is the ability to locate plastic pipe. Distribution lines are going more to plastic pipes. You can't use the same technology to locate the pipes. So, we would like to see more industry dollars go to some of that more step-change safety that is not really being focused on as much.

Mr. PETERS. I didn't hear you mention, explicitly mention, leak detection as one of the purposes, the objects of the technology, but I assume that would be covered as well?

Mr. ELLIOTT. Yes, I do think—and again, in my time I have been relatively impressed, at least in the leak detection capabilities that exist in control rooms. But probably more to your point, there is more that I think that can be done to identify smaller, some of those imperceptible leaks which tend to plague the industry. I think the larger releases, the systems seem to do a very good job. But you are probably correct, both with the in-line inspection capabilities that might identify issues before they ever turn into a leak—all of that I think with time will continue to reduce the likelihood of both large-scale leaks and small leaks.

Mr. PETERS. OK. Thank you.

Mr. Russell, in terms of lethality and cost of recovery, are pipelines in America more at risk from a cyberattack or a physical attack?

Mr. RUSSELL. I think there are definitely physical security concerns, as we have seen with environmental groups and others that cause damage. But the cyber threat is one that is ever emerging and ever evolving. And I think that is one where we thought there is more that could be done.

Mr. PETERS. Let me ask you this, because I have a minute left.

Mr. RUSSELL. Yes.

Mr. PETERS. As industry continues to deploy technology, how should the Government make sure that, from a cyber perspective, our citizens are protected? Because, I mean, technology is the point where bad actors tend to try to make those inroads. What do you think is the role for the Government, either administrative or the Congress, to make sure that we protect our citizens from a cyberattack?

Mr. RUSSELL. Sure. I think it boils down to robust oversight. So, do pipeline operators understand what their operating systems are, their control systems——

Mr. PETERS. Right.

Mr. RUSSELL [continuing]. Data systems, the industrial control systems that would be the point of attack? And have you ade-

quately protected those? Anything that Government can do to put out a framework—so, for example——

Mr. PETERS. I have got 4 seconds left. So, I appreciate the answer. I would say let's continue to work on that together. Thank you for showing up. And when you say "oversight," and we have the TSA not showing up, obviously, that frustrates the purpose, the ability of us to do oversight. So, I just note that for the record as well.

And I yield back.

Mr. RUSH. The Chair now recognizes the gentleman from Ohio, Mr. Latta, for 5 minutes.

Mr. LATTA. Thanks, Mr. Chairman, and thanks very much for holding today's hearing. It is very, very important that we have this hearing.

And I want to thank our panelists for being with us today.

I would also like to, again, welcome Commissioner Friedeman for being with us today. He comes from northwest Ohio, not too far from where I am from. And so, we appreciate you being here, making the effort.

If I could start my question with you, if I may, Commissioner Friedeman, as you mentioned in your testimony, Ohio is only one of eight States that acts as an interstate agent for PHMSA, which comes with considerable additional responsibility. Will you inform the subcommittee about Ohio's working relationship with PHMSA?

Mr. FRIEDEMAN. Yes. Thank you for the question, Representative Latta.

I think if you were to ask the commission staff anecdotally, they would characterize the relationship as professional, mutually respectful, cooperative, as well as productive. I mean, there is an acknowledgment of a shared accountability, I believe, in terms of the interstate pipeline and the assumption of responsibilities associated with the inspection. It enables the commission staff, frankly, to leverage in terms of funding in a way, again, to train, retrain, and retain good, qualified individuals, which then serves to benefit Ohio, and exemplary in terms of the compelling need to address these same situations nationally. So, it is a very positive relationship.

Mr. LATTA. Thank you very much.

Administrator Elliott, what could Congress do to help drive innovation and foster an environment where operators can incorporate new technologies and best practices?

Mr. ELLIOTT. Congressman, thank you for the question.

I think perhaps the best way is just continued support, and perhaps even a greater thirst for understanding how the oil and gas pipeline industry applies technology and innovation. Again, as I had mentioned earlier, it is a fairly constant drumbeat for us at PHMSA to encourage the pace at which that gets put into place. But I do believe that the more that people understand what is in place, and what more can be done, there might be some additional encouragements that can be brought to bear.

Mr. LATTA. Let me followup. Would more data and information demonstrating the capabilities of new technologies operating in real-world situations be helpful to PHMSA as it pursues updates to inspection and maintenance/repair critical in these regulations?

Mr. ELLIOTT. Yes, I think we have a large thirst for good, reliable data. We maintain a lot of that already, but I think, Congressman, the only way we are going to continue to get better is to continue to seek information/data that is going to allow us to continue to improve our safety mission.

Mr. LATTA. Thank you.

Commissioner Friedeman, I understand that Ohio has a good, accelerated pipeline replacement program. Would you talk a little bit about the commission's role to ensure that pipeline rates are adequate to allow for pipeline replacement and modernization?

Mr. FRIEDEMAN. Yes, sir. Thanks again for the question.

The commission needs to remain cognizant of the fact that the costs associated with the capital investment concomitant to the implementation of the program are essentially allocated socially across rate base. So, as I alluded to in my opening statement, there is a means by which we, the commission, not only incentivized accelerated replacement, but accelerated recovery. Now associated with that accelerated recovery is an annual audit where the commission could revisit the expenses and the prudence, and the various criteria by which we can appropriately balance the costs associated with the investment against the benefits derived from the investment.

Mr. LATTA. Thank you.

Mr. Russell, if I could go to your testimony when you found—you said, on page 5, "We found that TSA's Pipeline Security Branch had issued revised Pipeline Security Guidelines back in March of 2018, but TSA had not established a documented process to ensure that revisions occur and fully capture updates to supporting standards". But you go down, you get right into "reflect the dynamic threat environment and to incorporate cybersecurity principles".

I am concerned because in this subcommittee and this full committee we hear a lot about the attacks that occur out there. And how much is TSA taking these threats on the cyberattacks that are occurring on the pipelines out there to make sure that these guidelines get in place?

Mr. RUSSELL. Right. So, they were able to update them in March 2018, as you mentioned. Part of that update was to include more guidance for the pipeline operators on cybersecurity issues. Why we think it is very timely and needed for them to have a process to continue to update that is, about a month after the guidelines came out, there was a new set of an updated framework from NIST that included some additional provisions around supply chain risks and some other things that are important to also incorporate. So, our concern is that we want TSA to have a process, so you don't wait another 6 or 7 years to, then, incorporate those standards into the Security Guidelines.

Mr. LATTA. Thank you very much.

Mr. Chairman, my time is expired and I yield back.

Mr. RUSH. The Chair thanks the gentleman.

The Chair recognizes the chairman of the full committee, Mr. Pallone, for 5 minutes.

Mr. PALLONE. Thank you, Mr. Chairman.

Obviously, we are beginning the process of developing legislation to reauthorize the Pipeline Safety Act. And first, we have to under-

stand the current state of affairs and what work remains incomplete from previous reauthorizations. But, unfortunately, as I noted in my opening statement, numerous congressional mandates from the 2011 and 2016 reauthorizations have not been finalized by PHMSA.

So, I wanted to start with Administrator Elliott. I would like to ask you for updates on some of these outstanding mandates. First, what is the status of the rulemaking on emergency order authority that was included in the 2016 Pipes Act?

Mr. ELLIOTT. Mr. Chairman, thank you for the question. As you may recall, we submitted an Interim Final Rule for the emergency order authority, which we believe gives us the intended authority that Congress was looking for. We have since, after further public review and comment, have made some modifications to that specifically about the timelines that industry may have to do an appeal to that process. We have completed our final rule language, and it is currently over at OMB.

Mr. PALLONE. OK. Now what is the status of the rulemaking mandated in the 2011 Act to expand integrity management beyond high-consequence areas?

Mr. ELLIOTT. Well, really, that falls into two rules that we are working on, the liquid safety rule, which I had mentioned in my comment there are some integrity management aspects there. We have finished our work there, and that also is at OMB.

The other component is in the gas transmission rule. When I first came to PHMSA about a year and a half ago, that gas transmission rule was affectionately referred to as the "mega rule". It had gotten so big, I don't know how it could have ever moved. So, we split it into three parts, the mandate section, another section of the bill that deals with integrity management, some damage prevention, and the third part is gathering lines. We have completed our work on the mandate section, and we are actively working on the second section of that that deals with some additional integrity management work.

Mr. PALLONE. And then, lastly, what is the status of the rulemaking mandated in the 2016 Act to regulate underground natural gas storage facilities?

Mr. ELLIOTT. Right. We have completed our work with that, and that is also being reviewed by the Office of the Secretary.

Mr. PALLONE. Now I know, Administrator Elliott, that you inherited many of these delayed mandates, but the fact remains that your agency is behind schedule, obviously. So, we hope we will begin to see major progress this year.

And I wanted to shift briefly to Bill Russell from GAO. Your December 2018 report highlighted troubling weaknesses in the Transportation Security Administration's pipeline security program. And in your report, you found that the TSA Pipeline Security Branch had not calculated relative risk among the top 100 critical pipeline systems using its risk-ranking tool since 2014, and that the risk-ranking tool did not include current data. So, my question is, can you please elaborate on these findings and how GAO's recommendations address the shortfalls you identified in TSA's risk-ranking tool?

Mr. RUSSELL. Right. So, the risk-ranking tool is critical because that really shapes which companies, which pipeline operators TSA is going to review with the limited resources that they have. So, what we saw is some shortcomings in how they thought about the threats that were encountered. Obviously, from 2014 to now, there have been evolving threats. One of the questions we had was the extent to which some of the cybersecurity issues had been factored into that initial risk assessment. Another one had to do with just the safety of the pipeline system. So, for example, a pipeline network may be more vulnerable if, for example, PHMSA has identified some age and safety issues. Was that factored into the risk ranking in order to prioritize reviews? So, we had four different recommendations to try to get at some of these issues.

Mr. PALLONE. I mean, you know I am very concerned, obviously, as many of us are here, that TSA is working with outdated information, which can have dire consequences for a program focused on the security of the country's pipeline network. And again, it is unacceptable that TSA refused to testify at this hearing or explain how it is responding and reacting to the troubling findings in GAO's report. But I certainly appreciate what GAO is doing and your ongoing efforts to do oversight of this.

So, thank you, Mr. Chairman.

Mr. RUSH. The Chair now recognizes Mr. McKinley, my friend from West Virginia, for 5 minutes.

Mr. MCKINLEY. Thank you, Mr. Chairman.

I will go back, the title of this hearing says it is the "State of Pipeline Safety and Security in America". The state of pipeline safety and security in America. So, I am just curious, if we look back—I have got a chart here that says that, in the last 10 years, we are now transporting nearly 40 percent more material through our pipelines, gas and fuel oil, and whatever, a 40 percent increase on that.

Also, we have seen that, since 1999 to today, last year, the number of incidents have not varied much. I guess back to an earlier comment, someone said, if there is just one, it is a problem. And I don't think anyone would disagree with that. But I think the reality is, when you are transporting 614 million cubic feet of material, that there is a chance, just like in an airplane, with 737 Max and others, there is going to be a chance of something going wrong. But, over nearly 20 years, we virtually had no increase in incidents. We were 275; we dropped to 233, 258, 264, 278, 303. There were 286 last year. So, it is essentially the same, and we are transporting tremendously increase in product.

So, I am curious on this. How would you grade, Mr. Elliott, how would you grade your performance? Is it the fact that there are any, this is a "C" or a "D"? Or how would you give it a grade in overall safety and security of America with our pipeline system?

Mr. ELLIOTT. Congressman, thank you for that very important question. Before I assign a grade, I will tell you we can never ever do enough. We will constantly strive every day, at least while I am in the Administrator's chair, to improve the safety, not only of pipeline safety. And a lot of people forget we also have the responsibility of surface transportation safety, which is 1.2 million ship-

ments of hazardous materials a day, in addition to the 2.7 million miles of pipeline that we have.

But if I were to give a grade, I would give us a "C," because I think we are doing well, but we are never doing good enough. I think some of the comments that we had earlier, I do think that we will continue to see great advancements in safety through technology, innovation, research and development. But, from my perspective, I think it is going to be constantly working with the highly professional team at PHMSA to make sure that each and every day that we are out working with operators and members of the public to make the transportation of energy products by pipeline as practical and safe as possible.

Mr. MCKINLEY. Thank you.

Mr. Russell, how would you grade it? Because you have got an outside view of it. Given the increased traffic, virtually no increase in number of incidents, but there are incidents. And as I said before, I don't like that, either. But how would you grade it?

Mr. RUSSELL. I think, overall, based on our most recent report, it is clearly needs improvement, whether it is taking care of some elements in the Pipeline Security Guidelines that the pipeline operators rely on to help manage their processes, being a little bit more diligent on just following up on the common-sense recommendations that the pipeline security folks at TSA make to those operators.

Mr. MCKINLEY. Well, if I could, let me follow up with that a little bit.

Mr. RUSSELL. Sure.

Mr. MCKINLEY. Because I interpret what you are saying is maybe more regulations. So, I am curious, because I have got the Atlantic Coast Pipeline. I think we have heard about that. There are 67 permits that had to be granted, 67, for FERC, FAA, the Federal Communications Director, and NOAA, the National Park Service, the Corps of Engineers in Huntington, Pittsburgh, Norfolk, Wilmington. I could go on and on. Sixty-seven different permits to be able to—do you think the increased regulations—I am not talking about doing away with any of them—but increasing the number of regulations, is that going to give us more safety and security of our pipeline?

Mr. RUSSELL. Well, I will say, for the TSA role, there isn't a regulation. It is a voluntary-based system. So, I think our point is just making sure that that process works as effectively as possible, in the absence of a regulation.

Mr. MCKINLEY. I will think about that a little bit. Thank you. And I yield back.

Mr. RUSSELL. Sure.

Mr. RUSH. The Chair now recognizes Mr. Doyle for 5 minutes.

Mr. DOYLE. Thank you, Mr. Chairman, and thank you for holding this hearing today.

This conversation is particularly important to my district of Pittsburgh. Pennsylvania's energy mix has rapidly transformed in recent years due to the Marcellus Shale. And as a result of the natural gas boom, Pennsylvania is experiencing a buildout of infrastructure from pipelines to the Shell cracker plant in Beaver County, just outside my district. This can be a great resource, but only

if we ensure that the pipelines meet stringent safety and environmental standards, so that we are protecting the health and safety of the people of Pittsburgh as well as the country.

Mr. Elliott, Carnegie Mellon University in my district is a world-class center for robotics, which can play a vital role for monitoring the safety and security of pipelines and protecting the environment. How does PHMSA take into account new and emerging technology, and how do you ensure the performance standards reflect the most effective technology available?

Mr. ELLIOTT. Well, Congressman, thank you, and I appreciated visiting the gas transmission work going on in your district last week.

As I mentioned, PHMSA provides R&D dollars to help ensure that we are staying current with the most cutting-edge. One of the ways that we do that is on a biennial basis—and we are actually thinking now to do it more often—we hold an R&D forum where we allow colleges and universities, and others that are involved in pipeline research and development, to come in, and we kind of spell out what we are looking for, where we think we need to see research and development progress in the pipeline, especially the pipeline safety area. And then, from that forum, we receive applications for R&D, some of it actually including robotics that you mentioned about. And then, based on the best applications, we will provide the funds that we have to pursue that R&D. I wish we could do more, but we do the best we can.

Mr. DOYLE. Let me ask you, several pipelines are under construction in Pennsylvania right now. Late last year, it was reported that energy transfer in Sunoco had amassed more than 800 State and Federal permit violations while building two pipelines, the Rover and Mariner East 2, across Pennsylvania and Ohio. I have concerns that the two pipelines, despite being under construction, have polluted waterways with gallons of drilling fluid and created sinkholes in backyards. Can you please describe some of these violations?

Mr. ELLIOTT. Well, Congressman, thank you for the question, and we continue to work very closely with our State partners in Pennsylvania that have been doing most of the oversight there. And I will tell you, yes, I think we have at PHMSA a concern, based on our dialog with the State pipeline office, about perhaps a lack of professional construction methods that are being used. So, I think we wholly support the actions that are being taken at the State level to enforce perhaps a more rigid construction standard.

The work that I did for many years in the railroad industry—and Pennsylvania was one of the big States that we worked in—I also oversaw all of the environmental aspects of the railroad. And I will tell you that I have a great concern anytime there is any kind of impact to the environment, whether or not it is hazardous substance or whether or not it is material that basically is a byproduct of directional boring, which was some of the case we had here.

Mr. DOYLE. Right.

Mr. ELLIOTT. So, I agree with the aggressiveness that the State oversight is providing here.

Mr. DOYLE. Studies have shown, since 2010, at least two critical detection systems designed to help operators avoid costly accidents

only were detecting right away spills roughly 12 percent of the time. In fact, random observations from the public were nearly four times more effective in detecting leaks. Given that PHMSA studies have shown that industry leak detection can be unreliable, what is PHMSA doing to incorporate modern leak detection standards into its rulemaking, and when can we expect action on that?

Mr. ELLIOTT. Well, Congressman, again, thank you for the question. And we have incorporated some additional leak detection language within both our liquid and gas rulemakings. But I will also say that it is our intent, I think, to continue to see progression in the technology and the actions by the operators that will identify the potential for any kind of small leak. The larger leaks, typically, are the ones that the industry will quickly identify through their control rooms. It is those small leaks that propagate and may go unnoticed for many days. I think that is where technology is going to be most useful, to find areas of likely release and get in and correct that long before it can ever harm the environment.

Mr. DOYLE. Thank you.

Mr. Chairman, thank you. I yield back.

Mr. RUSH. I want to thank the gentleman for yielding back.

The Chair now recognizes the gentleman from Virginia, Mr. Griffith, for 5 minutes.

Mr. GRIFFITH. Thank you very much, Mr. Chairman.

I am going to pick up with Mr. Doyle's questions. But, first, I want to thank you for mentioning Virginia Tech, which is in my district, and I hope that you all were successful in finding some folks there who are willing to work for you. There are a lot of good people. So, I know that it was a worthwhile trip.

Mr. Doyle was already picking up on it, and there are a lot of new technologies coming out. One that I have looked at that I think has some real potential is fiberoptic, you know, placing that out there to track leaks.

We have a couple of pipelines coming through Virginia, one of which comes through my district and comes very close to Virginia Tech. And a lot of people are concerned about the safety, and the small leaks, as you said, are where the new technologies can go. But what is PHMSA doing to remove any regulatory barriers—and let me know if you think there are some—and incentivize the adoption of new technologies? Because we have got this big gas pipeline coming through, and it appears to me that FERC is not requiring that they use some of these new technologies to make sure that these facilities are completely safe. And even if it is just a small gas leak, what is small today, as you know, can be big tomorrow and can cause a problem not only to the environment, but to the people who live near that pipeline.

Mr. ELLIOTT. Congressman, thank you for the question. I think one of the items that I have been most impressed with is we have seen advancements in technology. And I do believe that, as we see new construction and complete replacement of pipelines, I do think that you are going to see—and some is available today and some will continue to be available—that the pipeline installation process will include systems that will self-report the health of the pipeline above and beyond what happens today with in-line inspection technology.

So, I think the combination of several things, continuing use of integrity management systems by the operators, the continued expansion of technology and in-line inspection technology, and then, the continued use of self-diagnostic capabilities with new and totally replaced pipeline. I do think that in the not-too-distant future we will probably see new constructed pipeline that will be able to self-report on a regular basis its real-time health.

Mr. GRIFFITH. So, here is my concern and the concern my constituents have. And I know they were trying to sell product, but some folks came in with their fiber optics and they were able to show how they can detect based on the temperature change. If you just lay that fiberoptic on top of the pipeline, you can tell if there is a small leak. You can also tell if somebody is trying to do physical harm to the pipeline, for whatever reasons, because they in real time can see if somebody is driving up or walking up to the pipeline, if somebody starts digging near the pipeline. They can see all of that.

And yet, the pipe is not in the ground yet. The technology appears to be ready. And FERC doesn't seem to be requiring it. Do you all work with FERC to say, hey, this is new technology? It is not that expensive, and when you are talking about a pipeline that is going to be in the ground for decades and near a lot of communities, I think people would sleep a lot better in my district if they knew that that was there. And it is not. There is no plan for it. The pipe is not in the ground yet in a large part of my district. What can we do to encourage the operators to do that? And what can you all do to work with FERC to say, hey, this is something that really ought to be done?

Mr. ELLIOTT. Well, we will continue to have dialog with FERC on a regular basis, and we will discuss that. But I think one of the other things that we can do in the regular dialog that we have with the oil and gas operators is to continue to push the use of new technologies that will minimize leaks and releases of pipelines. We can have that conversation with them.

Mr. GRIFFITH. I certainly hope that you will. And there are some new people in FERC. So, I don't want to say that they are all like this, but I will tell you, at one point a few years back, we had three Congressmen from our region who asked for additional hearings and we got nothing. And that is very discouraging. It doesn't seem like they are very open to input. I hope you have a different experience.

That being said, I have got a few more seconds. What is your favorite new technology on pipeline safety? You have got to have one that you are just like, hey, that is pretty neat.

Mr. ELLIOTT. To me, I actually think it is the ability to locate nonmetallic pipeline that is becoming so prevalent in natural gas distribution systems in major metropolitan areas, because I think that has the greatest opportunity to create safety. I know in the incident that occurred in Durham, North Carolina, where a directional boring machine tapped into a distribution line—I just think that the ability to be able to more accurately identify nonmetallic pipeline is probably my thing.

Mr. GRIFFITH. I appreciate that. Thank you.

And I yield back.

Mr. RUSH. The Chair now recognizes Mr. McNerney from California for 5 minutes.

Mr. MCNERNEY. Well, I thank the chairman for that.

And I thank the witnesses this morning.

Administrator Elliott, on September 9th of 2010, I was on the San Mateo Bridge when the San Bruno explosion occurred. Two of my three children live in peninsula just south of San Francisco. Also, the Aliso Canyon leak, which was incredibly dangerous, and we were very lucky that there were no explosions with that, occurred in California. Near my district we have three large natural gas storage facilities, including the MacDonald Island, which is 82 billion cubic feet.

So, are the inspections by the California Public Utility Commission and the Federal authorities for these facilities, and the high-pressure transmission pipelines, doing enough to keep our communities safe? Are they doing enough?

Mr. ELLIOTT. Congressman, I do believe that the work being performed is adequate. I, first, want to say, when I first came to PHMSA, it was the discussion of San Bruno and the eight fatalities that occurred there, and that Aliso Canyon was the worst natural gas release we have ever had in this country. So, those resonate very much.

We are so dependent upon the use of our State partners to oversee certain operations. And 80 percent of the pipeline system in the U.S. today falls to the oversight of our State partners. I think, as I said earlier, there is always more we can do. We always need to strive to get better. We need to work more closely with our State partners to make sure that we are being as forward-thinking as possible. But I would have to say that, at this point in time, I do think the work is adequate.

Mr. MCNERNEY. Well, we clearly have our complaints about the pace of PHMSA's rulemaking, but are we being too demanding about the safety of our constituents? Is that part of the problem?

Mr. ELLIOTT. No, I mean, you can never not take into account the absolute importance of the safety of your constituents. And as I had mentioned earlier, we have every reason to continue to focus on improving and completing those mandates, so the safety value of those rules can get out and be in place.

Mr. MCNERNEY. What is the holdup in these rulemakings? I mean, is industry dragging its feet or you don't have enough personnel? Do you need more resources from Congress? I mean, what is the holdup here?

Mr. ELLIOTT. As I had mentioned before, I understand it is my responsibility, as the Administrator today, to complete these mandates, going back to 2011 and 2016, and we work on that every day. For most of the mandates that have been brought to our attention as being most important, the liquid, the gas, the rupture detection valve rule, we have completed our work on those, and they are going through the necessary review before they can be published as a final rule, except for the rupture and automatic valve rule, which is a Notice of Proposed Rulemaking. So, granted, we have got a ways to go on that, but it has got the greatest attention at PHMSA, sir.

Mr. MCNERNEY. Thank you.

Mr. Russell, I have introduced some good cybersecurity bills in Congress and in a number of others in previous Congresses. Your example of the TSA's criteria for determining pipeline facility criticality as a potential for mass casualties or significant health effects, it is very concerning that the pipeline operators interpret this differently. What more can the TSA do to provide more clarity to operators of whether the facilities qualify and the additional steps that are necessary to make the infrastructure more secure?

Mr. RUSSELL. Thank you for the question. Certainly, TSA did update the guidelines in 2018. So, that is a good thing, to make them more current. But it is really some of those key terms. What does mass casualty mean? How does that translate to the area you are operating in? Again, issues around the criticality, what exactly does that mean? So, I think either a glossary or more specificity around some of those key terms is what we are proposing that TSA try to do.

Mr. MCNERNEY. Good. Thank you.

Commissioner Friedeman, how do you deal PHMSA's shortage of personnel? Is that a factor affecting your capability to do your job?

Mr. FRIEDEMAN. Not that I have been informed from our staff, recognizing, however, that there is an assessment on basically an operator's proportionate throughput that offsets any shortfall relative to funding. So, there is a budgetary opportunity on the part of the commission to address some of the issues inferentially that you are talking about.

Mr. MCNERNEY. OK. Thank you.

Mr. Chairman, I yield back.

Mr. RUSH. The Chair thanks the gentleman.

The Chair now recognizes Mr. Johnson of Ohio for 5 minutes.

Mr. JOHNSON. Thank you, Mr. Chairman.

Mr. Friedeman, welcome today from the great State of Ohio. We may have covered some of this ground already, but I want to dig in a little deeper. I really appreciate you being here to discuss how the Public Utilities Commission of Ohio best keeps our pipeline systems functioning and safe. Ohio's safety program has received the maximum score available, as you know, on PHMSA's audits over the last 2 years, which I think demonstrates how seriously PUCO takes pipeline safety.

Now I appreciated that in your testimony you reiterated PUCO's mission Statement, which focuses on reliability and safety, but also affordability. And I am sure each of these issues were taken into consideration when Ohio developed its accelerated pipeline replacement program.

So, I know Congressman Latta got into this a little bit, but can you talk a little bit deeper about the program's importance and your commission's replacement program and your commission's role to ensure that pipeline rates are adequate and just to allow for pipeline replacement and modernization?

Mr. FRIEDEMAN. Yes, sir. Thank you for the question. Thank you for the comments relative to the PUCO.

As I had indicated previously, the costs associated with the investments are obviously socialized across ratepayers. So, there is a need to balance, once again, to attempt to achieve the equilibrium between benefit and cost. And that is really something that is, I

think, inherit in the nature of the recovery mechanism that we use relative to using a rider, rather than waiting for a rate case. So, that enables the commission to review on an annual basis.

Mr. JOHNSON. What are some of the balancing factors? I mean, when you talk about your philosophy of balancing quality and safety with cost and acceleration, what are some of the factors that you use to balance all of that out?

Mr. FRIEDEMAN. Well, obviously, one of the key considerations is bill impact, recognizing again that affordability is a function—affordability across all ratepayers. That is, from the highest perspective, the consideration relative to the social costs associated.

In terms of the implementation of the program itself, there is a recognition that bare steel cast iron noncathodically protected infrastructure is subject to deterioration over time. So, basically, the staff, in conjunction with, in cooperation with the utilities in the State, identified pipelines that fall within the bucket targeted for replacement. And it was a very methodical approach that was started over a decade ago, and I believe that the various utilities are at various stages of completion, but that all four of the major investor-owned utilities are intending to complete their programs by 2033. And to the credit of other utilities, not those of the big four, they are beginning to adopt the same process, or at least express an interest in doing so, recognizing, I think, the benefits to be derived.

Mr. JOHNSON. OK. All right. Well, thank you.

Administrator Elliott, as you know, PHMSA's State partners oversee more than 80 percent of the Nation's pipeline infrastructure, especially the gas distribution pipelines that connect our homes and businesses to the main transmission system. Can you talk a little bit about State programs and the methodology that PHMSA uses to distribute pipeline safety grants?

Mr. ELLIOTT. And, Congressman, thank you for the question. There are all but two States that participate in the State program with PHMSA. Alaska and Hawaii are the two. So, on an annual basis, PHMSA will work with the State to receive information about their current inspection program, about the goals that they have achieved, about the staffing that they have. We take that information, and then, we will conduct a review of the State program, looking very much at the same information, the adequacy of the program. Is staff adequately trained? Are they meeting their goals?

And then, with the dollars that are allocated to PHMSA as part of our State-based grant, we look at the dollars that the State has projected that they have for the State program. Then, we add those dollars, and then, factor in the score. And that ultimately provides the funding to the State.

It has been mentioned before that, while PHMSA can fund up to 80 percent, over the last few years it has hovered more closely to about 70 percent. And actually, one of the things that we have done—we recognize the importance of funding the State programs. Occasionally, we will get a question about, well, what do you do for poor-performing States? And one of the answers is we can reduce the amount of funding, but, to me, that is counterproductive. Why would you reduce the amount of funding? So, we try to keep the funding as robust as possible. But, in the last few years, we have

actually taken some unused funds at PHMSA and moved it over to the State-based program to put in as much dollars as we can for the program.

Mr. JOHNSON. OK. Well, thank you.

And I apologize for going over, Mr. Chairman. Thanks for the indulgence. I yield back.

Mr. RUSH. The Chair now recognizes Ms. Kuster from New Hampshire for 5 minutes.

Ms. KUSTER. Thank you, Mr. Chairman.

And thank you to all of you for being with us today.

I want to dive right into an accident that was very close to home in the neighboring community. In September of 2018, an accidental release of high-pressure gas caused an explosion just across the border from my district in Lawrence, Andover, and North Andover, Massachusetts, referred to as the Merrimack Valley incident. Over 130 structures were damaged as a result of the accident. More than 20 individuals were injured and, very sadly, one person lost their life.

So, what we have learned is that the tragic accident could have been completely avoided. And it is imperative, in my view, that Congress work to identify additional safety measures that can help prevent these types of accidents. So, I want to address Mr. Elliott. My understanding is, in 2011, the Pipeline Safety, Regulatory Certainty, and Job Creation Act required the use of automatic or remote-controlled shutoff valves on transmission pipelines, but, to date, PHMSA has not implemented this mandate, despite the NTSB finding that the use of the automatic shutoff valves is effective in preventing and reducing the severity of pipeline explosions. So, my question is, why has PHMSA not implemented this mandate over 8 years since this bill was signed into law?

Mr. ELLIOTT. Thank you for your question, and we continue to feel for the Rondon family and the loss of their loved one in the incident up in Massachusetts.

You are correct that the requirement for automatic shutoff on transmission lines is part of the rupture detection and valve rule. In this case, we were dealing with a gas distribution line. And so, the rules didn't necessarily apply there.

But let me just expand what I think needs to be done or what we can do there. And I think it is important to say——

Ms. KUSTER. And is there any sense of urgency?

Mr. ELLIOTT. Congresswoman, I think there is a significant sense of urgency. I think this is a case, too, where the importance between PHMSA and the State partners actually works as intended. This was, in every sense of the word, a monumental failure on the part of the operator. We set the minimum standards, Federal standards, for pipeline safety. States can, and have for many years—and it has been over 50 years that States have been allowed to oversee their intrastate process—but the States had the ability where, if it is not in conflict with the minimum Federal regulations, to apply their own regulations to strengthen what the Federal Government has in place. And that is exactly what happened in Massachusetts. If you recall, the State legislature included specific language that now requires a professional engineer to sign off

on the plan, in the belief that doing that would have prevented this incident.

The minimum Federal requirements are very clear. They require qualified individuals and a qualification process at every step of the process. So, we believe that the Federal standards, if they had been adhered to in the Merrimack Valley incident, would have prevented this. But this is a good case where the State felt they needed to go above and beyond the Federal standards.

I think, going back to your original question, I think there will be a lot further discussion about the importance of automatic shutoff valves not just on transmission lines, but on gas distribution lines.

Ms. KUSTER. So, what is the holdup from instituting this requirement?

Mr. ELLIOTT. Right. Well, as I had mentioned before, the rupture detection and automatic valve rule is probably one that has languished the longest at PHMSA. It is in a Notice of Proposed Rulemaking stage. We have finished our work on it. And I have committed that we will move that not only into the Notice of Proposed Rulemaking, so we can get it out to get public comment, but, then, move it to the final rule as quickly as possible. It is still on schedule to become a final rule before the end of the year.

Ms. KUSTER. Can I ask you, do you know what percentage of new pipeline infrastructure has automatic shutoff valves? Is this accepted technology now and it is being installed?

Mr. ELLIOTT. I do not know specifically, but I can determine that, and I will as quickly as possible get back to you with that information. But I don't have the specifics of that.

Ms. KUSTER. And what is your sense of the timeline for when Congress can expect, and the public, the American public, for the mandate for the automatic shutoff valve to be implemented?

Mr. ELLIOTT. Well, again, that rule, even though it is in a Notice of Proposed Rulemaking stage, we still have it on the books to be completed in this year. That may be a bit aggressive, but we are going to work as hard as we can at PHMSA to move that bill forward.

Ms. KUSTER. I appreciate that, and I urge you, the urgency of now to protect our constituents. So, thank you.

I yield back.

Mr. ELLIOTT. Thank you, Congresswoman.

Mr. RUSH. The Chair thanks the gentlelady.

The Chair now recognizes the gentleman from Indiana, Mr. Bucshon, for 5 minutes.

Mr. BUCSHON. Thank you, Mr. Chairman.

I think you can see the bipartisan frustration with delays in action from Federal agencies. This is, not blaming anyone here, but this is kind of a frustration not only in this area, but across the board where congressional intent, determined and passed into law sometimes decades before, has not been carried out. And it is a frustrating problem, and it sounds like you are doing the best, Mr. Elliott, at least at PHMSA to resolve some of those frustrations.

I also want to say that, just as technology evolves in our own personal lives—you know, no one would go out and buy a computer with 20-year-old technology—we shouldn't be putting pipelines in

the ground with 20-year-old technology. As Mr. Griffith pointed out, there is new technology, including fiber optics, that, in my view, if we are putting new pipeline in the ground and technology exists, we should find a way to utilize that, because we wouldn't buy a computer for ourselves with 20-year-old technology. It makes no sense. This happens across the Government, and it is very frustrating. I understand that there are stakeholders and there are costs involved in new technology, but we need to be more nimble in this process, especially as it relates to something as critical as pipeline safety,

So, with those opening comments, Mr. Friedeman, I have a question. This has been addressed a little bit. But I understand over the last several years States have implemented mechanisms to accelerate the replacement of pipelines. That is a positive thing. In your testimony, you explain how these campaigns have helped rapidly modernize Ohio's aging infrastructure with over 5,000 miles of distribution main lines and more than 1 million service lines being replaced since the inception of the program nearly a decade ago.

How do you at the State level balance the need for these investments with, ultimately, the cost that is borne by the ratepayers? It is a difficult balance, I understand.

Mr. FRIEDEMAN. Yes, sir, it is a difficult balance. I think it is a qualitative as much as it is a quantitative assessment.

Mr. BUCSHON. Yes.

Mr. FRIEDEMAN. As I indicated previously, there is a sensitivity relative to affordability, an acknowledgment that affordability is not a constant across all ratepayers. And then, it is very difficult, as you suggest, to assign a quantitative value to that. It is a consideration. It is a variable that goes into the decisionmaking process. I can't be more specific than that. I am sorry, I hope that is responsive——

Mr. BUCSHON. No, that is. I mean, it is a difficult process as it is in southern Indiana, you know, and the State of Indiana, where we have the need for updating pipelines and other infrastructure. And then, of course, people like me hear back from our constituents about that, and I think sometimes maybe we don't, as a society, give as much information about the process to everyone, so that people understand. I think most people understand, if you have more safe and updated pipelines, that may necessitate in the short run, or even in the long run, higher rates to cover the capital improvements that have been made. And I think sometimes the frustration that I hear is that that understanding of that is not projected as well as it could be maybe to the ratepayers. And I am sure you guys do a great job of trying, doing your best to do that. But I would encourage everyone to try to project that to the ratepayers, because we hear about it.

We also hear about unfunded mandates from the Federal Government, and specifically, EPA and a number of other agencies that are blamed for that. But, many times, again, it is just a frustration.

Mr. Russell—and I have about a minute—as you know, risk-based decisionmaking is the best way to approach complex problems like cybersecurity, especially when you are dealing with 2.7 million miles of pipelines. Is it true that TSA is not attempted to

understand the relative risk of a safety instant among the Nation's most critical pipelines? Would you say that that is true or not true?

Mr. RUSSELL. I think, for their older risk assessment, the one that was done in 2014, one of the observations was not factoring in maybe some of the PHMSA safety data that would get at the age of a system and how that might affect the system's vulnerability. And that is one of the things we would like to see them take on.

Mr. BUCSHON. OK, great. And then, the last thing I will say is I am still struggling, me personally, to understand why the TSA, as the agency of record on some of these things—and I suspect that has happened over time—but I think someone mentioned that maybe we should revisit the jurisdictional issues related to pipeline safety as part of our reauthorization. I just want to throw that out there.

Thank you. I yield back.

Mr. DOYLE [presiding]. The gentleman's time has expired.

The Chair recognizes Mr. O'Halleran for 5 minutes.

Mr. O'HALLERAN. Thank you, Chairman and Ranking Member, and to all our witnesses before us today for joining our conversation on how Congress can ensure the pipelines of today do not harm our citizens, our economy, and environment of tomorrow.

I believe Congress has a duty to legislate; the agencies have a duty to carry out the laws and implement regulations in the spirit of the statute. In this vein, Mr. Chairman, it is my hope that we, as a committee, can continue working in a bipartisan fashion, as we have in the past, to reauthorize the Pipeline and Hazardous Materials Safety Administration's pipeline safety program.

Administrator Elliott, I thank you for appearing before our committee today to provide perspective regarding pipeline safety issues. However, given TSA's role overseeing their pipeline security program, and with the growing threat of cyberattacks facing our Nation, I find it troubling that TSA neglected to send a representative to appear before us in this vein. Hiding from the GAO report's negative findings is not the way to do this. Sooner or later, the TSA will have to let the American people know why they have not met their duty. And I just, having been involved in public safety in the past, I just can't imagine why this type of process is not addressed in an appropriate way.

Administrator Elliott, I appreciate the diligent, behind-the-scenes consultation you described in your testimony before our agency issues a rulemaking. However, since you became Administrator, which specific new actions and processes have you put into place to ensure these rulemakings are done in a timely fashion?

Mr. ELLIOTT. Well, Congressman, thank you for the question, and especially with regards to security. I think Ranking Member Upton said it best. At PHMSA, we understand you can't separate safety and security, and even though we have the safety function, the professional men and women of PHMSA that are out doing the inspections, I think it is worth mentioning, also are trying to, where they can, identify security concerns and convey that back to the industry and our colleagues at TSA.

With regards to what we are doing to try and expedite the rulemaking process, besides focusing on the sheer importance of mov-

ing the mandates, which I can guarantee we focus on every day, one of the things we have done that may have had, or will have, the best outcome is, you know, PHMSA really is two modal administrations in one. And we have actually just started to complete the work of basically bringing all the rulemaking activities into one single entity within PHMSA. And that's going to allow us to be more agile, more responsive to rulemakings, both on the pipeline and the hazardous material surface transportation side. It basically gives us the same ability to bring new resources together to form a single entity that is going to allow us to do work quicker and more efficiently, and again, as we say, flex more, depending on where the regulatory need is going to be. So, that is probably the most important thing we have done, other than focusing on mandates each and every day, sir.

Mr. O'HALLERAN. I thank you.

Section 30, Mr. Elliott, of the 2011 Pipeline Safety Act requires development of protocols to consult with Indian tribes that have hazardous material pipelines within their jurisdiction, and we know many of them do. How would you describe the agency's protocols to work with tribes on a pipeline near a reservation boundary and with the spill response zone entirely within the reservation?

Mr. ELLIOTT. Congressman, thank you for the question. Actually, I think it is good, and I will explain why. It was last year, in 2018, that one of the senior field members of the pipeline team actually prepared a protocol that sets out how we are going to communicate with tribal authorities before we go in to do inspections, typically, with oil and gas operators. That is kind of independent of what the operators do, but we feel that it is absolutely necessary to make sure that we provide the communications, and more importantly, the respect to the tribal leadership about the pipelines that operate underground within their territories. But I think, more importantly, to also create a stronger link between the tribal leadership and the PHMSA representatives, so they know who to call.

Mr. O'HALLERAN. Thank you, Mr. Elliott.

Mr. Chairman, as a citizen—forget the fact that we are here in Congress—but, just as a citizen, it really perturbs me that an agency of Government does not appear before the oversight committee.

Thank you very much.

Mr. DOYLE. The gentleman yields back.

I think both sides of the aisle and this entire committee shares your thoughts on that.

The Chair now recognizes Mr. Walberg for 5 minutes.

Mr. WALBERG. Thank you, Mr. Chairman.

And thanks to the panel for being here.

Administrator Elliott, thank you for being here, and thank you wearing that amazing blue tie. With a Buckeye at the other end of the table, we appreciate a Wolverine representation there.

[Laughter.]

I don't know if anybody else noticed, but I did. And after the 10 years football drought we have had, we will take anything.

Mr. Elliott, as you know, one of the challenges for States in colder climates like Michigan is inspecting pipelines for potential cracks, leaks, and not having to shut off or disrupt gas flow, especially in winters like last winter with the polar vortex that we ex-

perienced. That is why I am excited about the development of new technologies like robotic smart pigs for in-line inspections that could be used to help make pipelines safer. Other developments in recent years include drones for mapping and detecting leaks, software solutions to help analyze pipelines, and, as Mr. Griffith mentioned, fiberoptic cable technologies.

My question is, how does PHMSA work with operators or other technology innovators to develop and identify potential technologies for further attention in its regulatory processes? And secondly, what could Congress do to help drive innovation and foster an environment where operators can incorporate new technologies and best practices?

Mr. ELLIOTT. Well, Congressman, thank you for the question. With regards to my tie, while it is not the beloved cream and crimson of my Hoosiers, at least it is Big 10 colors.

Mr. WALBERG. Thank you.

Mr. ELLIOTT. You are welcome.

With regards to how we can continue to foster accelerated growth in technologies, especially technologies that provide greater safety, as I mentioned earlier, I think there are two important ways to do that. One is the absolute responsibility of PHMSA, and not only me, but the staff—I get the opportunity to talk to a lot of oil and gas executives, and it is probably one of the first points that I always make about the importance of safety technology and how we need to continue to invest, again, not so much in safe R&D, but, basically, some of the step-change safety that will help, I think, get us this next level of safety.

But I think the second part is from the congressional point of view. I think, again, have this great thirst to understand, I mean to ask industry to come in and be very specific about their paths to more aggressive implementation of this safety technology.

I came from the railroad industry where we have seen tremendous improvements in technology and R&D, all designed to eliminate causes of incidents that will create catastrophic incidents, rail incidents. And I have seen the same thing in the pipeline incident.

But I think the one thing that is missing is the ability to communicate that effectively to those people, both on the regulatory side as well as the congressional side, to fully understand what is going on, and then, to provide good recommendations about how all that good work can be——

Mr. WALBERG. How the program is helpful?

Mr. ELLIOTT. Yes.

Mr. WALBERG. Thank you.

Mr. Friedeman, as we have heard today, while PHMSA still has mandates for the 2011 reauthorization unfinished, they have made the most of the resources they have to bring these complex technical rulemakings close to the finish line. However, as you noted in your testimony, States can play an important role in taking some of the burden off of PHMSA by assuming safety authority over interstate gas pipelines. Like Ohio, Michigan is one of only eight States that act as interstate agents and perform inspections. Can you describe how your relationship with PHMSA has impacted the overall safety and integrity of Ohio's pipeline system?

Mr. FRIEDEMAN. In my discussions with the safety team at the commission, once again, anecdotally, that relationship I think is perceived by staff to be very productive, to be mutually respectful. And I believe there is, in becoming an interstate agent, an assumption of responsibility and an acknowledgment of the responsibility to promote the welfare of the citizens of Ohio. I would commend the State of Michigan for doing the same. I would believe that there is that same assumption of responsibility and acknowledgment at play there.

I think, given the activities within the State of Ohio that I, hopefully, described today, you can appreciate the sheer magnitude of pipeline activity nationally. I mean, it is absolutely remarkable. There are in excess of 2 million miles of distribution, transmission, and gathering lines.

In order to accept the charge of a regulator or responsibility of a regulatory to promote general welfare and the delivery of adequate and reliable service, and safe service, I think the magnitude underscores the compelling need of the parties to act in a cooperative and coordinated fashion. Again, I believe that the relationship between PUCO and PHMSA is a clear demonstration of what can be accomplished through that coordination.

Mr. WALBERG. OK. Thank you.

I yield back.

Mr. RUSH [presiding]. The Chair now recognizes the gentleman from North Carolina, Mr. Butterfield, for 5 minutes.

Mr. BUTTERFIELD. Thank you very much, Chairman Rush. Thank you for holding today's hearing.

This topic is a very timely one for my district, as two people tragically lost their lives, and others were seriously injured, as a result of an explosion originating from a natural gas line in Durham, North Carolina, that occurred on the morning of April 10th of this year. I just received a news break just a few moments ago that there is yet another gas leak in the 500 block of Duke Street there in Durham. We don't know the extent of it. The news reports are that no one has been injured, and that is a good report.

But, Mr. Chairman, the explosion in Durham demonstrates just how important the safety and security of our pipelines are and how the work of this subcommittee to reauthorize the Federal pipeline safety program is critically important.

And let me thank the three witnesses. But I will first address this question to the Administrator. Do you have any knowledge of the Durham explosion that I made reference to a moment ago?

Mr. ELLIOTT. Congressman, yes, I do.

Mr. BUTTERFIELD. Can you elaborate on it for me, if you could?

Mr. ELLIOTT. Congressman, we were saddened to learn of the second loss of life from this incident.

When incidents occur—and we are very thankful that in the State of North of Carolina we have a very good pipeline partner—but what we typically do anytime that there is a fatality, serious injury, or significant evacuations, we will dispatch members of our Pipeline Accident Investigation Division to go in and assist the State. And I need to underscore that, assist the State, because they have the predominant oversight.

We know that, when we arrived, it was still kind of being treated as a fire scene and that other agencies were there as well. We worked with our State partners, and I do know that one of the problems in helping, that has prohibited us from basically understanding the specific point of damage with the distribution line is the damage to the building and the asbestos-containing material and the debris. So, they have actually had to do an asbestos clean-up.

We know that they are getting close to being able to do the excavation of the actual distribution line that was hit by the boring machine. Our accident investigation team will be there again to assist the State. And then, once that area is uncovered, then that piece of pipe will go to, typically, go to a laboratory for analysis. So, we will continue to work with the State to assist in the investigation in any way we can.

Mr. BUTTERFIELD. But, based on you investigation thus far, do you believe that there could have been anything done to avoid this explosion?

Mr. ELLIOTT. Well, you know, this was a case where the excavation putting in the fiber optics had done the one call. The lines had been marked. But I think one of the determinations we are going to have to make is whether or not this was an area where the operator would have been required to do an excavation, to hand dig, and look to make sure that the directional boring didn't strike the distribution line. So, I think we will know more after the investigation is complete, Congressman.

Mr. BUTTERFIELD. Thank you.

Mr. Chairman, I yield to my friend from Iowa, if he wants to consume some of my time. If not, I will yield back.

Mr. LOEBSACK. Go ahead.

Mr. BUTTERFIELD. I yield back. Thank you.

Mr. RUSH. The Chair recognizes Mr. Olson for 5 minutes.

Mr. OLSON. I thank the Chair for holding this very important hearing to Texas 22.

And welcome, to our three panelists, to the first panel.

My first question is for Administrator Elliott. As you might know, I represent one of the fastest-growing communities in the country. Our pop base in Texas 22 is booming. In some areas, we have thousands and thousands of families who are living on a land that used to be rice, sugarcane farms, and cattle operations. That has made big changes for flood control, like Hurricane Harvey, but it has also put a challenge on pipeline safety. Clearly, there are pipelines all across Texas that used to be under wide-open spaces that are now under families' feet and schools. My district has that problem, that situation, over and over and over.

I would like to ask you about how inspections and, quote/unquote, "class location rules" change as land above pipelines changes. Am I correct that there has been a rule in the works since 2013? And will you work closely with Congress to make sure you all are taking it seriously?

Mr. ELLIOTT. So, Congressman, thank you for the question. With regards to how class location evolves with the increase of population, as you know, there are several class locations. And as new growth occurs near a pipeline, then there are certain restrictions,

and it is the responsibility of the operator to determine that growth. Are there now buildings and populations? And then, they have the responsibility to do several things. One of them is to reduce the pressure of the pipeline that is now going through this high-consequence area, part of the class location.

Mr. OLSON. One question for you on your workforce. At breakfast this morning with a lead in the energy operations, somebody in touch with the pipeline industry. And they are concerned because they admitted they poach your people. Your people, our best and brightest, they can pay them a lot more than you can pay them.

Mr. Doyle and I have a bill that addresses this for FERC by addressing them to have higher pay than the normal Federal level. Would that be something you would like to have? Have a little weapon to keep them? Because, again, they admitted these are great people; we want them in our employ; and so, we are poaching off of PHMSA.

Mr. ELLIOTT. Well, certainly we are in competition with industry. And when we do hire pipeline inspectors who typically have engineering degrees, and after we put them through some of the best possible training, they even become more marketable to industry folks. So, we are always looking at ways, Congressman, to find new sources of recruiting. I mentioned a little earlier, our HR Director has actually been tasked to go into colleges and universities that have engineering programs and, basically, do a better job of selling the safety mission of PHMSA, because I think that is attractive to a lot of folks.

We continue to look at ways to incentivize individuals that want to come to work for PHMSA. One of the most alarming things to me, for example, we had 10 job offers out for pipeline engineers. Sixty percent turned that offer down for various reasons. Many of those are actually because they had better offers elsewhere.

So, I guess that is a long way of saying we probably would encourage any help we could get to better incentivize pipeline——

Mr. OLSON. So, it would be OK with more money, not the restrictions that are placed right now, something like the SEC has to regulate securities and exchange. Would you be OK with more money to pay these people?

Mr. ELLIOTT. I would be happy to see that, but I will work with whatever tools I have.

Mr. OLSON. Yes, sir, that is our toolbox to give you.

The last questions is, Commissioner Friedeman of Ohio, as Texas 22 grows, we know that a lot of new pipe is being built, especially for local distribution lines. You described in your testimony how one phase is replacing older existing lines. Can you talk about how pipeline technology has changed in recent years and what this means for safety and spill prevention?

Mr. FRIEDEMAN. I think inherent in the replacement program is that, first of all, it is an inevitably long duration because of the scope of the activity required. And the natural consequence of that is technological advancement as the program evolves. An illustration of that would be the composite material in plastic. So, there is a certain remedial nature when you have an accelerated main replacement program that identifies pockets and susceptibility. When you replace old infrastructure with new infrastructure, not

only are you mitigating the risk associated with leakage, but what you are doing is replacing it with technologically improved composite material at the time, which should, then, extend the useful life beyond that which was historical. So, there is just an inherent benefit to a well-coordinated program.

Mr. VEASEY [presiding]. I thank you.

I yield myself 5 minutes.

Mr. Elliott, I wanted to ask you, in your testimony you reiterated that, "The mission of PHMSA is to protect people and the environment by advancing the safe transportation of energy products and other hazardous materials that are essential to our daily lives." And most of the time, we do pretty well at achieving this mission, but incidents are too frequent, and everybody knows that we have to do better.

Last year, February the 23rd, Linda Rogers was just 12 years old when she was killed by a natural gas leak and an explosion in her family's home in the district that I represent in Dallas. And we know the difference between transmission and distribution of natural gas, and the different approaches to safety that are obviously required for each of those. But, after this explosion, more than 300 nearby homes were evacuated due to the quantity and severity of the natural gas leaks discovered in the residential neighborhood, and reports show that more than 2 dozen homes across the north Texas and central Texas area have blown up since 2006 because of leaking from natural gas pipelines. And tragically, nine people have died and at least 22 others have been injured badly.

I appreciate you making clear in your testimony that completing the hazardous liquid rule, which includes installing a leak detection system, is one of your highest priorities. Do I have your commitment on making leak detection systems a priority in this rule?

Mr. ELLIOTT. Yes.

Mr. VEASEY. Beyond a rulemaking effort, there are recent pipeline industry-recommended practices addressing pipeline safety systems, leak detection, and integrity management systems that have been developed by the American Petroleum Institute in response to recent disasters. What are you doing to incorporate industry-recommended practices into your regular scheme?

Mr. ELLIOTT. Congressman, thank you for the question. And we are very aware of the tragic incident in Dallas with Atmos Energy. And, similarly, we had sent inspectors and investigators to work with the Texas Railroad Commission. We continue to work with them on some of the ongoing concerns.

But we will, with regards to the mandates, we will continue to work to complete those that will bring the greatest safety value to not only protecting people, as you said, as well as the environment.

Mr. VEASEY. Do you have any programs or efforts to collect and promote industry best practices?

Mr. ELLIOTT. And again, yes, and to that, we regularly will look at industry standards that have been in practice for a while that have shown tangible safety benefits. And we will, then, through incorporation, make those regulations. We have several of those that we are working on now, working on the language, and several of those deal with pipeline safety.

Mr. VEASEY. Thank you.

And just kind of switching gears, I wanted to ask, as you know, in today's pipeline technology, we have a lot of technology that is being used for leak detection, different things like that, to make sure that the transmission of natural gas is being done safely. What is being done, because we have talked a lot about it on the grid, but you don't hear it a lot as it relates to pipelines, like hacking, the technology actually being compromised as it relates to transmission of natural gas through pipelines?

Mr. ELLIOTT. Well, I think, as some of the discussion today has pointed out, you cannot separate safety and security. And while we work every day to improve safety, we understand we also have a responsibility, where we can, to help improve security. And one of those areas, actually, that is ongoing now is we are trying to understand, Congressman, how we can go into major pipeline control rooms that control these operations, some of them many thousands of miles in length, and perhaps be a little better armed to ask the pipeline control room operators questions about their SCADA security systems. Are they adhering to best practices within the cybersecurity realm? Again, we don't profess to be the security organization, but I think we can probably do a better job of ensuring that we ask the right questions to help understand that they are, in fact, doing that.

Mr. VEASEY. Do you feel that the people that are actually providing the technology, the technology that is being provided to the pipelines, that those companies are being vetted enough and that whatever they are providing to these pipelines is secure enough to make sure that any sort of hacking isn't taking place, and that those companies aren't somehow complicit with that?

Mr. ELLIOTT. Yes, it is certainly outside of my real area of expertise, but I can tell you, again, I fall back on my railroad experience, because we had the same issue with dispatching of trains and the concerns about cybersecurity and positive train control.

And I will tell you, I have every reason to believe that the vetting of companies that are involved in providing that kind of SCADA system, cybersecurity link—I have no reason to believe that the oil and gas industry do not adequately vet those companies.

Mr. VEASEY. Thank you very much. I appreciate you.

Now I yield 5 minutes to the gentleman from North Carolina, Mr. Hudson.

Mr. HUDSON. Thank you, Mr. Chairman.

Mr. Elliott, good to see you again. Thank you for being here with us today to examine ways to increase the safety of our constituents and all Americans.

While pipelines are the safest means of energy transportation, unfortunately, there are from time to time instances of failure. In these moments, it is critical our first responders are trained and prepared to handle these dangerous situations. Back home in North Carolina, some local and small fire stations don't have the budget to send their first responders to specific emergency pipeline safety. Last year, we had over 70 emergency responders take free online classes to receive pipeline emergency response training.

By using technology, we are creating safer communities. In recent years, technology has been developed to internally scan pipe-

lines to find issues and detect leaks before they become a problem. I know a lot of the questions today have surrounded technology, but do you want to just, more generally, add more detail to what PHMSA is doing to encourage pipeline operators to continue innovating and incorporating the most cutting-edge technologies and best practices?

Mr. ELLIOTT. Congressman, thank you for your question. And the first part of the discussion, I don't think we can ever do enough, especially in rural areas with volunteer fire service companies, to do enough in industry, whatever it may be, to train our emergency responders enough. We did that religiously in the rail industry, and I know the pipeline industry has similar practices. But that is something I totally support.

Again, I go back to the topic about technology and innovation, I guess my one area—and I don't necessarily consider it a concern, but I think it is where we have to focus more—that is through the oil and gas pipeline industry. It is, again, to move away from what I consider to be safe R&D and to move into some of the more research and development work that will deliver further safety enhancements.

You know, we have talked about, and I very rarely anymore talk about the fact that the pipeline industry has a rate of 99.997 percent safety. Having come from a heavily regulated industry, I am of the belief that we are not necessarily going to be able to regulate that last little bit of safety. It is going to come through adherence to certain regulatory items like integrity management, I think adherence to very comprehensive safety management systems that are less driven by regulations, but more by the safety culture of the company. And I think continuing to drive and invest more in technology and R&D, again, that is more step change than some of the traditional in-line inspection R&D that is going on today. I think that is where we can have some of the best investments and advancements in safety.

Mr. HUDSON. I agree with you on that. Would you support a pilot program or an alternative process that would allow PHMSA to work more closely with pipeline operators on some of this newer, safer technology?

Mr. ELLIOTT. Absolutely. I mean, one of the criticisms that we have heard, rightfully so, from industry is we are too slow in allowing new safety technology to come to pass. As I have mentioned, we have to be absolutely sure that this new technology does, in fact, deliver not only the ability to extend the life of the infrastructure and to be a surrogate for physical inspection, but it has to deliver safety value. And sometimes it takes us a little longer to understand that. I think our special permit process is good, but I think there are ways we can improve the ability to move good technology into the application process faster than we are able to do it today.

Mr. HUDSON. Appreciate that.

Do you have any recommendations for Congress on ways to encourage more early-stage R&D to supplement the work that PHMSA is doing today?

Mr. ELLIOTT. I mean, I do the best I can, so I will take whatever encouragement Congress can offer to provide greater investment and focus on R&D.

Mr. HUDSON. Well, I would just ask that maybe take that back and think about it. We would appreciate any advice that you have for ways we can partner with you, because I think we all agree, both sides of the aisle, we want these innovative technologies. We want to continue to move in the direction that you are describing where we continue to be on the cutting edge of safety and move as quickly as possible to keep our communities safe. So, if you would take that back as homework, and we would love to have any feedback you might bring back to us.

Mr. ELLIOTT. That is the kind of homework I appreciate. Thank you.

Mr. HUDSON. OK. Thank you.

And with that, Mr. Chairman, I will yield back.

Mr. VEASEY. Thank you, Mr. Hudson.

And now, I yield 5 minutes to the gentlelady from California, Ms. Barragán.

Ms. BARRAGÁN. Thank you.

Thank you for being here today, gentlemen.

Are any of you familiar with the 2015 oil spill in Santa Barbara? Yes, Mr. Elliott?

Mr. ELLIOTT. Yes.

Ms. BARRAGÁN. This was the Refugio State Beach spill.

Mr. ELLIOTT. Yes, the Plains issue?

Ms. BARRAGÁN. All American Plains. Can you tell me how something like this happens and where the pipeline safety program that PHMSA, where do they fall into the picture of this spill?

Mr. ELLIOTT. Well, Congressman, thank you for the question. And undeniably, this was a significant impact. Matter of fact, I just sat through a briefing that NOAA provided last week that actually showed kind of the impact from the point of origin, where the oil came underneath the highway and down the embankment, and then, out into the coast.

I do have to preface my remarks by saying, as you know, it is currently being litigated in the Department of Justice and involved in others. But I will tell you this: that from the PHMSA point of view, we really see this as a case where our integrity management rules and the responsibilities of this operator were not adhered to, and were not adhered to in a pretty significant way.

Ms. BARRAGÁN. Well, there were multiple violations, right? And they weren't fixing what had to be fixed, isn't that right?

Mr. ELLIOTT. That is generally correct, yes.

Ms. BARRAGÁN. How are the American people supposed to trust pipeline companies who can't do the right thing, and then, end up having a spill where you have the California coastline, just marine life, people, economy, and a huge impact? How are the American people supposed to trust when a company tells us day in and day out, "Hey, we are going to come in; we are going to put this in; it is going to be safe; nothing is going to happen"?

We hear the statistics on how safe it is. And then, you see these examples where there are constant violations and they are not doing the right thing. People start asking, Where is the oversight

on this? I think it is hard for the American people to trust these pipeline companies. And it is hard as well when you hear that, since that time, there hasn't been a lot done, and there have been all these delays that are happening.

And so, when you think about the President trying to open up new California coastline, and the coastline in general, to drilling, it is a huge concern, rightfully speaking, after you take a look at what has happened.

Let me ask, the Trump administration's requested budget for PHMSA is roughly 8 percent less in 2020 than it was in 2019. How will that impact the pipeline safety program, and does it open us up to have more incidences of what happened in Santa Barbara, if we are putting less money into it than more?

Mr. ELLIOTT. Well, thank you for that question, very important points. I want to comment about what needs to be done for operators that don't follow the requirements. I think it is true in any case, and at least from my experience in a year and a half at PHMSA, that there is a spectrum. There are some extremely good, conscientious operators, and we are very thankful that they are there. And I understand the issue of public trust. All it takes is one operator to kind of dispel that trust.

I think here, anyway, the process is working probably as it should, in that there were a number of parties to the investigation against Plains, and even criminal investigation and penalty. And again, I can't really get into it, but some discussion is ongoing about what the impact will be to Plains with regards to a settlement.

But in regards to——

Ms. BARRAGÁN. The budget cuts. Is the 8 percent budget cut going to make it more likely, less likely—I mean, how is it going to impact the pipeline safety program?

Mr. ELLIOTT. You know, I worked in my prior career to make sure that every dollar we have is effective in allowing us to conduct our safety mission. And I really see that we are able to do that at PHMSA. It is——

Ms. BARRAGÁN. Mr. Elliott, I only have 10 seconds left. Is an 8 percent cut in the budget going to help safety and the pipeline safety program, yes or no? Is it going to help it?

Mr. ELLIOTT. So, I will make sure that there is no degradation in PHMSA's ability to conduct its safety mission with the dollars that are provided to us, whatever that may be.

Ms. BARRAGÁN. Well, I don't have a lot of confidence in that, but thank you for responding.

Mr. ELLIOTT. I understand.

Ms. BARRAGÁN. I yield back.

Mr. VEASEY. Thank you.

And now, I would yield 5 minutes to the gentlelady from Washington, Ms. McMorris Rodgers.

Mrs. RODGERS. Thank you. I thank the chairman for the time.

And I appreciate all the witnesses being here. I think it has been a really important discussion, a discussion both on current standards and regulations and how we are doing as far as meeting those standards, but also looking at how do we do this in a smarter way, and embracing innovation and technology and the solutions that

are before us. Because we all want to make sure that we are keeping our communities safe and our shorelines safe from these kinds of situations.

I wanted to ask, Mr. Elliott, I just wanted to ask, coming from a rural area, I wanted to dig a little deeper into how do you approach pipelines in highly populated areas versus the rural areas, where there are less people and development. And we have class location requirements for pipelines located in areas where we have seen recent population growth. I just wanted to hear a little bit more about how do you go about the rural versus the more populated. And my colleague here from Texas talked about his growing area, too.

Mr. ELLIOTT. Well, thank you for the question. And certainly, there is an important dichotomy between oil and gas pipelines in populated versus rural areas. I really believe that it falls back to the absolute importance of adherence to the pipeline and safety, the Pipeline and Hazardous Materials Safety Administration's integrity management rules that require pipeline operators to have an absolute adequate understanding of all the operations within their network, whether or not it is a high-consequence area or a rural area, to make sure that that line is operating in as safe a fashion as possible, and that they are doing the appropriate inspections to ensure that any concerns that might be due to weld issues or lack of cathodic protection or corrosion are found and addressed long before they are ever an impact. And I think that our integrity management rules have been extremely effective over the years in making sure in holding operators accountable for understanding the health of their pipeline throughout their network, regardless of whether or not it is rural or high populated.

Mrs. RODGERS. And would you also speak just to, what are the procedures that you have in place to determine the risk? Because whether it is rural or a growing area, or what happened on the California coast, what are the procedures that are in place to address the——

Mr. ELLIOTT. Again, that all, for the most part, falls back to the operator and the application of their integrity management system. But one of the items that we do at PHMSA, I mean, we do our own risk assessment to make sure that we adequately work with operators to do inspections of gas and oil pipeline systems, both in rural and high-density areas. Again, with limited resources, we use kind of a risk analysis. We look at the past history of the operator. We look at past incidents of problems with that pipeline. That helps us set our inspection process to look at these lines.

Mrs. RODGERS. Would you update me on the review? I understand there has been a review underway since 2013 on the class location requirements.

Mr. ELLIOTT. So, the class location rulemaking that we are working on, we put out an Advance Notice of Proposed Rulemaking to seek comment about whether or not industry could use certain integrity management tools in lieu of having to take additional steps in the higher-level class locations, the high-density areas. In other words, can some of this technology and sophisticated in-line inspection capability replace the ability to have to reduce certain pipeline pressures?

And I think it was mentioned earlier, and rightfully so, I mean, some of the growth is basically expanding so rapidly that it is difficult to basically take some of the steps that are currently part of the class location program. So, we are working through a Notice of Proposed Rulemaking that will help us understand more fully can we somehow apply additional integrity management inspection process to higher class locations as we see population growth.

Mrs. RODGERS. OK. I had one more question, and this was to Mr. Russell, but I, too, am frustrated that TSA is not here. And I guess I will ask this final question on the record.

Thank you very much. I have run out of time. I yield back.

Mr. VEASEY. Are there any more questions?

If not, that concludes our first panel. I would like to thank our witnesses for joining us today to testify on this very important issue.

And at this time, I ask staff to prepare the witness table such that we may begin our second panel shortly.

Thank you. Thank you, participants.

Mr. VEASEY. We will now hear from a second panel of private-sector stakeholders. Those witnesses include Mr. Carl Weimer, executive director for Pipeline Safety Trust; Mr. Andrew Black, president and CEO of Association of Pipelines; and Ms. Christina Sames, vice president, operations and engineering services, American Gas Association.

We want to thank our witnesses for joining us today. We look forward to your testimony, and at this time the Chair will recognize Mr. Weimer for 5 minutes to provide his opening statement.

STATEMENTS OF CARL WEIMER, EXECUTIVE DIRECTOR, PIPELINE SAFETY TRUST; ANDREW J. BLACK, PRESIDENT AND CHIEF EXECUTIVE OFFICER, ASSOCIATION OF OIL PIPELINES; AND CHRISTINA SAMES, VICE PRESIDENT, OPERATIONS AND ENGINEERING SERVICES, AMERICAN GAS ASSOCIATION

STATEMENT OF CARL WEIMER

Mr. WEIMER. Good afternoon. I would like to thank Chairman Rush and Ranking Member Upton for inviting me to speak today on pipeline safety and for—I would also like to thank this committee for continuing this bipartisan effort to protect people and the safety of America, as you always do.

Before we get into various pipeline safety issues, let me give you a brief overview of where we stand today regarding the safety of pipelines in this country.

While everyone testifying today supports the goal of zero incidents, we still have a long way to go to reach that goal. According to PHMSA data, since the PIPES Act was signed less than 3 years ago, there has been over 1,700 reportable pipeline failures.

Over those failures, nearly 800 are considered significant incidents under PHMSA's definitions and the number of significant incidents had been increasing over the past decade.

For the past 15 years, the emphasis in reducing pipeline incidents has been focused on performance-based integrity management programs in high consequence areas.

Unfortunately, it would appear that these integrity management programs have not yet lived up to their promise as significant incident rates within high consequence areas continue to climb for hazardous liquid and gas transmission pipelines.

The pipeline safety system that Congress has created also plays a part in PHMSA's inability to get things done. One large barrier to getting better regulations in place is the cost versus benefit analysis that Congress has uniquely created for PHMSA.

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 under the current cost benefit rules.

If you are really interested in longstanding issues such as effective leak detection, automated shutoff valves, regulation of over 400,000 miles of totally unregulated gathering lines, then the cost benefit language in the statute needs to be fixed.

PHMSA's penalty authority also results in civil penalties that are economically insignificant to many operators and are much smaller than those imposed by some States.

The wording in the statute for criminal penalties also does not align with the better wording for PHMSA's hazmat operations and creates a very high bar to prove. We have provided suggested changes to the statute that can give PHMSA more flexibility and penalty assessment in the ability to bring criminal charges on companies in the rare cases where that is warranted.

As currently written, the pipeline safety statutes do not prohibit the release of gas or hazardous liquid from a pipeline.

Under current PHMSA rules as determined by recent court rulings, an operator can cause a significant incident without necessarily having violated a safety regulation.

In other words, under PHMSA's rules, an operator has to have a plan for operating and testing their pipeline but they don't necessarily have to have a plan that works.

To close that loophole, we ask that you add language to make clear that the intent of the statute is to avoid releases of gas or hazardous liquids.

In the PIPES Act, Congress asks GAO to produce important reports on the integrity management program for both natural gas and hazardous liquid pipelines after the new PHMSA rules, which they have been working on since 2010, are published.

Since those rules have yet to be published and may be delayed further, these important reports are not yet due. The current integrity management rules have been in place for over a decade, are well understood, and NTSB has done a study on its effectiveness. So we ask that Congress direct GAO to produce these important reports as soon as possible instead of waiting for the proposed rules.

Congress should also ignore industry calls for a relaxation of class location rules because of integrity management is in place until the GAO reports are done and the number of incidents under integrity management show a downward trend.

Also in the PIPES Act Congress directed PHMSA to make it clear that the Great Lakes, coastal beaches, and marine coastal waters are considered unusually sensitive areas.

This mandate has yet to be accomplished. The need to do this came as a surprise to us since, clearly, these 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 also ask GAO to do a study of whether PHMSA's definitions and identification of such areas along with commercially navigable waterways are consistent with other environmental regulations and whether PHMSA currently has GIS data layers that allow the agency and the industry to know where such boundaries are. Users of this data are to ensure that pipeline operators are accurately identifying these areas.

Congress should also mandate that such areas be made public so State and local governments, along with the public, can ensure that PHMSA and pipeline companies are considering these important areas.

I see that my time is about up so I want to thank you again for asking me to testify today and I stand ready to help answer any questions and work on reauthorization.

[The prepared statement of Mr. Weimer follows:]

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TESTIMONY OF THE PIPELINE SAFETY TRUST

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Presented by:

Carl Weimer, Executive Director

FOR THE

SUBCOMMITTEE ON ENERGY
OF THE
COMMITTEE ON ENERGY AND COMMERCE
UNITED STATES HOUSE OF REPRESENTATIVES

HEARING ON

The State of Pipeline Safety and Security in America

MAY 1, 2019

Good morning Chairman Rush, ranking member Upton, 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.

The Pipeline Safety Trust came into being after a pipeline disaster nearly twenty 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 property damage and economic disruption. While prosecuting that incident the U.S. Justice Department was so aghast at the way the pipeline company had operated and maintained its 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.

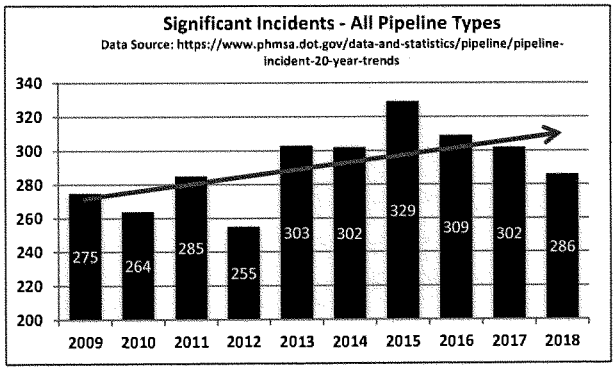
After the Bellingham tragedy our community, from the local level to our congressional delegation, all joined in the effort to ensure that a tragedy like that would "never happen again, anywhere." Unfortunately many tragedies have occurred since then, some of them even worse than Bellingham, and after each tragedy the people in those affected communities try to find a way to ensure it will "never happen again, anywhere." So here I am again today, nearly twenty years after my first testimony, representing all those communities and all those people searching for a way to prevent tragedies so they never happen again. We hope you will continue to work together in a bipartisan way to help us finally accomplish this.

Today I would like to focus my testimony on:

- **An overview of the safety of the current pipeline system in this country**
- **Needed Improvements to the Statutes that Cover Pipeline Safety**
  - ✓ Remove redundant and excessive Cost-Benefit Requirements Under 49 USC § 60102
  - ✓ Civil and Criminal Penalties under § 60122 and § 60123
  - ✓ Need for Mandamus Clause under § 60121
  - ✓ Clarify that reportable unintended releases are prohibited under § 60118
  - ✓ Ensure PHMSA follows the intent of reporting under §60102
  - ✓ Clarify and increase authorized appropriations under § 60125
- **Other Still Needed Improvements**
  - ✓ Require minimum standards for over 435,000 miles of natural gas gathering lines
  - ✓ Performance standards for hazardous liquid leak detection, and gas transmission rupture detection
  - ✓ Requirements for automated remote shut-off valve placement and performance on transmission pipelines.
  - ✓ Pipeline Segments that cross rivers are not sufficiently protected by existing rules
  - ✓ Address shortcomings in the way PHMSA defines and addresses Unusually Sensitive Areas for hazardous liquid pipelines
  - ✓ Reduction in Methane Emissions from Gas Pipelines
- **Hopeful Initiatives in the Works**
  - ✓ The Leonel Rondon Pipeline Safety Act
  - ✓ Safety Management Systems
  - ✓ Voluntary Information Sharing System for Pipelines

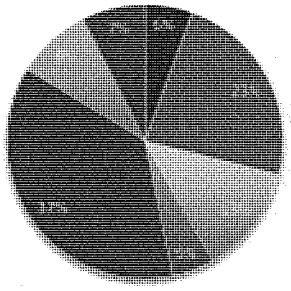
Overview of the safety of the current pipeline system

Before we get too far into 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 years since the President signed the PIPES ACT of 2016, there have been over 1700 reportable pipeline incidents. Of those incidents over 775 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), with the majority of that increase attributable to hazardous liquid pipelines.

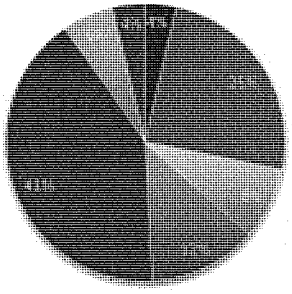


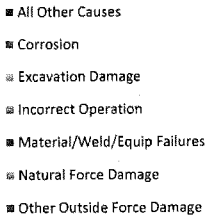
Also of concern is that for gas transmission and hazardous liquid pipelines over 65% of the significant failures in the past decade are from causes the operators ought to have control over such as corrosion, incorrect operations, equipment failures, and problems with the materials they use and the welds they make. The pie charts below, generated from PHMSA data[1], demonstrate this problem.

Causes of Significant Incidents on Gas Transmission Pipelines 2009 - 2018



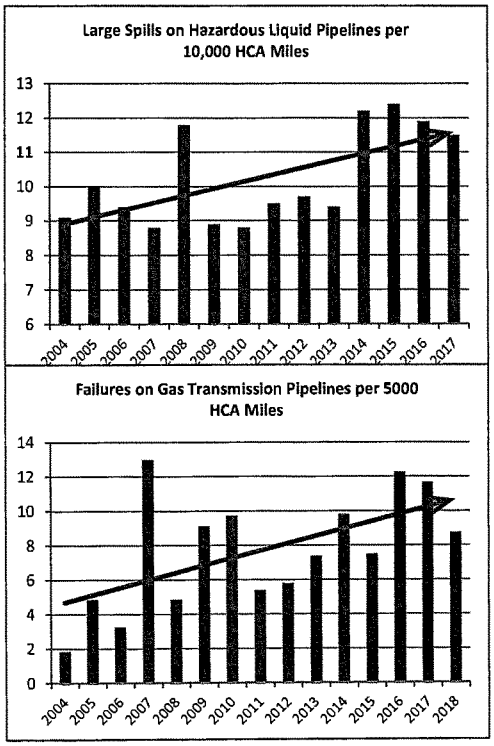
Causes of Significant Incidents on Hazardous Liquid Pipelines 2009 - 2018





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

Over 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 both hazardous liquid 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. These two graphs, generated from PHMSA's Integrity Management Data[2], demonstrate this concern with current integrity management programs. Some in the industry argue that older, prescriptive class location rules can now be relaxed because of the implementation of integrity management, but as the graphs above show it is too early to go to a more performance-based integrity management system until the industry can prove that integrity management works as it should.

Cost-Benefit Requirements Under 49 USC § 60102

The years since 2010 found us too often examining the failures that led to major pipeline incidents: Marshall, Michigan; San Bruno, California; Allentown, Pennsylvania; Sissonville, West Virginia; Harlem, New York; Mayflower, Arkansas; two spills into the Yellowstone River, oil flowing into the ocean off Santa Barbara, multiple homes destroyed in the Merrimack Valley of Massachusetts, and too many more. Against that backdrop of incidents and Congressional directives, NTSB and GAO recommendations, these years also provided a perfect example of a broken regulatory process that left PHMSA incapable of producing a single major new safety rule. There are many reasons the process is not working but chief among them is the unique and onerous cost-benefit requirements that PHMSA finds itself saddled with.

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[2] *Hazardous Liquid Integrity Management Performance Measures - https://www.phmsa.dot.gov/pipeline/hazardous-liquid-integrity-management/hl-im-performance-measures*
Gas Transmission Integrity Management Performance Measures – https://www.phmsa.dot.gov/pipeline/gas-transmission-integrity-management/gt-im-performance-measures

In 1996, a concerted Congressional effort was made to insert cost-benefit analysis requirements into rulemaking requirements under a whole host of environmental protection and health statutes, presumably as a way to reduce regulatory burden and codify the requirements for regulatory cost benefit analyses put in place by Presidents Reagan and Clinton in Executive Orders. Those Congressional efforts ultimately fell short of wide spread success because so many members of Congress realized how such measures in the statute would provide a well funded industry a strong litigation hook that would make it too easy to successfully challenge new regulations and nearly impossible to adequately protect people's health and safety. The 1996 reauthorization of the pipeline safety program, based solely on timing, represents the only health and safety or environmental protection statute where such an explicit directive to an administrative agency to base regulation of risk on a cost-benefit test was actually inserted into statute.

PHMSA rulemaking is therefore subject to two sets of cost-benefit requirements - one under the Pipeline Safety Act and one under the Executive Order that requires an economic analysis of every major rule reviewed by OMB before being published as a proposed rule and subject to comment. We urge you to put PHMSA's rulemaking on an even playing field with all other agencies by amending 49 USC § 60102 to eliminate references to the risk assessment/cost-benefit analysis in §60102(b)(2)(D) and (E); §60102(b)(3), (4), (5) and (6). PHMSA would remain subject to the requirements of the Executive Orders requiring a cost benefit analysis of major rules proposed by any agency, and the requirements for transparency in rulemaking provided by the existing statute and procedures.

A clear example of problems excessive cost benefit analysis can cause can be seen in the lack of regulation of rural natural gas gathering lines. According to a recent briefing from PHMSA[3] to the Gas Pipeline Advisory Committee they estimate that there are over 438,000 miles of such gathering lines in the country falling outside of any federal or state pipeline safety regulation. Many of these lines are the same size and pressure as transmission pipelines, so pose the same risk. The regulation of these lines has been one of our top priorities for years now, and it is now one of the state regulators' top priorities also. In 2010 the state regulators passed a resolution[4] that says in part:

> ***WHEREAS: In the newer gas gathering systems, it is not uncommon to find rural gas gathering pipelines up to 30" in diameter and operating at a MAOP of 1480 psi.***
>
> ***NOW THEREFORE BE IT RESOLVED: That NAPSR urge PHMSA to modify 49 CFR Sections 192.8 and 192.9 to establish regulatory requirements for gathering lines in Class 1 areas:***

Since these 438,000 miles of pipelines are completely unregulated no one collects any information about their location, construction, size, pressure, risks, failure incidents, etc. Since no regulator collects any information it is nearly impossible for PHMSA to pass regulations because how can they quantify the required costs or benefits? In a recent position paper on gathering lines[5] the industry claimed that if

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[3] *PHMSA Gas Pipeline Advisory Committee Meeting Pre-briefing, December 20, 2018 - https://primis.phmsa.dot.gov/meetings/FilGet.mtg?fil=1028*

[4] *http://www.napsr.org/SiteAssets/NAPSR-Resolutions-Open/201002%20Gas%20gathering%20line%20class%201%20Resolution.pdf*

[5] *Joint Position Paper, API & GPA Midstream Assoc. - https://www.regulations.gov/document?D=PHMSA-2016-0136-0045*

PHMSA moved forward with a relatively weak gathering line rule it would cost the industry 28 billion dollars. PHMSA finds itself in a no win situation based on cost benefit requirements that effectively make it impossible to move forward on needed rules without first going through years of costly information collection, (which will also be opposed by industry), to be able to complete a cost benefit analysis. How, under this cost-benefit requirement in the statute can PHMSA, knowing full well that the industry will challenge any such regulation, construct a rule that protects people from a known risk?

Proposed fix for this problem – remove highlighted language

§ 60102. Purpose and general authority

(b) PRACTICABILITY AND SAFETY NEEDS STANDARDS.—

(1) IN GENERAL.—A standard prescribed under subsection (a) shall be—

(A) practicable; and

(B) designed to meet the need for—

(i) gas pipeline safety, or safely transporting hazardous liquids, as appropriate; and

(ii) protecting the environment.

(2) FACTORS FOR CONSIDERATION.—When prescribing any standard under this section or section 60101(b), 60103, 60108, 60109, 60110, or 60113, the Secretary shall consider—

(A) relevant available—

(i) gas pipeline safety information;

(ii) hazardous liquid pipeline safety information; and

(iii) environmental information;

(B) the appropriateness of the standard for the particular type of pipeline transportation or facility;

(C) the reasonableness of the standard;

~~(D) based on a risk assessment, the reasonably identifiable or estimated benefits expected to result from implementation or compliance with the standard;~~

~~(E) based on a risk assessment, the reasonably identifiable or estimated costs expected to result from implementation or compliance with the standard;~~

(F) comments and information received from the public; and

(G) the comments and recommendations of the Technical Pipeline Safety Standards Committee, the Technical Hazardous Liquid Pipeline Safety Standards Committee, or both, as appropriate.

~~(3) RISK ASSESSMENT.—In conducting a risk assessment referred to in subparagraphs (D) and (E) of paragraph (2), the Secretary shall—~~

~~(A) identify the regulatory and nonregulatory options that the Secretary considered in prescribing a proposed standard;~~

~~(B) identify the costs and benefits associated with the proposed standard;~~

~~(C) include—~~

~~(i) an explanation of the reasons for the selection of the proposed standard in lieu of the other options identified; and~~

~~(ii) with respect to each of those other options, a brief explanation of the reasons that the Secretary did not select the option; and~~

~~(D) identify technical data or other information upon which the risk assessment information and proposed standard is based.~~

~~(4) REVIEW.—~~

~~(A) IN GENERAL.—The Secretary shall—~~

~~(i) submit any risk assessment information prepared under paragraph (3) of this subsection to the Technical Pipeline Safety Standards Committee, the Technical Hazardous Liquid Pipeline Safety Standards Committee, or both, as appropriate; and~~

~~(ii) make that risk assessment information available to the general public.~~

~~(B) PEER REVIEW PANELS.—The committees referred to in subparagraph (A) shall serve as peer review panels to review risk assessment information prepared under this section. Not later than 90 days after receiving risk assessment information for review pursuant to subparagraph (A), each committee that receives that risk assessment information shall prepare and submit to the Secretary a report that includes—~~

~~(i) an evaluation of the merit of the data and methods used; and~~

~~(ii) any recommended options relating to that risk assessment information and the associated standard that the committee determines to be appropriate.~~

~~(C) REVIEW BY SECRETARY.—Not later than 90 days after receiving a report submitted by a committee under subparagraph (B), the Secretary—~~

~~(i) shall review the report;~~

~~(ii) shall provide a written response to the committee that is the author of the report concerning all significant peer review comments and recommended alternatives contained in the report; and~~

~~(iii) may revise the risk assessment and the proposed standard before promulgating the final standard.~~

~~(5) SECRETARIAL DECISIONMAKING.—Except where otherwise required by statute, the Secretary shall propose or issue a standard under this Chapter 1 only upon a reasoned determination that the benefits of the intended standard justify its costs.~~

~~(6) EXCEPTIONS FROM APPLICATION.—The requirements of subparagraphs (D) and (E) of paragraph (2) do not apply when—~~

~~(A) the standard is the product of a negotiated rulemaking, or other rulemaking including the adoption of industry standards that receives no significant adverse comment within 60 days of notice in the Federal Register;~~

~~(B) based on a recommendation (in which three-fourths of the members voting concur) by the Technical Pipeline Safety Standards Committee, the Technical Hazardous Liquid Pipeline Safety Standards Committee, or both, as applicable, the Secretary waives the requirements; or~~

~~(C) the Secretary finds, pursuant to section 553(b)(3)(B) of title 5, United States Code, that notice and public procedure are not required.~~

(7) REPORT.—Not later than March 31, 2000, the Secretary shall transmit to the Congress a report that—

(A) describes the implementation of the risk assessment requirements of this section, including the extent to which those requirements have affected regulatory decisionmaking and pipeline safety; and

(B) includes any recommendations that the Secretary determines would make the risk assessment process conducted pursuant to the requirements under this chapter a more effective means of assessing the benefits and costs associated with alternative regulatory and nonregulatory options in prescribing standards under the Federal pipeline safety regulatory program under this chapter.

§ 60115. Technical safety standards committees

(a) ORGANIZATION.—The Technical Pipeline Safety Standards Committee and the Technical Hazardous Liquid Pipeline Safety Standards Committee are committees in the Department of Transportation. The committees referred to in the preceding sentence shall serve as peer review committees for carrying out this chapter. ~~Peer reviews conducted by the committees shall be treated for purposes of all Federal laws relating to risk assessment and peer review (including laws that take effect after the date of the enactment of the Accountable Pipeline Safety and Partnership Act of 1996) as meeting any peer review requirements of such laws.~~

(b) COMPOSITION AND APPOINTMENT

(3) The members of each committee are appointed as follows:

(C) Two of the individuals selected for each committee under paragraph (3)(C) of this subsection must have education, background, or experience in environmental protection or public safety. ~~At least 1 of the individuals selected for each committee under paragraph (3)(C) shall have education, background, or experience in risk assessment and cost-benefit analysis.~~ At least one individual selected for each committee under paragraph (3)(C) may not have a financial interest in the pipeline, petroleum, or natural gas industries.

(c) COMMITTEE REPORTS ON PROPOSED STANDARDS.

(1) The Secretary shall give to—

(A) the Technical Pipeline Safety Standards Committee each standard proposed under this chapter for transporting gas and for gas pipeline facilities ~~including the risk assessment information~~ and other analyses supporting each proposed standard; and

(B) the Technical Hazardous Liquid Pipeline Safety Standards Committee each standard proposed under this chapter for transporting hazardous liquid and for hazardous liquid pipeline facilities ~~including the risk assessment information~~ and other analyses supporting each proposed standard.

(2) Not later than 90 days after receiving the proposed standard and supporting analyses, the appropriate committee shall prepare and submit to the Secretary a report on the technical feasibility, reasonableness, ~~cost-effectiveness,~~ and practicability of the proposed standard and include in the report recommended actions. The Secretary shall publish each report, including any recommended actions and minority views. The report if timely made is part of the proceeding for prescribing the standard. The Secretary is not bound by the conclusions of the committee. However, if the Secretary rejects the conclusions of the committee, the Secretary shall publish the reasons.
(3) The Secretary may prescribe a standard after the end of the 90-day period.

Civil and Criminal Penalties under § 60122 and § 60123

The concern: PHMSA's penalty authority, and the agency's implementation of that authority, results in civil penalties that are economically insignificant to many operators, are significantly smaller than those imposed by some states, and are disproportionate to the harm inflicted by pipeline failures. The "hearings" referenced in the statute regarding fines are normally secret, closed door affairs where no record of what has occurred is available to the public, even though often proposed fines are dramatically reduced after those hearings.

Background: From 2002 through 2018, the total amount of penalties collected by PHMSA in completed civil penalty cases (from violations discovered in inspections or following incidents) is just over $56 million dollars combined.[6] In that same timeframe, the nearly *eleven thousand* reported pipeline incidents killed 249 people, injured 1041 and caused property damage approaching $8 billion dollars.[7] Congress increased PHMSA's civil penalty authority in the 2011 reauthorization up to a cap of $200,000 per violation and $2 million dollars for a related series of violations. In spite of that increase, there has not been a corresponding increase in penalties proposed or collected, suggesting that PHMSA remains reluctant to impose penalties. In fact, some dramatic incidents, like the failure and explosion of a NiSource natural gas pipeline in Sissonville WV (caused by corrosion) that destroyed a home and a section of Interstate highway, have resulted in no civil penalties at all.

Some states, notably California, have dramatically increased their use of civil penalties in the last decade, levying large fines like the one levied against PG&E following the San Bruno tragedy. The state regulator fined the utility $1.6 billion dollars for violations related to the 2010 failure in San Bruno and has since fined the utility additional millions relating to subsequent recordkeeping, reporting and other violations. These large fines are possible because the California, and other state statutes, do not have a limit on penalties for a related series of violations. Each day in violation is subject to another penalty.

Fortunately it is very rare that a pipeline operator violates the regulations in a way that would be considered criminal. Our organization, the Pipeline Safety Trust, was born from one of those rare incidents where an operator's actions were proven to be so reckless as to kill members of the public and do uncounted environmental harm. In that case the U.S. Justice Department under President Bush did an outstanding job prosecuting that case, fining the company, and actually getting jail time for company employees. There have only been a handful of other incidents caused by such reckless behavior from

[6] *https://primis.phmsa.dot.gov/comm/reports/enforce/CivilPenalty_opid_0.html?nocache=9634#_TP_1_tab_3 (from 11/29/2018).*
[7] *PHMSA, All Reported Incident Trends, (from 11/29/2018).*

pipeline companies since that case nearly 20 years ago, but it is important not to create barriers that make it difficult to hold companies accountable when they knowingly or recklessly ignore the laws meant to keep people safe. The current statute that applies to pipeline safety - **Title 49 USC § 60123. Criminal Penalties –** sets an unusually high bar for holding companies accountable for criminal behavior. We ask that you align the pipeline safety rules under PHMSA with the PHMSA rules for transportation of hazardous materials and change §60123 to adopt the "willfully or recklessly" language from the Hazmat statute in **Title 49 USC § 5124. Criminal Penalties.**

While PHMSA maintains considerable discretion over when and how much to fine a pipeline company, Congress should at least remove the barriers to adequate enforcement so the agency has the ability to send a message to a company when need be. Congress should also make sure the hearing process where final fines are determined is open to the public, that notice is provided, and that associated non-security-sensitive information is also publicly available.

Recommendations: Eliminate the cap on civil penalties for "a related series of violations," make the hearings public, amend the penalty amount for LNG facilities to a commensurate level with pipelines, and change the language for the standard for criminal penalties to align with the hazardous materials rules. Direct the Secretary to amend the agency's regulations accordingly within 180 days.

Proposed Language to fix this problem

§ 60122. Civil penalties
(a) GENERAL PENALTIES.—

(1) A person that the Secretary of Transportation decides, after written notice and an opportunity for a hearing for which public notice and access must be given, has violated section 60114(b), 60114(d), or 60118(a) of this title or a regulation prescribed or order issued under this chapter is liable to the United States Government for a civil penalty of not more than $200,000 for each violation. A separate violation occurs for each day the violation continues. ~~The maximum civil penalty under this paragraph for a related series of violations is $2,000,000.~~

(2) A person violating a standard or order under section 60103 or 60111 of this title is liable to the Government for a civil penalty of not more than $200,000 ~~$50,000~~ for each violation. A penalty under this paragraph may be imposed in addition to penalties imposed under paragraph (1) of this subsection.

§ 60123. Criminal penalties
(a) GENERAL PENALTY.—A person knowingly~~, and~~ willfully, or recklessly violating section 60114(b), 60118(a), or 60128 of this title or a regulation prescribed or order issued under this chapter shall be fined under title 18, imprisoned for not more than 5 years, or both.

The Need for a Mandamus Clause under § 60121

Goal: Amend the federal Pipeline Safety Act to include a provision allowing actions for mandamus against the agency for failing to fulfill non-discretionary duties under the Act.

Background: In 2015, the City of San Francisco, after witnessing the terrible nearby tragedy in San Bruno, felt so strongly that PHMSA was failing to uphold the statutory requirements and Congressional mandates

under the Pipeline Safety Act that they went to court to force PHMSA to do so. The Ninth Circuit Court of Appeals, without addressing the merits of the case, dismissed the case with an opinion holding that the Pipeline Safety Act does not provide the basis of a mandamus action to force PHMSA to carry out a duty under the Act.[8] The court relied, in part, on the absence of any explicit mandamus remedy in the Actions By Private Persons provision (49 USC 60121).

Recommendation: We believe that local and state governments, and others, should be able to ask the courts to carry out what Congress has required of it in the statutes. This is a common protection in many other laws. We urge Congress to include the following language in this year's reauthorization to close this loophole.

Section 60121 of title 49, United States Code, is amended by adding at the end the following:

> **"(e) MANDAMUS.—A person may bring a civil action in an appropriate district court of the United States to compel the Secretary to perform a nondiscretionary duty under this chapter that the Secretary has failed to perform."**

The Need to Ensure that Unintended Releases are Prohibited under § 60118

Background: As currently written the pipeline safety statutes do not expressly prohibit the release of gas or hazardous liquid from a pipeline. That is, as the Fifth Circuit found in a review of the PHMSA enforcement action following the 2013 spill from the ExxonMobil Pegasus pipeline in Mayflower Arkansas, an operator can cause a reportable incident, or even a significant incident, without necessarily having violated a safety regulation. Because of the performance-based nature of many of the PHMSA rules it is possible for a pipeline operator to have a plan of operations, or an integrity management plan, that meets all of PHMSA's requirements, but still allows releases to happen. In other words under PHMSA rules an operator has to have a plan, but they don't necessarily have to have a plan that works to prevent releases. To close that loophole, we propose that language be added to require operators to avoid releases of gas or hazardous liquids in quantities that would make them reportable incidents under PHMSA regulations. We propose that this prohibition be inserted into 49 USC §60118, the general compliance and waiver section of the statutes. This section is subject to enforcement by PHMSA under §60122 or by the Attorney General under §60120. PHMSA would still maintain their discretion of how to deal with such releases, but this additional language would make it clear that the intent of the statute is to prohibit releases. This also aligns with all the major pipeline industry association's goal of "zero" incidents, and since so many of the PHMSA regulations have moved toward performance based requirements it would provide a good incentive to make sure performance means no releases.

Proposal: Amend §60118. Compliance and waivers by adding at the end of (a) General Requirements the following

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[8] *City and County of San Francisco v United States Department of Transportotion, https://www.transportation.gov/administrotions/office-general-counsel/city-and-county-san-francisco-v-dot*

(5) not release gas or hazardous liquid from a pipeline facility in a quantity that would require the reporting of an incident or accident under regulations prescribed under this chapter.

Ensuring PHMSA Follows the Intent of Reporting under §60102

The existing statute on safety-related conditions reporting is found at **49 USC §60102(h)** and requires the Secretary to promulgate rules requiring the reporting by an operator of any "**condition that is a hazard to life, property, or the environment**", and "**safety related condition that causes or has caused a significant change or restriction in the operation of a pipeline facility.**" Reports are to be received within 5 working days after the operator establishes that such a condition exists.

PHMSA refers to these reports as the leading indicators it collects, as compared to incident reports, which are lagging indicators of safety. Collecting information about hazardous conditions that *could cause* incidents allows the agency to examine those conditions, determine their frequency and degree of risk, and perhaps to pre-emptively issue advisories or regulations to prevent recurring hazardous conditions from becoming a spate of pipeline facility failures. The agency describes them this way, acknowledging that the exemptions included in the implementing regulations reduce the value of these reports as a performance measure:

> ***"Leading indicators are precursors that may lead to an accident or injury. They can be used to monitor the effectiveness of integrity programs and safety management systems before accidents, damages, or failures happen. As leading indicators focus on enhancing performance and reducing the probability of serious accidents, they can compensate for any shortcomings of lagging performance indicators.... PHMSA regulations require operators to submit reports for certain conditions before a leak has actually occurred. However, the regulations include numerous exemptions from reporting. These exemptions reduce the value of SRCR as a performance measure."*** [9]

The regulations, found at 49 CFR part 191.23 and 195.55, rather than requiring reporting of the conditions the statute broadly describes as hazards to life, property or the environment, as well as safety related conditions that restrict the operation of a facility, instead identify a limited number of specific (although ill-defined) types of conditions that must be reported and then provides several exemptions from the requirement to report even that limited subset of conditions. For example, wholly exempted from reporting requirements are hazardous conditions that exist more than 200 meters from a building intended for human occupancy or outdoor place of assembly and those that are repaired or otherwise corrected before the report is due (5 days), as well as abnormal loading or movement of a pipeline from environmental or seismic causes unless the movement "impairs the serviceability of a pipeline."

It is important to remember that the point of making reports of hazardous conditions that don't cause incidents is to allow the regulator to learn about their frequency and degree of risk so it can proactively respond to identified risks. The exemptions to reporting requirements prevent these reports from being

[9] *Leading Indicators - SRCR and IM Notifications*
https://www.phmsa.dot.gov/data-and-statistics/pipeline/leading-indicators-srcr-and-im-notifications

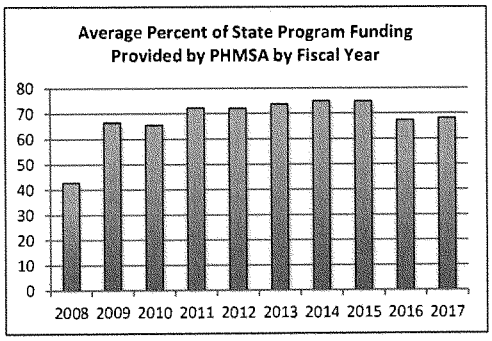
useful to PHMSA for that purpose. A hazardous condition might happen to a pipeline in any location. Exempting reports of those conditions by their proximity to occupied buildings or if it is repaired before the report is due eliminates the usefulness of these reports in identifying either the frequency or the degree of hazard. If these reports are to be useful as leading indicators of safety risks, the reporting requirement must be consistent with, and as broad as the statutory language and Congress' original intent.

Proposal: Amend 49 USC §60102 (h) Safety Condition Reports by adding at the end the following section

(3) Regulations prescribed by the Secretary under this section shall not exempt any conditions from reporting requirements if such an exemption would reduce or eliminate the value of these reports as leading indicators of safety or environmental hazards. The Secretary shall make the content of these reports available to the public on the agency website.

Clarify and Increase Appropriations under § 60125

State operated pipeline safety programs under agreements with PHMSA oversee over 80% of the pipeline mileage in the country. Under the Pipeline Safety Act PHMSA has the authority to reimburse states for up to 80% of the costs associated with this oversight, yet as the chart here shows PHMSA often falls well below this level putting state programs in a bind to do more with less, which does not often work out well when safety is concerned. Because of this reimbursement rate gap states also often pay their inspectors less than what PHMSA pays inspectors, which is less than what the pipeline industry pays its similar employees. This has led to a well-understood situation throughout the country where states train inspectors that then leave the state to work for PHMSA or the industry. PHMSA has a similar problem with its own engineer inspectors being recruited by the pipeline industry who can pay more, thus leaving the state and federal regulators with the least trained workforce to oversee this country's pipeline safety.



This situation needs to be cured by ensuring that both state and federal inspectors can be hired at more competitive wage rates, and by Congress making sure adequate funding is authorized and appropriated to cover these costs. Congress also needs to ensure that PHMSA is charging user fees as authorized in 49 USC §60301 at sufficient rates to cover these increased costs, along with all other pipeline functions of PHMSA. We noted that in PHMSA's 2020 fiscal year budget request they asked for considerably less money from user fees, and to reimburse states with – both these requests go in the wrong direction for improving safety.

In September 2018 the Secretary delivered to Congress a Nationwide Integrated Pipeline Safety Regulatory Database Feasibility Study.[10] In that study, wisely required by Congress in the 2016 Act, PHMSA pointed out that state programs are not required to provide PHMSA with comparable inspection and enforcement information even though PHMSA is paying states up to 80% of their costs for these functions. The lack of comparable data makes it impossible for PHMSA, Congress, or the public to know how state pipeline safety programs are performing, and more importantly to know how pipeline companies within those states are performing under the varying state regulatory regimes. As PHMSA points out in the study, by requiring and collecting this information from states PHMSA could:

- ***"incentivize pipeline operators regulated by States to improve safety and avoid enforcement actions,"***
- ***"allow PHMSA to analyze the most frequently violated aspects of pipeline safety regulations,"***
- provide ***"regulators, both PHMSA and State, with knowledge of previous inspection and enforcement actions for a pipeline operator, regardless of the regulator conducting the inspection."***

For these reason we hope that Congress will authorize funding for PHMSA and the States to get this important information sharing exchange started. While in the study PHMSA painted a picture of the need for years to implement such a system, in reality there is no reason this could not be phased in over time with at least the basic information collected immediately about which companies are being inspected by each state and for what, and what types of enforcement actions are being taken against pipeline companies in each state and for violating what rules. This would not be a heavy lift, and would give PHMSA, Congress, and the public some idea of how well the States, and more importantly pipeline companies operating within the states, are doing regarding pipeline safety. We are somewhat astounded to learn that PHMSA does not already have this information in exchange for funding state programs.

Require Minimum Standards for over 435,000 Miles of Natural Gas Gathering Lines

PHMSA estimates there are over 435,000 miles of unregulated onshore gathering lines.[11] While these gas gathering lines are the same size and pressures as regulated gas transmission lines, and thereby have the same risk, they are not covered at all under PHMSA's regulations. In PHMSA's 2016 Notice of Proposed Rulemaking the agency proposed to begin regulating all rural (10 or fewer buildings intended for human occupancy nearby) gathering lines 8 inches or larger with some very basic regulations to start ensuring they are safe, while collecting information about where they are actually located and what incidents they are causing. The PHMSA proposed regulations are actually less than what PHMSA already requires of offshore gathering lines, so in fact fish in the Gulf of Mexico are currently better protected than people living in rural areas of states such as Pennsylvania, West Virginia, or Texas. The PHMSA proposal for regulating these gathering lines is also considerable weaker than what the state pipeline safety programs asked for in 2010

[10] *https://www.phmsa.dot.gov/sites/phmsa.dot.gov/files/docs/news/69271/reports-congress-09262018.pdf*
[11] *PHMSA GPAC Presentation – Slide 14 - https://www.phmsa.dot.gov/sites/phmsa.dot.gov/files/docs/standards-rulemaking/pipeline/70276/gas-gathering-lines-gpac-meeting-jan-8-9-2019-presentation-version-12-21-2019.pdf*

when they passed a resolution[12] asking that PHMSA regulate these gathering line similarly to the way gas transmission lines are regulated. Unfortunately, the gathering pipeline industry howled, gnashed their teeth, and as we mentioned above threatened to use the cost-benefit requirements of the statute to kill the entire large natural gas rule that PHMSA has been working on since 2011. In response to the tantrum the gathering line industry threw, PHMSA ignored their state regulatory partners, ignored the threat to the public that live near rural gathering lines, and carved the gathering line part of the rule into it's own separate rule, and has since recommended to leave out the majority of gathering lines from the rule altogether. They then gave the industry time to develop an industry designed recommended practice (standard), that both PHMSA and the industry hopes will be incorporated into PHMSA's rule as the new gathering regulation.

Contrary to the industry, there is of course good reason to extend better safety requirements to the hundreds of thousands of miles of currently unregulated gathering lines. Below are pictures of what a 10-inch gathering line did to a home near Midland, Texas last year and of the three-year-old girl who died in that pipeline failure. The exact cause of that failure is still unknown, (no one is investigating because it is unregulated), but clearly a 10-inch gathering pipeline about 20 feet from this home posed a risk. The common sense rules that PHMSA had included in their original proposal like corrosion control, damage prevention, public awareness, and leak surveys may help to prevent another tragedy like this, but under both PHMSA's and the industry's current proposal for these types of lines this pipeline would remain completely unregulated.

While API continues to push forward to create an industry designed recommended practice for PHMSA to incorporate as the gathering line rule, that effort is fraught with many fairness, completeness, and process issues. Last summer the state regulators (NAPSR) withdrew from that entire process writing in part:

> *"There are multiple reasons for withdrawal; however the primary reason is that NAPSR declines to endorse or to give any appearance of endorsement of the API Onshore Gas Gathering Line RP. ... In addition, it appears that efforts to produce the RP draft had begun, without any notifications to the industry, the public, or to State or Federal regulators, some time before NAPSR and other outside stakeholders were invited to participate. These efforts infringe upon the process for fair and*

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[12] *NAPSR Resolution 2010-2-AC2*
http://nebula.wsimg.com/215b293abe58ff21d6d2ad867ae864a3?AccessKeyId=8C483A6DA79FB79FC7FA&disposition=0&alloworigin=1

unbiased development of standards or other practice documents that are praduced for industry and sometimes regulatory guidance."

This is clearly a situation that could be improved by removal of the cost-benefits requirements that we talked about earlier to allow PHMSA to move forward on the rules they think are necessary, instead of the rules the industry will agree to. It is time to end this standoff on over 435,000 miles of risky gathering lines, and the easiest way to move forward on this issue immediately is for Congress to make clear in the statute that you want these rural lines regulated to some degree, which would then give PHMSA the ability and flexibility to do what they think is necessary. One way this could be accomplished is by changing the language in the statute as follows:

§ 60101. Definitions
(a) GENERAL.—In this chapter—
(21) "transporting gas"—
(A) means—
(i) the gathering, transmission, or distribution of gas by pipeline, or the storage of gas, in interstate or foreign commerce; and
(ii) the movement of gas through regulated gathering lines, which shall include all onshore gathering lines operating above 20% SMYS.; ~~but~~
~~(B) does not include gathering gas (except through regulated gathering lines) in a rural area outside a populated area designated by the Secretary as a nonrural area.~~

Needed Performance Standard for Hazardous Liquid Leak Detection, and Gas Transmission Rupture Detection.

In the Pipeline Safety, Regulatory Certainty, and Job Creation Act of 2011, Congress asked the Secretary to provide a report within one year on the technical limitations of current leak detection systems, the practicability of developing standards for the capabilities of leak detection systems, and the costs and benefits of requiring pipeline operators to use such systems. PHMSA completed an in-depth study of leak detection systems in December of 2013.[13] That study found that for hazardous liquid pipelines:

- "The pipeline controller/control room identified a release occurred around 17% of the time."
- Emergency responders or a member of the public were currently the most likely means of discovering a pipeline release.
- "There is no technical reason why several different leak detection methods cannot be implemented at the same time. In fact, a basic engineering robustness principle calls for at least two methods that rely on entirely separate physical principles."
- "External sensors have the potential to deliver sensitivity and time to detection far ahead of any internal system."

In 2010 PHMSA issued an ANPRM for hazardous liquid pipelines that asked in part whether PHMSA should "establish and/or adopt standards and procedures for minimum leak detection requirements for all pipelines." Nearly eight and a half years after the close of the comment period on that ANPRM the proposed rule has still not been issued. Again, the slowness of the rulemaking process seems at odds with

[13] *Leak Detection Study – DTPH56-11-D-000001 https://www.phmsa.dot.gov/sites/phmsa.dot.gov/files/docs/technical-resources/pipeline/16691/leak-detection-study.pdf*

the public proclamations of concern and action.

In its hazardous liquid transmission pipeline integrity management rule, PHMSA requires that operators have a means to detect leaks, but there are no performance standards for such a system.[14] This is in contrast to the State of Alaska, for example, which requires that *all* crude oil transmission pipelines have a leak detection system capable of promptly detecting a leak of no more than 1% of daily throughput[15], or the State or Washington that requires intrastate hazardous liquid pipelines have "leak detection systems must be capable of detecting an eight percent of maximum flow leak within fifteen minutes or less."[16] PHMSA listed in the integrity management rule various criteria for operators to consider when selecting such a device. Again, such an approach is virtually unenforceable and not protective of important environmental assets such as rivers and lakes including those not considered High Consequence Areas.

The Enbridge spill in Michigan and the Chevron pipeline release near Salt Lake City, both nearly nine years ago, are examples of what can go wrong when a pipeline with a leak detection system has no performance standards for operations. In both those incidents the pipelines had leak detection systems as required by regulations, but neither system was capable of detecting and halting significant spills.
We ask that Congress direct PHMSA to issue performance standards for leak detection systems used by hazardous liquid pipeline operators by a date certain to prevent damage from future pipeline releases. Such standards need to clearly determine the size of leak the system is capable of detecting, and the time required for the system to issue an alarm in the event that a leak of that size should occur.

Requirements for Automated Remote Shut-off Valve Placement and Performance on Transmission Pipelines.

Natural Gas Transmission Pipelines – Two decades ago Congress was debating a requirement for remote or automatic shutoff valves on natural gas pipelines in the wake of the Edison, NJ accident and the two and a half hours it took to shut off the flow of gas that fed the fireball due to the lack of a remotely controlled shut off valve. After the 2010 San Bruno tragedy where it took the pipeline operator over an hour and a half to drive to and close a manual valve the NTSB recommended that PHMSA "***Amend Title 49 Code of Federal Regulations 192.935(c) to directly require that automatic shutoff valves or remote control valves in high consequence areas and in class 3 and 4 locations be installed and spaced at intervals that consider the factors listed in that regulation.***"

In the Pipeline Safety, Regulatory Certainty, and Job Creation Act of 2011 Congress asked the Secretary to consider within two years appropriate regulations to require the use of automatic or remote-controlled shut-off valves, or equivalent technology, on new or replaced pipelines. PHMSA did contract with Oak Ridge

[14] *See 49 CFR 195.452(i)(3).*
[15] *See 18 AAC 75.055(a)(1).*
[16] *See WAC 480-75-300*

National Laboratory for a study of such valves. That study[17] concluded that ***"installing ASVs and RCVs in pipelines can be an effective strategy for mitigating potential consequences of unintended releases because decreasing the total volume of the release reduces overall impacts on the public and to the environment."***

In 2010 PHMSA issued an Advanced Notice of Proposed Rulemaking (ANPRM) for hazardous liquid pipelines, and then in 2011 PHMSA issued an ANPRM for gas transmission pipelines. Both ANPRMs made it clear that some change to the requirements for automatic or remote-controlled valves was being considered. Many stakeholder groups invested a significant amount of time responding to these ANPRMs. Unfortunately, years later, information regarding how PHMSA will deal with this issue in a future rulemaking has not been made available. The slowness of the rulemaking process regarding automatic and remote-controlled shut-off valves seems at odds with the public proclamations of concern and action.

Hazardous Liquid Pipelines - For liquid pipelines the foot dragging is even worse. In 1992, 1996, 2002, and 2006, Congress required OPS to "survey and assess the effectiveness of emergency flow restricting devices (including remote controlled valves...) to minimize product releases"[18] with the first such requirement having a deadline in 1994 (24 years ago!). Following this analysis, Congress required OPS to "prescribe regulations on the circumstances under which an operator of a hazardous liquid pipeline facility must use an emergency flow restricting device."[19]

OPS/PHMSA never issued a formal analysis on emergency flow restricting device (EFRD) effectiveness. Instead, in its hazardous liquid pipeline integrity management rule[20], OPS rejected the comments of the NTSB, the US Environmental Protection Agency, the Lower Colorado River Authority, the City of Austin, and the Environmental Defense Fund and chose to leave EFRD decisions up to pipeline operators after listing in the rule various criteria for operators to consider. Such an approach to EFRD use does not appear to meet Congressional intent, partly because the approach is essentially unenforceable and not protective of important environmental assets such as rivers and lakes including those not considered High Consequence Areas.

Congress needs to reiterate its previous mandates to PHMSA on EFRD use on liquid pipelines and ensure they are followed to mitigate the extent of future pipeline releases.

Pipeline Segments that Cross Rivers are Not Sufficiently Protected by Existing Rules

In July 2011, ExxonMobil's Silvertip Pipeline ruptured where it crosses the Yellowstone River near Laurel, Montana. The investigation into the cause of the failure revealed that the pipeline had been undermined by sustained floodwaters scouring the riverbed and exposing the pipeline, resulting in its failure along what

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17 *http://www.phmsa.dot.gov/pv_obj_cache/pv_obj_id_2C1A725B08C5F72F305689E943053A96232AB200/filename/Final%20Valve_Study.pdf*

18 *See 49 USC 60102(j)(1).*

19 *See 49 USC 60102(j)(2).*

20 *See 49 CFR 195.452(i)(4).*

had become an unsupported span submerged in the river. The rupture resulted in the release of more than 63,000 gallons of crude oil into the Yellowstone River, and approximately $135 million dollars in property damage.

In the 2011 reauthorization act, Congress asked the Secretary to study hazardous liquid pipeline incidents at crossings of inland bodies of water with a width of at least 100 feet to determine if the depth of cover over the buried pipelines was a factor in any accidental release of hazardous liquids. If the Secretary's study found that depth of cover was "a contributing factor," then a review of the existing regulations and development of legislative recommendations was required.
The existing regulations require that newly constructed pipelines that cross inland water bodies with a width of at least 100 feet between high water marks be buried at least 48 inches beneath the riverbed. There is no requirement for maintaining any particular depth of cover. PHMSA concluded after its study that it required no additional legislative authority to address risks of hazardous liquid pipeline failures at major river crossings. While we feel there were major shortcomings in the study produced by PHMSA, and we believe that significant changes are necessary to the existing regulatory requirements for pipelines crossing water bodies, we concur that PHMSA possesses adequate authority to improve the regulations. Whether such a rulemaking might ever be undertaken or could make it through the substantial bottleneck that the rulemakings underway since 2010 and 2011 have encountered are separate questions.

The river crossing study produced by PHMSA did succeed in highlighting several major issues with the existing rule and its implementation:

- PHMSA has no data set, geographic or otherwise, that identifies the 100 foot wide crossings that are subject to the four foot depth of cover rule at the time of construction, making enforcement of the rule dependent on having a PHMSA inspector on site at the time of construction at every crossing where the rule might apply.

- Rivers are dynamic systems, as the Silvertip failure graphically illustrates. The existing rule only applies at the time of construction, but does not require an operator to maintain four feet of cover over the lifetime of the pipeline.

- Many river systems narrower than 100 feet can dramatically scour their beds, putting perhaps thousands of other pipelines at risk of exposure and failure. The existing rule does not cover those crossings.

- The integrity management rules and their implementation and enforcement are not a sufficient substitute for an adequate rule prescribing operators' ongoing depth of cover obligations at all crossings. The Silvertip system underwent an integrity management inspection from PHMSA less than a month before its failure, yet there is no indication that the vulnerability of the line and the inadequacy of the operations plans were identified. Moreover, the IM rules apply to only 41% of liquid lines in the country. There may be many crossings that do not fall within the narrow definition of an "unusually sensitive area" and where IM rules would therefore not apply.

Proposal: Direct the Secretary to acquire and maintain a geographic data set capable of identifying pipelines crossing water bodies with a width of at least 100 feet between high water marks, and where the pipeline segment is within or could affect a high consequence area. Direct the Secretary to inventory the conditions of these crossings, determining the current depth of cover and the adequacy of each operator's

assessment of the risk to a pipeline from flooding, erosion, riverbed scour, bed load movement or slope instability, and to incorporate the findings from that inventory in a report to Congress, together with a regulatory proposal to better protect pipelines (both liquid and gas) at water body crossings and high consequence areas from potential failures.

Address Shortcomings in the Way PHMSA Defines and Addresses High Consequence Areas for Hazardous Liquid Pipelines

The Integrity Management rules for hazardous liquid pipelines apply only to those 41% of HL lines that "could affect" a high consequence area if the line fails. There are two areas where we believe the agency has overly narrowly defined areas that should be subject to these rules: areas described by Congress as those crossing waters " where a substantial likelihood of commercial navigation exists," and those "unusually sensitive to environmental damage."

When Congress delegated the identification of those unusually sensitive high consequence areas to the Secretary of Transportation in 49 USC §60109, it was with this direction:

> (b) AREAS TO BE INCLUDED AS UNUSUALLY SENSITIVE
>
> (1) locations near pipeline rights-of-way that are critical to drinking water, including intake locations for community water systems and critical sole source aquifer protection areas; and
>
> (2) locations near pipeline rights-of-way that have been identified as critical wetlands, riverine or estuarine systems, national parks, wilderness areas, wildlife preservation areas or refuges, wild and scenic rivers, or critical habitat areas for threatened and endangered species.

Unfortunately, in the adoption of the definitions for Unusually Sensitive Areas (USAs) the agency defined them much more narrowly than by using Congress's list. Instead, the agency developed a set of definitions for "ecological resource areas" that relies on little known, arcane non-governmental designations and completely excludes areas that Congress clearly expected would be included. For example, National Parks and designated wilderness areas are not necessarily USAs. National Wildlife refuges are not necessarily USAs. Wild and Scenic Rivers are not necessarily USAs. It is not even clear that critical habitat for threatened and endangered species designated under the Endangered Species Act is automatically a USA. Instead, to be a USA, an area must be, for example, a Ramsar site designated under The Convention on Wetlands of International Importance Especially as Waterfowl Habitat, or otherwise defined by a ranking system developed by the Natural Heritage Programs, or the Nature Conservancy's Global Conservations Status Rank, or a Western Hemisphere Shorebird Reserve Network.

Once these very narrow definitions were adopted, PHMSA was to identify these areas and make those designations available to operators so they could identify which segments of their pipelines could affect these areas in a rupture. PHMSA has not updated these definitions, nor has it kept up with the geographic designation of these areas over the years since they were first identified. That means they have no way of inspecting operator compliance with HCA identification or operator assessment of risks to the environment in the case of a rupture.

The public is prevented from seeing PHMSA's efforts to map these USAs, so we have no way of knowing whether they have mapped even these very narrowly defined areas correctly.

The Pipeline Safety Trust asked for an expansion of these areas and therefore the number of pipelines covered by the integrity management rules when PHMSA asked for input on changing the Hazardous Liquid safety rules in 2010. That rule, finalized in 2016 under the Obama Administration, was withdrawn by the Trump Administration and has yet to be re-issued, so we have no way of knowing whether any changes will be made in that rule, assuming it is again finalized and released.

The issue with identification of commercially navigable waters, administratively defined to include "a waterway where a substantial likelihood of commercial navigation exists" is not one of definition, because those are the exact words Congress directed the agency to use. Rather it is in the implementation of that definition, where PHMSA uses a definition of commercial navigation that limits its application to major shipping routes for freighters, excluding commercial fisheries, charter boats, tribal commercial or subsistence fisheries, or any other small scale commercial use. This results in a nonsensical designation of small strips of coastal waters, large rivers and harbors being identified as HCAs, rather than the entire body of water.

Proposal

Require GAO do a study of whether PHMSA's definitions and identification of various Unusually Sensitive Areas (USAs) and commercially navigable waterways for Hazardous Liquid pipelines are consistent with other environmental regulations, are sufficiently inclusive to meet the original intent of Congress, and whether PHMSA currently has and maintains GIS data layers that allow the agency and the industry to know where such HCA boundaries are, and whether PHMSA uses this GIS data to ensure pipeline operators are accurately identifying HCAs and the risks to them from the potential failure of a pipeline. **This would most likely have identified the problem with the majority of the Great Lakes Basin being left out of HCA definitions. Congress took action to mandate the designation of the Great Lakes as HCAs in the last reauthorization, but the agency has yet to issue implementing regulations for that designation so Congress may also want to give PHSMA a deadline for that effort now.**

Congress should also mandate that HCA designations be made public on the National Pipeline Mapping System so state and local governments, and the public can ensure that PHMSA and pipeline companies are correctly designating such important areas.

Methane Emissions from Pipelines -

It is well understood that natural gas pipelines of all types leak, and that during repairs large quantities of gas is vented into the atmosphere. This is allowed under the current regulations, because up until recently the value of the gas was thought to be insignificant, and the effects of the methane being released was not understood. Over the past decade many studies, from a variety of sources, have shown that the amount of gas lost through ongoing leaks costs consumers hundreds of millions of dollars, and that the methane in those leaks has a much more dramatic effect on climate change than carbon dioxide. Unfortunately PHMSA has paid little attention to these issues, has no clear emission reporting requirements, and their own

incident reporting thresholds (no report required until 3 million cubic feet of gas released) exempts many large releases from even being reported.

For those reasons it is essential that Congress requires PHMSA to do the following:

- Require companies to use the best technology available to capture natural gas when making pipeline repairs.
- Require companies to use the best technology to look for leaks
- Require companies to adequately invest in replacement and repair programs for known types of leaky pipelines.
- Change the reporting requirements for gas incidents to a more realistic level to track how much is actually being released. We would suggest changing the reporting threshold from 3 million cubic feet to 50,000 cubic feet (50,000 cubic feet is equivalent to the average monthly use in 9-10 homes[21]).

Hopeful Initiatives in the Works

The Leonel Rondon Pipeline Safety Act – In September of 2018 multiple gas explosions rocked the Merrimack Valley of Massachusetts killing a teenager, setting off over 120 fires, completely destroying 5 homes, and forcing thousands of people to seek temporary housing for months while repairs were made to their homes and the pipeline system. In response to that tragedy Congressional leaders from Massachusetts and elsewhere have crafted the The Leonel Rondon Pipeline Safety Act to address many of the issues that have been identified that might help prevent a similar tragedy from occurring somewhere else in the future. As all regulations need to evolve over time, this proposal seeks to more clearly specify a pipeline operator's responsibilities under existing pipeline safety programs such as Distribution Integrity Management Programs, ensure that operators and state regulators have the necessary resources and are effectively assessing risks, and providing regulators the tools they need to provide adequate inspections and enforcement. We support these efforts, especially if linked with the necessary increased funding for state programs, and ask that as reauthorization proceeds, you incorporate the ideas proposed in the Leonel Rondon Pipeline Safety Act into your reauthorization proposal.

Safety Management Systems (SMS) – In 2015, based on a recommendation from the NTSB after nearly a million gallons of oil was spilled into the Kalamazoo River in Michigan, the pipeline industry created a recommended practice (API RP1173)[22] to help pipeline companies implement a continuous improvement Safety Management System. This promising voluntary effort ought to help companies reduce the number of incidents and near misses they have, and help create a stronger safety culture within companies so safety really is the first priority, not just a slogan. We have already seen some companies embrace this fully, and for those companies the change is real. So we support this effort, and believe it can have lasting impacts, but only if companies embrace it, which is always the rub with voluntary practices. We were surprised after the recent tragedy in the Merrimack Valley in Massachusetts to hear how many of the gas companies in that state had not yet moved forward on SMS, and only did so after a tragedy and the strong

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[21] *The American Gas Assaciation, Natural Gas: The Facts https://www.aga.org/globalassets/2019-natural-gas-factsts-updated.pdf*

[22] *https://pipelinesms.org/wp-content/uploads/2018/08/API-RP-1173-Pipeline-Safety-Management-Systems.pdf*

urging of the state regulator. We think it is still too early to have to make SMS a required regulation, but Congress should certainly ask the industry to show proof that companies are adopting this voluntarily, and what the measurable outcomes are. If the rate of adoption and implementation is too slow then PHMSA or Congress may need to step in with regulatory requirements, or enforcement incentives, to ensure that all companies embrace this valuable system, and not just the companies who do truly put safety first.

Voluntary Information Sharing (VIS) - For the past two years PHMSA has been working with the Voluntary Information Sharing Working Group to produce a report for the Secretary outlining the benefits of setting up a Voluntary Information Sharing system for pipeline safety similar to what the FAA has for airline safety. The Pipeline Safety Trust supports the creation of a Pipeline Safety VIS, but the draft report we saw lacked many important details about initial and ongoing costs, how and who will pay for this system, how and who information would be shared with, how the program's effectiveness will be assessed, and how the important participation by non-regulatory, non-industry participants will be guaranteed. For these reasons we hope you will seek greater clarity on the above questions before moving forward with complete authorization for such a VIS. One option might be to provide PHMSA with the authority and the funding to create the multi-stakeholder VIS Executive Committee as envisioned in the report, and then task that group to flesh out the details to Congress' satisfaction before greater funding is provided.

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 continues.

Mr. VEASEY. Thank you, Mr. Weimer.

Mr. Black, you are now recognized for 5 minutes.

STATEMENT OF ANDREW J. BLACK

Mr. BLACK. Thank you, Mr. Chairman, Ranking Member.

I am Andy Black, president and CEO of the Association of Oil Pipelines. AOPL represents liquid pipeline owners and operators transporting crude oil, refined products like gasoline, diesel, jet fuel, and home heating oil, and industrial products like propane and methane.

We have over 55 member companies which deliver over 21 billion barrels annually over a 215,000-mile network of pipelines. I am also testifying on behalf of the American Petroleum Institute, which represents all facets of the oil and natural gas industry including exploration and production, refining, marketing, and pipeline and marine transportation.

Pipelines are the safest way to deliver the liquid energy we all need and use every day. No other mode of transportation is as safe for the American people or the environment as pipelines.

And pipelines are getting safer. Over the last 5 years, pipeline operators have reduced the number of liquid pipeline incidents impacting people and the environment by 20 percent.

This is Government data publicly available from PHMSA. PHMSA data also shows pipeline incidents caused by incorrect operation impacting people and the environment are down 38 percent over the last 5 years and pipeline incidents caused by corrosion, cracking, or weld failures impact people and the environment are down 35 percent over that period.

Member companies of AOPL and API work hard to improve pipeline safety. We are transparent about where we are doing well and where we can do better.

The statistics I just shared come from the performance report we develop jointly each year analyzing pipeline safety data. We use this analysis to guide our industry wide pipeline safety programs focusing on key safety issues as we strive towards the goal of zero incidents.

Through this strategic effort, the pipeline industry has addressed key safety recommendations from Congress, PHMSA, the NTSB, and issues identified through analysis of safety data.

Recent safety accomplishments include developing new best practices for finding and fixing cracking in pipelines, managing leak detection programs, responding to pipeline emergencies, and applying safety management systems to pipelines.

API also just released an updated best practice for inspecting and performing maintenance on pipelines using the latest inspection technologies and analytical techniques.

Harnessing technology to advance pipeline safety is a theme we are pursuing across industry and we recommend Congress adopt as well. For example, high-tech tools can travel inside a pipeline scanning it like an MRI or an ultrasound at the doctor's office.

Pipeline operators have the opportunity to find issues early, perform preventative maintenance, and keep pipelines operating safely.

The problem is Federal regulations can't keep pace with fast-moving technology innovations. Outdated PHMSA regulations sometimes conflict with the latest knowledge and techniques.

Congress can do more to allow PHMSA and pipeline operators to improve safety by harnessing technology and innovation such as creating a pilot program to test pipeline safety technologies and approaches. We were thrilled to hear Administrator Elliott say "Absolutely" when asked if he was interested in authorizing a voluntary information-sharing program encouraging joint stakeholder problem solving, requiring regular PHMSA and stakeholder review of pipeline safety research and development advances, improving the approval process for alternative safety technologies, and encouraging voluntary discovery, disclosure, correction, and prevention of pipeline safety violations.

Next, protecting public safety and the environment from attacks on pipelines is a top reauthorization priority for us. Pipelines are the safest way to deliver the energy American families and consumers use every day at their industrial facilities. Recent attacks on pipelines by turning valves or attempting to damage the pipeline itself are dangerous.

Members of the public, surrounding communities, and the environment are put in danger by attacks on pipeline facilities that could easily result in a spill.

Congress should deter future attacks against pipeline facility by closing the loopholes in the scope of criminal Federal liability and in Federal pipeline safety law put by previous Congresses on a bipartisan basis.

AOPL and API also recommend improving PHMSA programs and regulations by easing hiring and retention of PHMSA inspectors, which we discussed on the first panel, improving due process in enforcement proceedings, tailoring requirements to pipeline operating status, adjusting incident reporting requirements for inflation, and incorporating the latest best practice on inspection repair and tank maintenance.

I look forward to answering any of your questions on these proposals, our pipeline safety performance record, or the action operators are taking to improve pipeline safety further.

Thank you.

[The prepared statement of Mr. Black follows:]

Testimony of Andrew J. Black, President & CEO, Association of Oil Pipe Lines (AOPL) on Behalf of AOPL and the American Petroleum Institute (API) to the U.S. House Committee on Energy & Commerce Subcommittee on Energy Hearing on "The State of Pipeline Safety and Security in America" on May 1, 2019

On behalf of the Association of Oil Pipe Lines (AOPL) and the American Petroleum Institute (API), thank you for the opportunity to speak today about our industry's proactive efforts in pipeline safety and our priorities for federal Pipeline Safety Reauthorization.

AOPL represents liquids pipeline owners and operators transporting crude oil, petroleum products, like gasoline, diesel, jet fuel, and home heating oil, and industrial products, like propane and ethane. We have over 50 member companies which deliver over 21 billion barrels of crude oil and petroleum products annually over a 215,000-mile network of pipelines. AOPL members transport more than 97 percent of interstate barrel-miles.

API is the only national trade association representing all facets of the natural gas and oil industry, which supports 10.3 million U.S. jobs and nearly 8 percent of the U.S. economy. API's more than 600 members include large integrated companies, as well as exploration and production, refining, marketing, pipeline, marine businesses, and service and supply firms. They provide most of the nation's energy and are backed by a growing grassroots movement of more than 47 million Americans. API was formed in 1919 as a standards-setting organization. In its first 100 years, API has developed more than 700 standards to enhance operational and environmental safety, efficiency and sustainability.

Pipeline Safety Record

Pipelines are the safest way to deliver the liquid energy we all need and use every day. Pipelines deliver crude oil and petroleum products to their destination safely greater than 99.999 percent of the time. No other mode of transportation is as safe for the American people and the environment as pipelines.

Pipelines are getting safer. Over the last five years, pipeline operators have reduced the number of liquids pipeline incidents impacting people or the environment by 20 percent, as shown by government data publicly available from the U.S. Pipeline and Hazardous Materials Safety Administration (PHMSA). PHMSA data also shows pipeline incidents impacting people or the environment caused by incorrect operation are down 38 percent over the last five years, and pipeline incidents impacting people or the environment caused by corrosion, cracking or weld failures are down 35 percent over the last five years.

Commitment to Pipeline Safety

AOPL, API and our member companies 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 greater than 99.999 percent of crude oil and petroleum products reach their destination without incident, pipeline companies are striving to address the remaining fraction of a percent to reach our shared industry-wide goal of zero incidents. The industry's ability to continually advance the safety of pipeline operations is based on three critical elements: (1) people, (2) technology and (3) safety culture. Education and training are constantly provided to industry employees to ensure they can operate the latest and greatest technologies. Similarly, employees are committed to developing a culture of safety that is continually assessed and improved. This three-pronged approach is designed first and foremost to prevent an incident from ever happening, but also ensures that the industry is prepared for any incident and can effectively respond in the rare instance that an incident occurs.

Our two associations and our member companies work hard to improve pipeline safety. We are transparent about where we are doing well and where we can do better. The pipeline safety statistics cited above come from the performance report developed jointly by AOPL and API to analyze pipeline safety data[1]. We use this analysis to guide our industry-wide safety programs focusing on key pipeline safety issues.

Through this strategic effort the pipeline industry has addressed key safety recommendations from Congress, the U.S. National Transportation Safety Board (NTSB) and PHMSA as well as issues identified through analysis of pipeline safety data. Recent safety accomplishments include developing new best practices for finding and fixing cracking in pipelines, managing leak detection programs, responding to pipeline emergencies and applying safety management systems to pipelines. API has also just released an updated best practice for inspecting and performing maintenance on pipelines utilizing the latest inspection technologies and analytical techniques.

The Importance of Industry-Wide Pipeline Standards

Liquid pipelines have not been waiting for Federal regulations to continue improving pipeline safety. The pipeline industry, led by API, continues to develop and revise critical standards and recommended practices for prevention, mitigation, and response activities to address pipeline safety. Since 1924, API has been the leader in developing voluntary, consensus-based, internationally recognized industry standards that promote safety and reliability. The API 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

[1] http://www.aopl.org/wp-content/uploads/2019/04/2019-API-AOPL-Pipeline-Performance-Report.pdf

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 U.S., these standards are referenced more than 650 times in federal regulations, covering multiple government agencies, including PHMSA. Additionally, 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. AOPL members are proud to play a part in the development of many of these API standards.

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 RP 1173, *Pipeline Safety Management Systems (SMS)*, 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 leadership of a company all the way to an individual working in the field. Safety culture must be organically strengthened from within an organization, and API and AOPL work together with our members to effectively implement SMS across multiple pipeline sectors.

As U.S. production continues to grow and pipeline capacity does as well 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, regulator and broad stakeholder 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, and continuous testing to verify the skills of qualified employees is a critical effort of operators. API has also 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 management system framework

for operators to ensure they are prepared to respond to any event in a coordinated way with our government and first responder partners. 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.

Reauthorization Proposals

As stated earlier, to improve upon our strong safety record and reach our goal of zero pipeline incidents, it is imperative that the regulatory environment and PHMSA be positioned to meet current and future safety challenges. As such, there are three priority areas where PHMSA reauthorization can support the shared objective of industry and the regulating agency in advancing pipeline safety: 1) Harnessing Technology & Innovation, 2) Protecting Pipelines, People and Environment, and 3) Modernizing PHMSA and Pipeline Safety Regulations.

1. Harnessing Technology & Innovation

Harnessing technology to advance pipeline safety is a theme liquid pipelines are pursuing across industry and we recommend Congress adopt as well. For example, hi-tech tools can now scan pipelines like an MRI or ultrasound at the doctor's office, allowing pipeline operators to find issues early, perform maintenance and keep pipelines operating safely. The problem is federal regulations cannot keep pace with fast-moving technology innovations. In fact, outdated PHMSA regulations sometimes conflict with the latest knowledge and techniques.

It is imperative that PHMSA's regulations not hamper an operator's ability to address potential problems through the application of the most innovative technology, critical engineering assessment processes and fit-for-purpose repair criteria based on data and sound engineering principles. Congress can do more to allow PHMSA and pipeline operators to improve safety by pilot testing innovations and learn from shared pipeline safety insights.

Specifically, operators are required to conduct timely assessments of pipeline integrity, and that may often be done effectively and efficiently with technology such as in inline inspection tools or "smart pigs". However, a company's ability to utilize the most advanced technologies in these inspections may be inhibited by the burdensome approval process in the use of alternative safety technology. Establishing clear parameters and deadlines associated with PHMSA's review, notification and approvals of alternative technology will help provide more certainty in the process and allow operators to utilize the latest, cutting-edge technologies to further pipeline safety.

With this in mind, 20-year old regulations that only allow new technologies to be used one rulemaking at a time must be updated. While those regulations reflected the technology and best thinking available at the time of adoption, they have not kept pace with advances in pipeline safety technology and modern engineering practices.

Our proposals for Congress to harness technology and innovation to improve pipeline safety include:

- creating a pilot program to test cutting edge pipeline safety technologies and newly developed best practices

- authorizing a Voluntary Information Sharing program encouraging joint stakeholder problem solving
- requiring regular PHMSA and stakeholder review of pipeline safety research and development advances
- encouraging voluntary discovery, disclosure, correction and prevention of pipeline safety violations

2. Protecting Pipelines, People and the Environment

A top reauthorization priority for us is protecting public safety and the environment from attacks on pipelines. Pipelines are the safest way to deliver the energy American families and consumers use every day, but they're still industrial facilities. Recent attacks on pipelines, either by turning valves in ways that threaten ruptures or other efforts to damage the pipelines are dangerous. Members of the public, surrounding communities and the environment are put in danger by attacks on pipeline facilities.

In October 2016, anti-pipeline activists staged simultaneous attacks on five crude oil pipelines in four states along the U.S.–Canada border. They targeted valve stations maintained by pipeline operators to stop the flow of product through the pipeline when necessary to conduct maintenance or isolate a pipeline segment during an emergency. After breaking the chains and locks on perimeter fencing, they entered the facility grounds and turned valves shutting off the flow of pipelines that together had a deliver capacity of 2.8 million barrels of crude oil a day, or around 15 percent of daily U.S. consumption. There were also attacks in 2017 and 2019 and admissions of damaging pipelines about to go into service.

After the 2016 attacks, Carl Weimer of the Pipeline Safety Trust said *"we think that illegally closing valves is a dangerous stunt that really does little to address these people's concerns. The Pipeline Safety Trust was founded in part because a valve closed unexpectedly causing a pressure surge that ruptured a pipeline killing three young men. Closing valves on major pipelines can have unexpected consequences endangering people and the environment. We do not support this type of action, and think it is dangerous."* We commend Mr. Weimer for separating legitimate policy concerns from dangerous activity that can hurt people and the environment.

For the safety of the public and the environment, Congress should do more to prevent threats to critical infrastructure like oil and natural gas pipelines. Loopholes exist in current pipeline safety criminal penalties that allow dangerous activity to escape punishment. While we certainly support the right to protest peacefully, we want to deter dangerous actions that can have significant public safety and environmental repercussions.

3. Modernizing PHMSA and Pipeline Safety Regulations

As PHMSA and the energy industry together continue to drive toward our shared goal of zero pipeline incidents, a modernized regulatory agency with the necessary tools, well-trained staff, and streamlined programs can bring needed certainty and consistency to the regulatory and oversight process. While the industry continues to work proactively through our standards development process and collaboration with regulators and other stakeholders to pursue our goal of zero incidents, there are additional regulatory reforms that we believe will help to further enhance pipeline safety.

In certain areas, outdated regulations drive inefficiencies and resource allocation to less impactful safety priorities. For example, in current regulations, pipeline operators are required to report pipeline incidents if they meet certain conditions, including a clean-up cost of $50,000 or higher. However, PHMSA set this threshold in 1984 and has not updated it for inflation since. As such, incident reporting based on the current-day costs would allow pipeline operators to better utilize and allocate resources toward more significant incidents. Keeping pace, Congress should require PHMSA to adjust its incident reporting dollar threshold for inflation.

Additionally, there are more than 650 API standards referenced in Federal regulation. As these standards are improved through the American National Standards Institute (ANSI)-accredited process at a minimum of every five years, Federal regulations often are unable to be updated in a timely manner to reflect these important leading practices within the industry. Currently, 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 more timely and frequent review process that can use the existing rulemaking processes to incorporate by reference the latest edition of appropriate standards.

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 have driven our industry to invest in furthering in-line inspection tool detection, ultimately preventing incidents 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. 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.

Lastly, the oil and natural gas industry strives to have well trained and qualified PHMSA pipeline inspectors to help bring certainty and consistency to the inspection and enforcement of federal pipeline safety regulations. However, pipeline inspectors frequently come into PHMSA with limited pipeline safety experience, and those that already have or gain experience often depart the agency to pursue more lucrative opportunities. As such, similar to other agency hiring authority for specialty positions, the ability to compensate pipeline inspectors at market rates through PHMSA's use of Schedule A employees with streamlined hiring and flexible pay levels would enhance PHMSA's ability to attract and retain expert pipeline inspectors.

AOPL and API recommend Congress improve PHMSA programs and regulations by:

- helping PHMSA hire and retain expert pipeline inspectors
- improving due process in PHMSA enforcement proceedings
- tailoring pipeline requirements to operating status
- adjusting PHMSA incident reporting requirements for inflation
- incorporating the latest best practices on inspections, repair and tank maintenance

API and AOPL oppose removing the current statutory requirement for the benefits and costs of PHMSA regulatory proposals to be identified. We believe there is no link between current PHMSA delays in rulemaking and the need to demonstrate benefits and costs of proposed

regulations. If anything, this requirement saves time by avoiding delays with the Office of Management and Budget were PHMSA to submit a rulemaking where the costs exceed the benefits. In our view, this requirement makes for rulemakings more focused on specific pipeline safety needs and less likely to be overly broad or needlessly burdensome. The American people, who ultimately pay the costs of regulation, deserve to know that the benefits of regulations outweigh their costs.

Additionally, this cost-benefit analysis requirement is a bipartisan provision based upon a fundamental good government principle, which was first added by a Democratic Congress. The current Executive Order requiring review of the costs and benefits of all agency regulatory proposals was issued by President Bill Clinton. A statutory requirement to consider costs and benefits in health, safety, and environmental regulations is not unique to PHMSA as Congress has, as a part of various acts, required the Occupational Health Safety Administration (OHSA), Mine Safety Health Administration (MSHA), and Environmental Protection Agency (EPA) to analyze costs and benefits during rulemaking.

That said, we believe there is a great amount of work that Congress can do to improve pipeline safety on a non-partisan or bipartisan basis as has been custom in prior reauthorization bills. Several of our proposals would specifically engage stakeholders from all ends of the political spectrum in the joint effort of pipeline safety. The Voluntary Information Sharing program is supported by labor unions, environmental groups, pipeline safety advocates, PHMSA and pipeline operators. Further attention to R&D would come in a forum which includes environmental groups, pipeline safety advocates, federal and state regulators and industry. Our proposal to help PHMSA hire and retain pipeline inspectors would be paid for by industry itself through user fees. All of these proposals are designed to improve pipeline safety.

Conclusion

Safety of the public and the environment is our industry's top priority, and collaboration with PHMSA and other government agencies only strengthens our ability to transport energy liquids across America with the fewest possible number of incidents. We are committed to promoting safety in all of our operations, helping to ensure that American families and businesses can efficiently access affordable and reliable energy. Again, thank you the opportunity to appear before you today.

Mr. RUSH [presiding]. And now the Chair would like to recognize Ms. Sames for 5 minutes.

STATEMENT OF CHRISTINA SAMES

Ms. SAMES. Chairman Rush, Ranking Member Upton, and esteemed members of the committee, thank you for the invitation to be here.

I am Christina Sames, vice president of operations and engineering at the American Gas Association. Prior to AGA, I worked for the Pipeline Research Council International, which is a research consortium, and also spent 12 years within PHMSA's Office of Pipeline Safety where I worked on everything from regulations on damage prevention to unusually sensitive areas and initiative like, well, community assistance, the pipeline mapping program, and moving damage prevention forward.

AGA represents more than 200 local energy companies that deliver natural gas to 74 million natural gas customers. Natural gas pipelines deliver gas through 2.5 million miles of pipeline including 2.2 million miles of local distribution pipe.

The gas utilities distribution pipelines are the last critical link to the delivery chain that brings natural gas from the well head to the burner tip.

AGA's members live in the communities they serve and interact daily with both customers and regulators to oversee pipeline safety locally. Our customers are our neighbors, our friends, and our family members.

The industry uses a variety of tools to ensure the integrity of their distribution systems. This includes prescriptive and risk-based regulations along with voluntary actions.

A key risk-based regulation used by operators is distribution integrity management, a regulatory process that allows an operator to develop a unique safety plan specific to that system's operating characteristics and risks to determine how best to mitigate those risks and to prioritize the work that needs to be done. The process strengthens the systems and improves safety. Upgrading distribution pipeline systems is important to safety and reliability. We currently have 43 States and the District of Columbia that have expedited pipeline replacement programs and over the past 20 years the amount of cast iron and bare steel in use has declined dramatically, replaced by modern pipelines which increase system safety and reliability.

The distribution industry has proven it can simultaneously increase delivery and improve safety. PHMSA data shows the distribution incidents have declined as the mileage and consumers have increased.

But while we have come a long way, recent tragic incidents demonstrate more needs to be done. The April 10th incident in Durham, North Carolina was caused by third-party excavation damage, which continues to be the primary cause of distribution incidents.

The tragic incident in Merrimack Valley was unprecedented. Why the NTSB is still investigating, they have stated the cause was over pressurization of a low-pressure gas distribution system.

Post incident, AGA immediately brought together industry experts and published a shared InShare technical paper capturing leading practices to prevent over pressurization.

AGA created a board-level task force to escalate our existing pipeline safety efforts and determine what more can be done. We hosted a crisis leadership and communications summit and developed a technical paper that covers the skills required to perform engineering work on a natural gas system.

AGA's member safety efforts exceed expectation and regulations. The AGA board adopted a commitment to enhancing safety that lists specific activities above and beyond regulation. We participate in peer reviews, bench marking activities, safety summits, and other industry programs to enhance safety.

Relative to reauthorization, AGA asks the subcommittee to consider three high-level principles. Preserve industry engagement and pipeline safety rulemaking by upholding the PHMSA regulatory process. Support flexibility in rulemaking by recognizing that the gas distribution system differs and avoid one-size-fits-all regulations. Don't obstruct pipeline safety replacement programs via new mandates that delay pipeline replacement or require a replacement faster than work can be accomplished safely, reliably, without compromising quality.

Our full statement covers several pipeline safety reauthorization topics. We would like to highlight how integral PHMSA's gas pipeline advisory committee process is to the pipeline safety rule making.

Providing stakeholders supporting vital roles which includes input from subject matter experts actually accelerates rulemaking and their implementation.

We also support the GPAC cost benefit analysis process. To the best of AGA's knowledge, not one single rulemaking has been held up by this process.

More importantly, cost benefit analysis protects the public as regulatory costs are ultimately borne by the customers.

Thank you for the opportunity to participate. I look forward to your questions.

[The prepared statement of Ms. Sames follows:]

Statement of Christina Sames
Vice President, Operations and Engineering Services
American Gas Association

Subcommittee on Energy
Committee on Energy and Commerce
United States House of Representatives

The State of Pipeline Safety and Security in America

May 1, 2019

The American Gas Association (AGA) is pleased to provide this statement for the hearing record for the Subcommittee on Energy's, May 1st hearing on *The State of Pipeline Safety and Security in America.* AGA shares the same goals as our industry partners, safety advocates, the public and Congress: Ensuring that America maintains the safest, most secure, most reliable pipeline system in the world.

About the American Gas Association

AGA, founded in 1918, represents more than 200 local energy companies that deliver clean natural gas throughout the United States. There are more than 74 million residential, commercial and industrial natural gas customers in the U.S., of which 95 percent - nearly 71 million customers - receive their gas from AGA members. Natural gas pipelines, which transport approximately one-fourth of the energy consumed in the United States, are an essential part of the nation's infrastructure. Indeed, natural gas is delivered to customers through a safe, 2.5-million-mile underground pipeline system. This includes 2.2 million miles of local utility distribution pipelines and 300,000 miles of transmission pipelines that stretch across the country, providing service to more than 177 million Americans.

Our Number One Priority: Pipeline Safety

Distribution pipelines (Attachment 1) are operated by natural gas utilities, sometimes called "local distribution companies" or LDCs. The gas utility's distribution pipes are the last, critical link in the natural gas delivery chain that brings natural gas from the wellhead to the burner tip. As such, gas utilities are effectively the "face of the gas industry." AGA member companies are embedded in the communities they serve and interact daily with customers and with the state regulators who oversee pipeline safety locally. The distribution industry takes very seriously the responsibility of continuing to deliver natural gas to our families, neighbors, and business partners as safely, reliably, and responsibly as possible.

The domestic shale revolution has resulted in an abundant supply of clean, affordable, domestically produced natural gas. In turn, robust supply has translated into stable natural gas prices and an increasing number of utility customers who use this resource for residential and commercial applications like cooking, space and water heating. Alongside this tremendous opportunity comes the absolute necessity of operating safe and reliable pipeline infrastructure to help ensure dependable natural gas delivery. Unquestionably, pipeline safety is our industry's number one priority, and through critical partnerships with state and federal regulators, legislators, and other stakeholders to constantly improve pipeline safety, gas utilities continue to advance system integrity and provide increased access to natural gas service for homes and businesses nationwide.

Through the decades, a variety of materials have been used to make natural gas pipelines. The selection of materials varies with the date the pipeline was placed in service, the diameter and pressurization requirements of the pipeline and the characteristics of the local terrain. For much of the 20th century, cast iron was the choice for many utility systems because of its excellent resistance to corrosion. In the 1950s, steel replaced cast iron as the material of choice, mainly because of steel's flexibility and strength. There was a higher risk of corrosion with steel pipes, so many of the pipes had protective coating added and "cathodic" protection systems installed with the pipe to protect against corrosion. During the past 30 years, however, plastic pipe has predominated in gas utility distribution systems. Plastic pipe provides increased safety and integrity to pipeline infrastructure because it is resistant to corrosion, flexible, and may even be

able to be installed in an existing pipeline. Since 2007, nearly 12,000 miles of cast iron main, 15,000 cast iron services, and over 20,000 miles of "bare" steel pipe have been replaced by plastic pipe.

Operators predominantly use "Distribution Integrity Management Programs," (DIMP) to manage systems that consist of many different types of pipe, of different ages, at different pressures and in different environments. DIMP is a comprehensive regulation that provides an added layer of protection to the prescriptive federal regulations that have been in place since the 1970s, the state regulations that go beyond federal regulations, and the voluntary safety programs being implemented by local distribution companies. DIMP takes into consideration the wide differences that exist between natural gas distribution operators and allows operators to develop a DIMP plan that is appropriate for the operating characteristics of their distribution delivery system and the customers that they serve.

DIMP requires all distribution operators, regardless of size to:

- Understand their system (design, material, operating conditions, environment, maintenance and operating history, etc.)
- Manage the threats that could affect the integrity of the system (excavation damage, corrosion, potential for natural force damage, material defects, fitting failure, etc.)
- Assess and prioritize risks
- Identify and implement appropriate measures to mitigate risks
- Measure performance, monitor results, and evaluate the effectiveness of its programs, making changes where needed
- Periodically report performance measures to regulators

The use of DIMP helps operators prioritize replacement work and other measures that strengthen the gas system. Upgrading the nation's pipeline system is just one of many steps that are being taken to fulfill the industry commitment to safety. Pipeline replacement projects have been a joint initiative between the industry, state regulators and commissioners, and the U.S. Department of Transportation's Pipeline & Hazardous Materials Safety Administration (PHMSA). Currently, 43 states and the District of Columbia have established innovative rate mechanisms that allow operators to replace pipe faster. In the past 20 years, due to these efforts, the amount of cast iron pipelines in use has declined by approximately 52 percent, and the amount of cathodically unprotected and bare steel pipelines has decreased by approximately 46 percent. These systems have been replaced by modern plastic pipelines which provide increased gas utility system safety, resiliency and affordability to communities.

With 630,000 new natural gas utility customers being added every year, we are committed to meeting that increased demand with the safest pipeline infrastructure available. Since 1990, the use of modern plastic pipelines has increased by over 200 percent. Today, plastic pipe makes up 58 percent of the nation's natural gas distribution main and 74 percent of the gas service line infrastructure. Cathodically protected and coated steel make up another 35 percent of the nation's natural gas distribution main and 19 percent of the gas service line infrastructure.

Safety is a joint effort which engages customers, regulators, and policymakers at every level. We are committed to this partnership and our member companies proactively work with federal and state regulators, public officials, emergency responders, excavators, consumers, safety advocates, and the public to continue improving the industry's natural gas distribution pipeline system. Our nation's natural gas utilities invest nearly $50,000 every minute into enhancing the

safety of natural gas distribution and transmission systems. Furthermore, AGA and its member companies have adopted a *Commitment to Enhancing Safety* (Attachment 2). This commitment identifies actions, beyond regulation, to improve safety, and underscores the actions our member companies are taking every day to help ensure that America's 2.2 million miles of natural gas distribution pipeline operate safely and reliably.

Industry's Demonstrated Commitment to Safety

The natural gas distribution industry has demonstrated that it can increase the delivery of natural gas while continuously making improvements in safety. PHMSA data shows that significant distribution incidents, those that result in a death, injury or property damage of greater than $50,000, and serious incidents, those that result in a death or injury, have declined over the past 20 years. Significant incidents have declined 16 percent and serious incidents have declined 35 percent. Notably, the primarily cause of these incidents is excavation damage, which accounted for 38 percent and 27 percent of significant and serious incidents respectively in 2018. The April 10, 2019, incident in Durham, NC, which resulted in two deaths and 25 injuries was the result of third-party excavation damage.

While we have seen improvements, clearly more needs to be done. One incident is one too many. The National Transportation Safety Board (NTSB) is still investigating the tragic incident that occurred on September 13, 2018, in the Merrimack Valley in Massachusetts, but has stated the incident was due to an over-pressurization of a low-pressure natural gas distribution system.

Following the Merrimack Valley incident, AGA and the industry took quick action based on known information including,

- Holding conference calls to brief members and key stakeholders on what was publically known about the incident
- Issuing a survey to its members to gather practices in place that are intended to prevent over-pressurization
- Collecting information from a variety of sources including technical publications and industry experts
- Holding a roundtable of several hundred operators/service providers to review the practices submitted and gathered and obtain additional options to prevent over-pressurization
- Bringing together subject matters experts from over 30 companies to analyze the cumulative results and identify leading practices

Using this information, AGA and its members developed a white paper: *Leading Practices to Reduce the Possibility of a Natural Gas Over-Pressurization Event*[1], which was issued just two and a half months after the incident. We have made this white paper widely available, sharing it with AGA members and other parts of the industry, including PHMSA, the NTSB, state regulators and public representatives such as the Pipeline Safety Trust.

Following the incident, AGA also formed a new Board-level Task Force focused on Safety, Resilience, Reliability, and Security. The Task Force is looking at what actions, beyond our current

[1] *Leading Practices to Reduce the Possibility of a Natural Gas Overpressurization Event* (November 26, 2018) at https://www.aga.org/globalassets/safety-and-operations-member-resources/leading-practices-to-prevent-over-pressurization-final.pdf

leading practices, are needed to raise the bar in these key areas. The AGA Board will be discussing additional actions the industry will take at its May 20, 2019 meeting.

AGA also held a Crisis Leadership Summit for its members on April 8-9, 2019. The Summit included a half day workshop conducted by the NTSB focused on its family assistance operations and how pipeline operators can work collaboratively with the broader response community to meet the needs of affected individuals and communities. The Summit also included case studies and presentations on crisis readiness, internal preparation and coordination, stakeholder engagement, lessons learned from significant events and mutual assistance. AGA will also hold a similar workshop in June.

Finally, to address the NTSB recommendation following the Merrimack Valley incident that operators have certain documents or plans sealed by a professional engineer prior to commencing work, AGA created a white paper *Skills and Experience for Effectively Designing Natural Gas Systems.*[2] The purpose of this document is to provide guidance to operators on how to develop, maintain, and enhance the key technical competencies required to safely and effectively perform engineering work functions for natural gas systems.

Pipelines Bring Affordability and Opportunity

American families rely more than ever on natural gas not only for heat in the winter, but year-round for cooking, drying clothes, taking a hot shower, and so much more. American businesses also rely more than ever on natural gas to heat, supply hot water, and run industrial and manufacturing processes. And these numbers continue to increase. Over the past four years, hardworking families who use natural gas for their everyday needs have collectively saved nearly $66 billion in energy costs. That is an average of $874 in annual savings per household. American businesses have seen $105 billion in savings since 2009.

Natural gas provides the best value to families for home heating and on average is more affordable than other major energy sources including electric heat pumps, electrical resistance furnaces, fuel oil furnaces, and propane furnaces. With a national average of roughly $600 per year, the annual cost for a family using a 90 percent efficient natural gas furnace is just one-third of the annual national average cost of using a 99 percent efficient electrical resistance furnace, which comes in at over $1800 per year. Despite there being more than 74 million natural gas customers, there are pockets of this country that do not have the option to choose between those costs because they do not have access to natural gas. Extending America's pipelines brings opportunity to the homes, businesses, and communities that have the capacity to efficiently use natural gas but do not have access.

Access to affordable natural gas service should be an option for every American family and business. Expanding our nation's pipeline system would allow every household to access the safe, reliable, affordable and lifesaving benefits of natural gas and allows every business to contribute to the economic development of cities, counties, and states. Across America, state legislators and regulators are recognizing the benefits that natural gas brings to their communities. To date, 43 states have adopted or considered innovative proposals to expand natural gas infrastructure, so more households and businesses can access this affordable and reliable clean fuel source. AGA

[2] *Skills and Experience for Effectively Designing Natural Gas Systems* (April 8, 2019) at https://www.aga.org/contentassets/2ebcf84d71484f89a1b30dd26f1721ef/skills-and-experience-for-effectively-designing-ng-systems_final.pdf

and our member companies routinely work with state regulators and other policymakers to ensure that both the integrity of pipeline expansions and the safety of the communities served.

Promoting Energy Efficiency Programs

AGA and our member companies recognize that rising energy prices and growing concern about the environmental impact of energy use have increased customer interest in using energy more efficiently. By investing in the efficiency of buildings and appliances, promoting smart energy choices, and subsidizing energy-saving efforts for low-income families, natural gas utilities are helping their customers save money and reduce their carbon footprint, while maintaining the comfort and productivity of their home or business.

Even as the number of natural gas customers increases annually, natural gas usage per household has decreased. And as the overall demand for energy has risen, utilities continue to invest in natural gas efficiency programs which has resulted in more customers using less gas due to more efficient home construction, utility-sponsored energy efficiency programs, and the development of increasingly efficient natural gas appliances. Overall, natural gas utility industry investment in energy efficiency programs have nearly quadrupled in the last decade and natural gas utilities in America spend $4 million every day on energy efficiency programs.

Natural Gas is America's Cleanest Fossil Fuel

AGA member companies are working towards a shared goal of reducing greenhouse gas emissions through increased efficiency and the growth of the renewable natural gas market. Increased use of natural gas has contributed to U.S. energy-related carbon dioxide emissions now reaching among the lowest levels in 25 years. Currently, residential natural gas consumption accounts for just 4 percent of total greenhouse gas emissions in the U.S. As the number of natural gas customers has been steadily increasing, the level of methane emissions continues to decrease. This decrease is a result of increased efficiency by natural gas customers and improved technologies for natural gas appliances, as well as the replacements and upgrades being made along the natural gas pipeline systems throughout America. In particular, an increased focus on pipeline safety has led to significant decreases in methane emissions from our nation's pipeline network; nearly 90 percent of the emissions decline from distribution systems since 1990 are due to pipeline replacement activities.

Pipeline Safety Reauthorization

DISTRIBUTION PIPELINE REGULATION

AGA supports reasonable and practicable federal regulations that improve pipeline safety. Further, AGA supports recommendations from the National Transportation Safety Board that are reasonable, applicable and reflect stakeholder input. AGA also supports relevant recommendations from the U.S. Department of Transportation Inspector General, Government Accountability Office, National Association of Pipeline Safety Representatives (NAPSR) and the National Association of Regulatory Utility Commissioners (NARUC). In addition, per an agreement with the federal government, state public utility commissions are empowered by statute to direct and enforce safety standards for pipeline facilities and to regulate the safety practices of LDCs. Public utility commissions enforce federal safety standards as they relate to design, installation, operation, inspection, testing, construction, extension, replacement and maintenance of pipeline

facilities. State public utility commissions may also prescribe additional standards, beyond those set by the Federal government, provided they are not in conflict.

COMMITMENT TO SAFETY

AGA and its members' safety efforts go far beyond regulation and are driven by our dedication to the continued enhancement of pipeline safety. In fact, AGA's board adopted AGA's *Commitment to Enhancing Safety,* a public declaration that LDC's are committed to proactively collaborating with federal and state officials, emergency responders, excavators, consumers, safety advocates and the public to continue improving the industry's longstanding record of providing natural gas service safely, reliably and efficiently. This document also reflects LDCs' willingness to make safety an intrinsic part of their core business functions, including pipeline design and construction, operations, maintenance and training, as well as more public facing programs like workforce development, pipeline planning stakeholder engagement, and first responder outreach. While these business activities will vary with each operator, it is the consensus of AGA members that implementing these priorities will help enhance pipeline safety, improve gas utility operations, reduce greenhouse gas emissions and provide better public accountability.

AGA's members also participate in peer reviews, benchmarking activities, the development of publications, and industry events that allow for the sharing of leading practices. This includes but is not limited to the following:

- The AGA Peer Review and Gas Utility Operations Best Practices Programs are voluntary safety and operational practice programs that allow local natural gas utilities throughout the nation to observe their peers, share leading safety practices and identify opportunities to better serve customers and communities
- AGA and its members have developed hundreds of technical publications to assist operators. Two of the more recent publications are, *Leading Practices to Reduce the Possibility of a Natural Gas Over-Pressurization Event*[3] and *Guidelines to Understanding Pipeline Safety Management Systems* (Attachment 3)
- AGA's 2019 spring committee meetings, and its Operations Conference and Exhibition will include nearly 20 technical committee meetings, more than 180 speakers, over 275 exhibitors, and more than 2800 attendees, all focused on the sharing of technical knowledge, ideas and practices to promote the safe, reliable, and cost-effective delivery of natural gas to homes and businesses across the country

PIPELINE SAFETY ACT REAUTHORIZATION PRIORITIES

AGA and its member companies support reasonable, flexible, risk-based, and practicable updates to pipeline safety regulation that build upon lessons learned and evolving improvements to safety and pipeline technology. Following this path leads to the sort of regulatory certainty our industry needs to better serve our customers. AGA asks the subcommittee to consider three high-level principles when drafting reauthorization legislation:

(1) Preserve Industry Engagement in Pipeline Safety Rulemaking. Reauthorization legislation should avoid legislative prescription and uphold the PHMSA regulatory process which allows all stakeholders a role in developing new safety regulations. Integral to PHMSA's pipeline safety rulemaking capability is the role the Gas Pipeline Advisory Committee (GPAC) plays in providing stakeholders a better understanding of the goals of

[3] *Leading Practices to Reduce the Possibility of a Natural Gas Overpressurization Event* (November 26, 2018)

proposed regulations by allowing them to ask questions, provide input, offer alternate regulatory language when the proposed language fails to meet intended goals, and come to consensus on final rules that are technically feasible, reasonable, cost effective and practicable.

(2) Support Appropriate Flexibility in Rulemaking. Any new rulemakings authorized by pipeline safety reauthorization legislation should recognize that every pipeline distribution system is different in terms of design, use, age, materials, location, external risks, operating history and current operating conditions. Therefore, efforts to reduce risk in one system may not work in a different system. Any new safety rulemaking should recognize the differences between systems and avoid one-size-fits-all safety equipment or process mandates. Due to the distinct differences amongst distribution systems, prescriptive regulations may result in mis-prioritization of safety risks.

(3) Don't Obstruct Ongoing Pipeline Replacement Programs. Due in large part to active support by gas LDCs and other pipeline safety advocates, 43 states and the District of Columbia have implemented pipeline replacement programs either via legislation or regulation. These replacement programs offer the public continuously improving pipeline safety, environmental benefits, and more cost effective and consumer friendly gas utility operations. Reauthorization legislation should not saddle effective state replacement and upgrade programs with counterproductive new federal mandates that delay these replacements or require replacement faster than that work can be safely, and cost effectively, accomplished.

AGA intends to leverage the substantial operations and engineering expertise of our more than 200 natural gas member companies to assist Congress in producing practical pipeline safety reauthorization legislation that reflects solid engineering principles and operational realities. To that end, we offer the following comments on a number of issues we anticipate will come up during the debate:

Cost-Benefit Analysis Requirements are Necessary in Rulemaking

Under current law, a cost-benefit analysis must be conducted during the PHMSA rulemaking process. The current requirements promote effective, reasonable, transparent and legally-sound regulations. A cost-benefit analysis provision helps gain consensus on regulations, rather than delay rulemakings. The clear and specific requirements in the Pipeline Safety Act lead to regulations that are more effective and legally sound, with a greater likelihood that PHMSA's rulemakings will survive any legal challenge to the sufficiency of the analysis.

AGA believes that the role PHMSA's Gas Pipeline Advisory Committee (GPAC) plays in subjecting rulemakings to cost benefit analysis is integral to PHMSA's pipeline safety rulemaking capability. Overall, AGA opposes making operational changes to GPAC activities as a method for streamlining the regulatory process. In fact, we believe the PAC process speeds up rulemaking since it provides final rules that have been vetted by industry, other government agencies, and the public for technical feasibility and practicability. Recent interim final rules where PHMSA deviated from the process have resulted in litigation or stays of enforcement to correct issues missed due to the lack of GPAC involvement. Specifically, we oppose eliminating the GPAC cost-benefit analysis for two reasons. First, from a process perspective, none of the recent regulations that failed to meet legislative deadlines were delayed due to the cost-benefit analysis process.

More importantly, cost-benefit analysis serves to protect consumers because regulatory costs are ultimately borne by industry customers.

Professional Engineer Licensing Requirements Do Not Enhance Pipeline Safety

A Professional Engineer (PE) license does not demonstrate that an individual has the specified system knowledge or experience required to understand natural gas systems and make decisions related to public safety. This is especially true since there is not a PE license specifically for natural gas pipelines. For tasks that require an engineer, it is more important for an individual to have both an engineering degree and knowledge of the natural gas system. Having processes in place to ensure applicable technical expertise, designs review and approvals, and Management of Change, will have the greatest impact on pipeline safety.

Traceable, Reliable, and Complete Distribution Records Requirements

Not all records are equal in importance. Data that does not advance pipeline safety should not be managed with the same rigor as data that is essential for pipeline safety. AGA supports traceable, reliable, and complete record requirements for essential records for new or fully replaced distribution pipelines.

Effective Emergency Response and Communication Plans are Vital

Every gas event is unique and establishing communication with first responders as soon as practicable after discovery of an incident benefits public safety. However, mandating communication within 30 minutes may not allow operators time to perform an initial assessment, confirm that the event is related to natural gas, or that the event is on an operator's pipeline.

AGA supports prompt emergency response and enhancing communication with first responders, affected public, and relevant public officials as soon as practicable after discovery of an incident. It is reasonable to require operators to implement their communication plan as soon as practicable after an operator has confirmed discovery of a gas pipeline emergency.

Pipeline Safety Management Systems (PSMS) Enhance Pipeline Safety

American Petroleum Institute Recommended Practice (RP) 1173 (July 2015), PSMS, outlines a systematic approach to managing pipeline safety and continuous monitoring and improving overall pipeline safety performance. The core principal of PSMS, which is the "Plan-Do-Check-Act" cycle, requires operators to determine the steps to be taken to evaluate and enact changes/improvements within 10 specific areas. Ultimately, this requirement drives the industry towards its zero-incident goal by providing that the various components of PSMS are regularly reviewed and continually evolving.

The industry and other stakeholders, including PHMSA, believe that PSMS will enhance pipeline safety and improve safety culture if properly implemented. Significant efforts have been underway since the release of PSMS to promote, pilot and share learning on the benefits of implementing PSMS. Any prescriptive regulatory requirements to implement PSMS will limit the effectiveness of the continuous improvement cycle and could shift the focus from safety culture to compliance

culture. In addition, new regulatory requirements will stall current PSMS implementation efforts to provide compliance with regulations, delaying any potential benefits from implementation.

AGA supports the promotion of PSMS and the development of system(s) that promote self-disclosure and a collaborative culture between regulators and operators, like the program in place with FAA.

Management of Change Principles are Important for Significant Work

Some have argued to include provisions that require natural gas distribution systems have a detailed procedure for a Management of Change. Management of Change is a best practice to ensure that safety, health and environmental risks and hazards are properly controlled when an organization makes changes to their facilities, operations or personnel.

The industry is supportive of Management of Change for significant work, such as capital main installation or replacements, changes to an engineering design, or changes to a standard. This will help to ensure that the change does not inadvertently introduce a new hazard or unknowingly increase the risk of an existing hazard. However, broad application of Management of Change principles diverts resources from additional oversight for processes which enhance pipeline safety.

Each operator's gas system is unique and subject to different system threats and risks. Operators should identify significant work relevant to their unique system and apply Management of Change principles to important work such as changes to technology and equipment, and procedural and organizational changes within their company systems.

These processes should clarify roles and responsibilities and should ensure that personnel have knowledge and skills specific to natural gas pipelines. Management of Change principles should identify industry-specific knowledge, competencies, and skills employees and contractors require to perform work processes.

A Mandamus Clause Should Not be Included in 49 U.S.C. Section 60121

A mandamus clause would allow local and state governments, and others via "citizen lawsuits," to ask the courts to compel PHMSA to carry out its statutory pipeline safety responsibilities Advocates argue that this is particularly important given PHMSA's alleged inability carry out its mandated responsibilities. AGA believes that expanding citizen suit provisions of Section 60121 to allow mandamus-type actions against PHMSA would result in more litigation, which would require PHMSA to redirect its resources to defending itself in court instead of executing its statutory responsibilities to ensure pipeline safety. Pipeline safety is a highly technical and complex area of the law. The regulatory agencies with specific subject matter expertise, not the courts, are best positioned to make decisions regarding how to regulate pipelines and ensure public safety.

Criminal Liability Should Not be Expanded

Recommendations have been made to amend the Pipeline Safety Act's criminal penalties provision (49 U.S.C. § 60123) to include "willfully and recklessly" language, noting that the current statute that applies to pipeline safety sets an unusually high bar for holding companies accountable for criminal behavior. The current version of 49 U.S.C. § 60123 allows for criminal

prosecution of those accused of knowingly and willfully violating the law. This holds those who engage in egregious, intentional misconduct accountable and ensures compliance with the law. There is no history of conduct in the industry that merits expanding the current criminal liability. As such, AGA does not support expanding criminal liability to include "recklessness" under Section 60123.

Civil Penalties Should Not be Increased

Civil penalties serve as one measure of enforcement available to PHMSA. Furthermore, existing penalties were recently increased as part of the Pipeline Safety Act of 2011. Recent suggestions to amend 49 U.S.C. § 60122(a) to increase the maximum civil penalty available under the Pipeline Safety Act as much as a hundredfold (i.e., from $200,000 to $20,000,000 (each violation) and $20,000,000 to $200,000,000 (cumulative maximum)) or eliminate the cap on civil penalties are unsubstantiated. Such proposed increases are excessive and will, if implemented, be counterproductive to ensuring pipeline safety and reliability, especially given that most fines and penalties are not used to improve pipeline safety. Existing penalties are sufficient at deterring Operators from violating the law and increases will not advance the goals of deterrence and swift resolution of safety issues.

Remote-Controlled and Automatic Shutoff Valves Provide Benefits

Additional scrutiny has been placed on installing automatic shutoff valves and remote-controlled valves (ASVs and RCVs). Operators have installed ASVs on pipeline segments that have not experienced wide pressure fluctuations and are not expected to experience wide pressure fluctuations in the future, and where the risk analysis indicates the ASV will provide added protection. PHMSA is working to publish its notice for proposed rulemaking (NPRM) which addresses ASVs and RCVs for new and fully replaced transmission pipelines. The primary benefit of an ASV or RCV is the ability to control the amount of natural gas released after the incident has already occurred. AGA supports PHMSA in developing a proposed rule to modify 49 C.F.R. § 192 for ASVs and RCVs on new and fully replaced transmission pipelines.

Prohibiting Unintended Releases Under Section 60118 Does Not Advance Pipeline Safety Efforts

Recommendations have been made to amend Section 60118(5) with language, to prohibit the unintended release of natural gas: However, emissions or releases from non-hazardous leaks, by definition, do not pose a safety hazard. In fact, there are circumstances where a release of natural gas may be required to ensure pipeline safety. Existing law and regulation already require the reporting of natural gas pipeline releases to PHSMA for appropriate response. The focus of any new legislation should enable PHMSA and the regulated community to improve and enhance pipeline safety, not include ambiguous mandates that do little to enhance safety.

Critical Resources Should Not be Diverted from Pipeline Safety Efforts to Regulate Methane Emissions

There have been recommendations to revise the Pipeline Safety Act to abandon its goal of promoting pipeline safety and require PHMSA to regulate methane emissions as a greenhouse

gas issue – diverting critical resources from the agency's important mission of pipeline safety. There is no need to regulate methane emissions through the Pipeline Safety Act since PHMSA already has in place regulations to inspect for leaks, immediately address leaks that are considered hazardous, and monitor those that have the potential to become hazardous. AGA does not support imposing a mandate requiring PHMSA to regulate greenhouse gas emissions because it is counterproductive to ensuring pipeline safety and reliability.

Conclusion

America's gas utilities' commitment to pipeline safety relies on sound engineering principles and technological advance, a trained professional workforce, effective community partnership and a strong partnership with state pipeline safety authorities and PHMSA. As pipeline safety reauthorization legislation is drafted this year, we encourage Congress to (1) embrace PHMSA's role as regulator and the continuing practical necessity of collaborative stakeholder engagement in the regulatory process, (2) recognize the continuing great strides in pipeline safety engineering and operating practices that natural gas utilities are putting into practice across the country, and (3) exercise discretion as Congress considers changes to law or regulation that may prove tangential or counterproductive to the government and gas industry's mutual interest in the constant improvement of pipeline safety practices and technology and our mutual interest in overall public safety.

Mr. RUSH. As chair, I want to thank all of the witnesses for their opening statements. This concludes our opening statements and we will move now to Member questions and I will start by recognizing my friend Mr. Doyle for 5 minutes.

Mr. DOYLE. Thank you, Mr. Chairman. I appreciate the courtesy.

Pittsburgh has had a record amount of rain over the past year that has caused flooding and landslides throughout our region. As recently as September of 2018 a landslide in neighboring Beaver County caused a pipeline to explode and one house was completely destroyed and 30 more homes had to be evacuated.

We know that extreme weather will continue because of climate change. Mr. Black and Ms. Sames, how does the industry take into account extreme weather events and earth movements and how does industry plan to adapt as we are seeing more and more of this severe weather?

Mr. BLACK. Pipeline operators face requirements today to be aware of that operating environment. Earth movements, any change. So there is a current requirement right now for that pipeline operator to have understood what stress might be placed on a pipeline by land movement.

We have a practice in information sharing among our industry and we'll bring pipeline operators together to tell stories about incidents or near misses or precautions that were taken based on that information.

If the climate continues to change, pipeline operations right now continue—will continue to be faced with those requirements and ongoing practices to assess that operating environment.

Mr. DOYLE. Ms. Sames?

Ms. SAMES. Congressman Doyle, I am actually from the Pittsburgh area originally. I am very familiar with all the rain you have had along with other areas of the country.

So we look at a variety of things. We are looking at new flood mapping that is coming out. We are monitoring the weather. We are putting sensors on our lines to look for ground movement.

We have been doing this for a while in areas where we have seismic activity but we are looking at it now for other areas because we are seeing changes, and with changes you have to adapt.

So operators are not including this more in their distribution integrity management plans.

Mr. DOYLE. Mr. Weimer, how about you? What should be done to properly address climate adaption and resiliency?

Mr. WEIMER. Yes, thanks for the question.

Clearly, the pipeline operators are supposed to be—have control of their pipeline and under integrity management they are supposed to look at risks and find out how to mitigate those risks. I think as we have seen with changing weather, whether it is river scours that caused two releases into the Yellowstone River in your area in the Midwest, there has been a number of big failures because of ground movement flooding.

In Texas, there has been failures because of wet soil. When the NTSB looked at integrity management they thought it was working pretty well for things like corrosion but it wasn't working very well for some of these other threats that are harder to find.

So I think we need to get a better handle and the industry is working on some of that. We also need to think about it when we are siting pipelines. You know, it doesn't make much sense to put a pipeline on the side of a hill that can fail.

So some of the routing of some of those pipelines needs to be considered, too.

Mr. DOYLE. How about—you know, Pennsylvania has a history of coal mines where we were a coal-producing State and we have many abandoned mines throughout our State.

So subsidence is also a concern for energy infrastructure. How is subsidence and geological formations taken into account?

Ms. SAMES. Well, the one good thing with distribution lines is many of them are plastic, which means they have a little bit more flexibility to move with the ground. It only goes so far, which means that where you have a sudden change, a sudden drop, a sudden sink hole, which you do experience in Pennsylvania and a few other areas, you're focusing on emergency response—how do you quickly shut off the gas to that area when there is a subsidence that is so fast and so dramatic that it causes the pipeline to break.

Mr. BLACK. Thinking about your question, Congressman, on rivers, the industry updated a recommended practice on waterway crossings to address the river scour issue. What once was a recommended practice just about calm coastal areas has now been upgraded to address the river scour issues.

Pipeline operators have to take those responsibilities seriously and do.

Mr. DOYLE. OK.

Mr. Chairman, thank you so much. I appreciate the courtesy you have shown me and I will yield back.

Mr. RUSH. I thank the gentleman for yielding the chair.

The Chair now recognizes Mr. Upton for 5 minutes.

Mr. UPTON. Well, thank you again, Mr. Chairman, and I thank the panellists for waiting. Aren't you glad we don't have three panels, right?

A couple of questions. Ms. Sames, to follow up on what you just said, and I was going to ask about new technologies as we look—you know, as we look at this next bill and there has been some questions raised about, you know, sort of like plastic and paper, plastic and steel. So you indicated that plastic is emerging volumewise, I guess you could say, in a lot of new pipelines.

Can you talk a little bit about the advantage or disadvantage and where do you think plastic is as it relates to steel? What hurdles might be there and help us?

Ms. SAMES. In case it's not obvious, you start talking technology with by background I start getting really excited.

So plastic now takes—accounts for more than 50 percent of the distribution pipe. That is increasing because we are replacing the cast iron and bare steel.

Mr. UPTON. And that is primarily in gas because oil really doesn't work, right?

Mr. BLACK. Still coated steel. Yes, Congressman.

Mr. UPTON. I am sorry to interrupt. Go ahead.

Ms. SAMES. That's fine. So some of the benefits of plastic, and it only goes up to a certain size, which is why you see on the liquid lines and the interstate lines really coated steel.

But on plastic—on distribution we use a lot of plastic because it is flexible, it is easier to insert, it is not subject to corrosion. So there's a lot of benefits that we see with it.

And the product has come a long way since the initial—the initial products back in the '60s and '70s. So we are seeing a shelf life of—lifespan of these plastics—these newer plastics—they are predicting well over a hundred years. That is pretty darn good.

The down side of plastic is——

Mr. UPTON. What's the cost difference between——

Ms. SAMES. Definitely cheaper.

Mr. UPTON. Substantial? Is it substantial?

Ms. SAMES. Mm-hmm. Right. Right. So the customers are bearing that cost benefit, which is why you see bills so low right now between the cost of natural gas and being able to use plastic. It is a lot cheaper.

The one down side with plastic is an issue that we continue that struggle with, which is third-party damage. The Durham incident, third-party damage again.

So if you all could find a way to stop the telecoms, the water, and sewer lines from hitting us, I would greatly appreciate it.

Mr. UPTON. Mr. Black, do you want to comment on it at all or not?

Mr. BLACK. We are excited about the technology advances. They're not in plastics and the liquids but they are about inline inspection technologies, leak detection technologies. We have encouraged Congress to direct PHMSA to implement a pilot program allowing for real-world testing of technology and applications. We think that will give them more information that they need so that they can update regulations to advance technology.

Mr. UPTON. In the last Congress, both Mr. Black's and Ms. Sames' organizations submitted letters of support for our action to strengthen DOE's cybersecurity program for pipelines. We appreciated that.

This bill has now been introduced—reintroduced as H.R. 370, Pipeline and LNG Facilities Cybersecurity Preparedness Act. Can you continue to support that? I don't know if you have taken another look at it. It really hasn't changed. But we would—let me just say we would welcome your written support for this a second time.

Ms. SAMES. We do support that bill. It gives DOE a great coordination role, which I think is very much needed. So yes, you continue to have our support.

Mr. BLACK. We are glad to support that bill to help it get through the committee process. Cybersecurity is important. We encourage all of Congress to work on this—a holistic approach with energy, transportation, and intelligence-related committees.

An important goal is not having duplication and conflicting sets of guidance that could set operators back.

Mr. UPTON. Great. Thank you. I yield back.

Mr. RUSH. Thank you for yielding. The Chair recognizes himself for 5 minutes.

Mr. Weimer, so good to see you again before the subcommittee. You have provided your expertise to the members of this subcommittee on pipeline safety, reauthorization efforts, and we certainly appreciate you being here once again with us.

In your testimony, you stated that since the year 2010, despite all the high-profile pipelines incidents, congressional interest, NTSB and GAO recommendations, PHMSA is incapable of producing new safety rules mostly due to the unique and overly burdensome cost benefit requirements that the agency must adhere to.

Why do you call the cost benefit requirement for PHMSA unique and how does it contribute to an agency's inability to implement significant new rulemaking even when they are directed to do so by law?

Mr. WEIMER. Thank you for the question, Chairman Rush. Yes, I am on the gas advisory committee for PHMSA and we have another board member who is a law professor at the University of Arkansas who is on the gas advisory committee. I am on the liquid advisory committee.

Both of these committees often focus on the cost benefit. It was put into the statute in the mid-90s and PHMSA, just because of timing efforts, was one of the few places where the cost benefit requirements landed.

We don't have a problem with cost benefit. We think it makes sense to consider the costs versus the benefits and that is already required under executive orders.

We are not talking about that. We are talking about the uniqueness in the statute where the industry can, because of the Administrative Procedures Act, can legally challenge that and the cost benefit is—the only place we know of it is in the PHMSA statute.

Other places like EPA and some other agencies have mention of cost benefit. But it is not—they don't have to justify the cost the way PHMSA does.

Even a former Administrator, just two Administrators back, has recently said that one of her frustrations as Administrator was trying to get rules passed because of the cost benefit statute, and you see it slowing things down because PHMSA doesn't always have enough data to justify the cost because they have to get that data from the industry.

So the industry comes forward with any rulemaking and says things are going to cost billions and billions of dollars and PHMSA really can't argue with that. Good information to know.

The committee should certainly take that into consideration. But it shouldn't be the only way you can get a rule passed.

Mr. RUSH. What kind of corrective strategies would you recommend that the Congress take?

Mr. WEIMER. Well, I think in our testimony we provided some red line version of what cost benefit language got put into the statute in the '90s and we recommended that that be removed to make it more of an even playing field with just about every other statute we see.

Mr. RUSH. You feel very strongly about the need for enacting minimum standards for the 435,000 miles of natural gas gathering lines traversing our Nation.

What are the dangers, in your opinion, of leaving those lines unregulated?

Mr. WEIMER. Thank you for that question. Yes, it is pretty amazing. As the shale plays have turned out in this country, especially in places like Pennsylvania, you know, rapidly there was hundreds of thousands of miles of new gathering lines put in.

A lot of those shale plays have pressures coming out of the ground at much higher pressures. So the pipelines going in are larger and much higher pressure. They are basically the same as gas transmission pipelines that are already fairly well regulated.

These pipelines run right past homes. Even in rural areas they run past clusters of homes. Were it failed, it would be the same as a failure of a gas transmission pipeline and in most places they are completely and totally unregulated.

So, you know, to prevent failure so people don't show up in front of this committee again with the latest failure minimum standards for these gathering lines need to be enacted.

Mr. RUSH. My time is up. I certainly want to thank you very much.

The Chair now recognizes Mr. Latta from Ohio for 5 minutes.

Mr. LATTA. Thank you, Mr. Chairman, and thanks to our panel of witnesses today for appearing.

Mr. Black, if I could start with you. You said something kind of interesting that we talk about in this committee a lot.

Energy and Commerce is a great committee. We have very broad jurisdiction. We think it is the best committee in Congress—not only think, we believe it.

But you said something that we really believe, because what we see in this committee are technologies and inventions that are really 5 to 10 years out and so one of the things we have to be careful when we are, you know, working on legislation is to make sure that we are not hindering the progress out there in the community.

And you have mentioned that—on, you know, making sure that the Federal regulations, you know, keep pace in what you're all doing out there. But what I would like to do is—my first question I would like you to go, if you would further expand on your testimony and comments regarding a pilot program to test cutting-edge safety technologies.

And would you tell us about what those new technologies are and are available out there and how they might offer the opportunity for further improvement for pipeline safety?

Mr. BLACK. I will give you one example. Pipeline integrity management regulations are almost 20 years old. That is before the iPhone. We had smart pigs then but they weren't nearly as smart as they are now. Right now, there are improved technologies of travel inside the pipeline collecting data.

At the same time that we now have terabytes of data on pipeline features whereas we didn't before, we also have better analytical techniques to know what that increased information tells us. Yet, the PHMSA regulations are almost 20 years old and are not up to date.

So the latest know-how and techniques on prioritizing risks in pipelines is not what PHMSA is requiring operators to do. Repair

criteria updates are not in what we understand would be the next hazards liquids rule that is moved.

We can see PHMSA needing real-world experiences from a controlled environment by selecting pipeline operators to test any new technologies. It could be leak detection technologies. It could be scheduling repairs and maintenance under new analytical techniques.

If they can gather information like that, they can have more confidence to update regulations in the manner that they should with equivalent or better level of safety, maybe they won't be so slow.

Mr. LATTA. Well, I assume you have discussions with PHMSA on a frequent basis. When you bring this up to them, what do they say about upgrading those regulations that bring this new technology out?

Mr. BLACK. Well, they know that it's important to us that integrity management regulations be updated. You have heard Administrator Elliott say that he is open to pilots.

We hope this would be an issue that they would work on. They also have the special permit process which has been cumbersome and slow and only allows one operator to get a waiver for an equivalent level of safety or better.

It may be ill-suited to pipeline integrity management regulations. But it is something that we need to consider with them.

The industry just released API-recommended practice 1160. That is all about performing maintenance and repairs on pipelines and as the Administrator said they have a goal—we all have a goal in avoiding spending resources on issues that aren't high priority and making sure that we are on high priority.

Whatever it takes, whether it is congressional action or a pilot program or a repair permit or a rulemaking we need to update those regulations.

Mr. LATTA. Thank you.

Just continuing on this topic, we know that the technology is ever changing and adapting. But, again, what do you—how do we get to that point of working with the agency to make sure we get those technologies out there?

Mr. BLACK. Well, we found the model in the motor carrier statute at the Department of Transportation. They have the authority to do this pilot program, and if Congress directs them to do that and creates that authority, hopefully, that is something that they will create.

We also have rich exchanges on research and development advances. They are funding research and development. We are funding research and development.

The collaboration between the two is episodic and not as good as it should be. One of our proposals is that Congress direct PHMSA to review its research and development programs and have us do it within the entities that Mr. Weimer was describing—the liquid and gas pipeline advisory committees.

If you put that in the statute that that is something that PHMSA should be doing, we believe that will maybe force more regular and frequent and fast discussions of R&D advances because we share the same goal—zero incidents, improving pipeline safety and technology.

Mr. LATTA. Thank you.

Mr. Chairman, my time has expired and I yield back.

Mr. RUSH. I want to thank the gentleman for yielding back.

Mr. Walberg is—no, I am sorry. Mr. Olson is recognized for 5 minutes.

Mr. OLSON. I thank the Chair, and welcome to the second panel.

I want to start by thanking each of your organizations for your performance—of pipeline performances during Hurricane Harvey.

Hurricane Harvey hit southeast Texas in late August of 2017. Parts of my home received 5 feet of rain over 2 days. The largest petrochemical complex in the world is along the Houston Ship Channel, which is 52 miles long.

It is America's largest exporting port for the last 10 years. All that product comes from Eagle Ford, Permian Basin, somewhere else. It got there without a major spill—major incident.

So thank you, thank you, thank you. Hurricane Harvey shows how safe you guys are.

Our first question is for you, Mr. Black and Ms. Sames. As they mentioned on the first panel, Texas 22 is booming. One example—our population, we think, will be over one million in the next Census. It has grown almost 30 percent in the last 10 years.

As the population keeps increasing, people are moving to areas that were rural before. There were pipelines there, and so with all that traffic flowing to the Port of Houston, the port of Freeport, coming from the west Permian Basin flows through Fort Bend County. Can't get there without Fort Bend County.

So can you all please talk about how the industry works with new communities as they are built around existing pipelines? How to make sure that first responders and others know what the risks are?

Mr. BLACK.

Mr. BLACK. Well, you are certainly right, Congressman, that not only is the population of that area in your district growing but the benefits within Texas of increased oil and gas production are helping Houstonians and others have benefit from lower prices, more availability to U.S. and North American supplies.

It is important for us to expand pipeline capacity to help feed those needs and to make sure that the public along the existing route is aware of pipelines that are there.

We are ready to work with anybody that is constructing a pipeline to make sure that they are safely not threatening the pipeline. The "call before you dig" program and public awareness programs are very important.

Mr. OLSON. Ms. Sames, your comments, ma'am?

Ms. SAMES. Well, in addition to what Andy said, there is also the Pipeline Informed Planning Alliance document that helps to—helps communities as they are building around existing pipelines. There are a lot of great practices in there.

It was a collaborative effort that included, you know, the Pipeline Safety Trust, the oil industry, the gas industry, emergency responders, Governors, cities. I lost count of how many. It is a good document and it really provides guidance around how communities can build safely around these existing pipelines—these larger existing pipelines.

Simple things like if you're building a school near an existing pipeline put the parking lot near the pipeline, not the school, but also make sure that there is a good exit so that when people—if something happens in that small stretch that they have an escape route. It is things like that that are within the document. Hopefully, they will consider it.

Mr. OLSON. I thank you, too, because pipelines provide green space all over Fort Bend County and Brazoria County. A park right by my house, the biggest park my hometown of Sugar Land has, is built over an existing pipeline. The markers are all along the park. But it's a park and people are there. They're flying kites. They've got this little dirt bike trail. That is because a pipeline is there. That land is available. It would have been taken up but that pipeline gave us green space. So thank you for that.

I want to get back to the staffing issues I talked about with PHMSA in the first panel. You know, they can't function without the right agents, the right people in place, and sometimes, I mentioned, they get poached because their people are so good.

Mr. Doyle left, but he and I have a bill to give FERC a sort of waiver to keep employees, pay them higher than average Federal salary. That has happened for the SCC. Would you support that going through PHMSA, having that have more financial resources to keep the people they've got?

Mr. BLACK. I will tell you about the proposal that we have made to the Congress on this and the committee. We understand that if PHMSA had Schedule A hiring authority for its inspectors, they would be able to better attract and retain pipeline operators.

From what we have learned about the Federal personnel process, that would help. It is in all of our interests for PHMSA to be able to have quality inspectors on the job. I haven't studied your bill. I am happy to do that. But the spirit of being able to have PHMSA maintain quality inspectors is one we support.

Mr. OLSON. Thank you. One final comment, and this is a question for you, Mr. Black. Are the Horned Frogs going to beat the Sooners this year in football?

Mr. BLACK. Well, as a TCU grad, they should every year. Yes, sir.

[Laughter.]

Mr. OLSON. OK.

Mr. RUSH. The gentleman from Michigan, Mr. Walberg, for 5 minutes.

Mr. WALBERG. Thank you, Mr. Chairman. Thanks to the panel.

Mr. Black and Ms. Sames, I think you share some of the frustrations regarding PHMSA's inability to comply with congressional mandates relating to pipeline safety rulemakings.

In your view, what is keeping PHMSA from complying with deadlines on their significant rulemakings?

Mr. Black?

Mr. BLACK. Congressman, we believe there was a strategic mistake by the last administration to lump many large complex issues into a few mega rulemakings. The rulemaking process is not build for that.

We believe that they should have separated them out. The Administrator has acknowledged that and that is what they are

doing. We don't believe cost benefit requirements are what delayed those rules.

Now, certainly, if a proposal is overly broad it deserves to be reviewed further. We think the American people, who ultimately pay the cost of regulations, deserve to know that the benefits outweigh the costs and we think cost benefit analysis improves regulations.

Lastly, some of the proposals that we have seen to remove cost benefit from the PHMSA statute risks, number one, later—longer delays because the Office of Management and Budget might return something to PHMSA that hasn't had cost benefit analysis.

And, two, I would hate to end the requirement that a risk benefit analysis and a cost benefit go before the public advisory committee that Carl and our industry reps are on. Those are great discussions to improve regulations.

We think, to answer your question, it has been mistakes of just lumping too many things in mega rules. That is why they were delayed. They are recovering now.

Mr. WALBERG. Ms. Sames, any additions there?

Ms. SAMES. I fully agree with Mr. Black. But in addition, just an observation. It is my opinion, my observation, that PHMSA's staff—technical staff—are pretty darn good at moving things forward after the advisory committee meets.

It appears that something is occurring after it leaves their technical office to that rulemaking. I don't know exactly what it is but——

Mr. WALBERG. Does OMB add to the delays?

Ms. SAMES. I am sure that there are some with OMB. But it appears that there may be things beyond PHMSA within the department that may also be holding things back a little bit. I don't know where the obstacle is.

But I can tell you that the industry is very frustrated. We like certainty. How often do you have the industry sending in letters to the secretary asking for them to move a rulemaking forward? And we have been doing that.

Mr. WALBERG. Thank you.

Ms. Sames, in your written testimony you highlight that every natural gas distribution system is different in terms of design, use, age, location, external risks, operating history, current operating conditions, et cetera, et cetera.

Could you please talk about how, as a result of these differences, prescriptive regulations that take basically a one-size-fits-all approach might not be the best idea?

Ms. SAMES. Thank you for the question.

Distribution lines are really different from the interstates and the liquid. You have—for example, on distribution you have plastic. You have steel. You have coated steel. You have bare steel. You have all of these different materials that were put in over the ages.

You also have different pressures and different sizes. It's just very unique compared to everything else.

So when you get a prescriptive regulation it doesn't take any of that into account and I will give you an example. Atmospheric corrosion surveys are done every 3 years. Now, if you are in a desert environment you may not need an atmospheric corrosion survey every 3 years.

However, if you are along the ocean you probably need it more frequently, which is why it is important to have not only those prescriptive regulations but also the risk-based regulations that we get through integrity management. That kind of balances things out of it.

Mr. WALBERG. OK. On the first panel I asked about the role of States like Michigan, which have robust inspection programs themselves, play in pipeline safety—specifically, their coordination with PHMSA.

Has this model helped your Michigan utilities meet higher safety standards at low regulatory burden as they invest in transitioning away from the old cast iron or steel distribution pipes?

Ms. SAMES. I think it has because the local inspectors know the environment. They know the operators. They're spending a lot of time with the distribution operators and that allows them to collectively move safety forward in a way that is the lowest cost to the customers.

The members that I have, they are all publicly traded utilities for the most part, which means that their rates are going through the commissions and it really is a partnership—how do you improve safety, how do you do things the right way at the lowest cost to the customer and the least burden.

Mr. WALBERG. And they should have a better grasp on the situations?

Ms. SAMES. Correct, because they are there. They live and work in the same communities that we are serving.

Mr. WALBERG. Thank you. I yield back.

Ms. SAMES. You are welcome.

Mr. RUSH. The Chair now recognizes the gentleman from Virginia, Mr. Griffith, for 5 minutes.

Mr. GRIFFITH. Thank you very much. I appreciate it, Mr. Chairman.

Mr. Black, earlier you indicated that, you know, there were concerns about a tax on pipelines and I share that, and I understand you also have indicated in speaking with Mr. Latta that, you know, one of the things we can do is to have voluntary compliance and so forth.

But one of my concerns is, as you heard me on the previous panel, is we got pipelines going in the ground, you know, as we speak or in the process. They are not in the grounds yet. Once we get them in the ground we are not going to put new technology—you know, we are not going to say "Dig it up" 5 years from now and put in the new technology.

And so the concern is why aren't the companies putting those pipelines in the ground now, putting in the technology? And, again, there may be others.

But, you know, I had a demonstration of what could be used with the fiber optics and, of course, you'd have to have some broadband in the area so we'd have to work on that.

But the fiber optics that will tell you if somebody is—if there is a leak that just occurs naturally or if somebody is making an attack on a pipeline that's underground they can see it, you know, live action and get out there and do something about it before the

harm you indicated, which I agree with you, could be harm to the community.

You know, it's not just about stopping the pipeline. There could be an environmental risk. There's a risk of explosion or fire or whatever. So if the industry is not already doing it, it seems to me that would be smart.

In fact, as a recovering attorney, let me posit that because that technology is out there the gas companies might very well be at risk of having not used the best equipment and may have some liability damages in the future.

So why aren't they doing it? And that makes me worry that voluntary doesn't work and that we may need to have, you know, regulatory that says, you know, if there's something out there that increases public safety we ought to do it.

What say you?

Mr. BLACK. We are excited about leak detection technology development. I know operators are talking with vendors about technologies to see, sniff, and hear signs of small leaks, which are the hardest ones to detect.

That can include acoustic smart balls, fiber optic cables. I have heard of copper cables with conductors. PHMSA conducted a study on leak detection technologies as a result of a mandate from Congress.

We heard what you alluded to on the first panel. Sometimes the claims of performance—we are not sure yet about how they will do road tested. So operators have having those conversations right now and hoping to be able to have confidence in those technologies.

I am aware of several pilot programs, not in a DOT pilot but in a company sense, where they're testing some of those new technologies. We think the pilot program will help an operator work with PHMSA and try and implement, hey, this is how we want to do for leak detection—are you OK on that.

Mr. GRIFFITH. But here is the problem with my constituents, and there are two coming through Virginia. One comes directly through my district. Another one is a little bit further north.

OK, great. You do a pilot project. Wouldn't it make more sense to go ahead and put that in the ground now? Because they're not—once the pilot project comes back and says yes, it works, they're not going to dig up the corridor over hundreds of miles and suddenly put down that technology that works.

So aren't we—if we had something that already could do that and you said, well, the new stuff doesn't work any better than the old stuff, I would say, OK, let's wait and see or—but we don't have anything that will give us that detection and at least with the one technology, and again, I admit there are others that are probably out there, it changes the temperature of the gourd.

They can tell immediately if there's a leak out there and it would seem to me that the companies would want to do this and put it down in advance and then if you needed the software upgrades down the road you might be able to do that a whole lot easier than—I mean, the ditches are dug right now and they are laying the pipe. Why aren't they doing it, and that is what calls into question for me voluntary versus us having some regulations.

Now, if it's going to take us 20 years to get the regulations that isn't going to work either. I am not sure there is an answer to that, Mr. Black. Let me go to Ms. Sames for something different because you have referenced it, I think. But the finalizing of the rule-making on the automatic shut off valves and remote controlled shut off valves which, to me, makes a lot of sense and I think that's the one you're asking them to hurry up and get it done.

But can you explain for the public the difference between the transmission and distribution systems and what considerations need to be made on these auto shut offs for each of those?

Ms. SAMES. Sure. So automatic and remotely controlled valves we are putting them on our intrastate transmission. I can't speak to the interstates. But we are putting them on our intrastates where we have what I will call consistent pressure.

The problem with automatic shut off valves is they sense a pressure drop, which means that if you have pressure fluctuations in the line, it is going to shut off and now you are shutting off customers, which is why they tend not to work as you get further downstream.

You have too many pressure fluctuations because people are turning on their stoves. They are turning on their furnaces. They are using more natural gas, which is sucking the gas from the system which is dropping the pressure.

We are very supportive of them in many instances where you don't have those pressure fluctuations.

Mr. GRIFFITH. Well, how about the—and I know you said it was—you were doing intra but how about that 42-inch pipe coming through my district? Wouldn't that work better there?

Ms. SAMES. I cannot speak to that one, sir.

Mr. GRIFFITH. Yes, ma'am. I appreciate it.

I yield back, Mr. Chairman. Thank you.

Mr. RUSH. I thank the gentleman, and I want to thank all the witnesses for your patience and for your participation in today's hearing, and I want to also remind Members that, pursuant to committee rules, you have 10 business days to submit additional questions for the record, which will be answered by the witnesses who have appeared before the subcommittee, and I ask each witness to respond promptly to any such questions that you may receive.

And this—we have a unanimous consent request to enter into the record the following information: a letter from the American Public Gas Association, a letter from the Interstate Natural Gas Association of America, a letter from the National Association of Regulatory Utility Commissioners, a letter from the Alliance for Innovation and Infrastructure.

Without objection, so ordered.

[The information appears at the conclusion of the hearing.]

Mr. RUSH. And the Chair now adjourns this committee.

At this time, the committee stands adjourned. Thank you.

[Whereupon, at 1:24 p.m., the committee was adjourned.]

[Material submitted for inclusion in the record follows:]

AMERICAN PUBLIC GAS ASSOCIATION

May 1, 2019

Congressman Bobby Rush
2188 Rayburn House Office Building
Washington, DC 20515

Congressman Fred Upton
2183 Rayburn House Office Building
Washington, DC 20515

Re: Energy and Commerce Committee Subcommittee on Energy Hearing on "The State of Pipeline Safety and Security in America"

Dear Chairman Rush and Ranking Member Upton,

On behalf of the American Public Gas Association (APGA), we appreciate this opportunity to submit comments on this important hearing addressing pipeline safety, the status of mandates, and examining additional safety needs.

There are approximately 1,000 public gas systems across the country. Our members are retail distribution entities owned by, and accountable to, the citizens they serve. They include municipal gas distribution systems, public utility districts, county districts, and other public agencies that own and operate natural gas distribution facilities in their communities. Public gas systems' primary focus is on providing safe, reliable, and affordable natural gas service to their customers. APGA members serve their communities in many ways. They deliver gas to be used for cooking, cleaning, heating and cooling, as well as for various commercial and industrial applications.

The public gas systems that APGA represents are a specific subset of natural gas utility companies, or local distribution companies (LDCs). There are two major categories of LDCs: publicly owned gas systems and investor-owned utilities (IOUs). The average investor-owned utility has over 100,000 customers and typically employs over 1,000 individuals. Publicly owned gas systems, however, typically serve less than 6,000 customers and employ only 25 individuals on average. Additionally, utility rates, are determined locally by city councils, utility boards, or other similar groups[1]. Rates for IOUs are set at a state level and the cost of compliance can be shared by rate payers and shareholders. This nuanced difference is important when considering how LDCs recover the cost of compliance.

While publicly owned gas systems and IOUs vary greatly in size, both are required to adhere to the federal pipeline safety rules and regulations promulgated by the Department of Transportation (DOT) Pipeline and Hazardous Material Safety Administration (PHMSA). PHMSA does not differ in the

[1] In Indiana, Maryland, and Pennsylvania there are exceptions to this statement for large publicly owned gas systems.

requirements and expectations for operators, regardless of their size. This consistency is why it is so critically important that mandates and regulations stay scalable and flexible. While a new pipeline safety requirement may represent a "good practice," it should also recognize that not all regulated entities are the same.

APGA is Dedicated to the Safe Operation of Pipelines

Safety is paramount for APGA's members. Whether maintaining a safe community around our pipelines, ensuring employees and contractors return home safe each day, or operating and maintaining at the highest level of safety, APGA members are committed to safety. APGA members understand that their ability to provide natural gas to homes and businesses is directly linked to their ability to do it safely.

In July of 2018, APGA's membership formally approved APGA's Commitment to Pipeline Safety. This policy resolution memorializes APGA membership's dedication to pipeline safety through principles found in Pipeline Safety Management Systems.

APGA Supports the PHMSA Rulemaking Process

The Administrative Procedure Act provides "interested persons an opportunity to participate in the rulemaking through submissions of written data, views, or arguments." It is understood that the rulemaking process takes time, but, in the case of PHMSA and natural gas pipeline safety regulations, we believe it functions properly. It allows the agency - through a sometimes iterative process - to refine the requirements until they are deemed to be technically feasible, cost-beneficial, and practical by all stakeholders.

It is through this iterative process that stakeholders are able to lend their expertise to the agency. No one individual or group of individuals from any one stakeholder community can be experts on all aspects of a new requirement. The rulemaking process allows those interested groups to come together and create the best possible product. An integral part of PHMSA's rulemaking process occurs during Pipeline Advisory Committee meetings. The Gas Pipeline Advisory Committee (GPAC) is an advisory committee to the Department of Transportation and to PHMSA on rulemakings impacting natural gas pipelines. The GPAC provides a forum for full stakeholder review of proposed regulations and PHMSA initiatives outside of regulations. The GPAC is comprised of 15 members, with equal representation from the natural gas industry, federal and state regulatory agencies, and the public safety advocates. The chartered role of the GPAC is to review and report on the "technical feasibility, reasonableness, cost-effectiveness, and practicability" of PHMSA's proposals. APGA supports the GPAC process and believes it creates an open, transparent process in which the best possible rules can be promulgated. It is a key part of the pipeline safety "journey."

APGA supports the existing PHMSA rulemaking process and believes the unique statutory requirement for PHMSA to perform cost-benefit analysis at each stage ultimately results in effective, transparent and comprehensive rulemakings. Without this requirement, PHMSA would not have the opportunity to refine their analysis prior to proposed rules being forwarded to the Office and Management and Budget. APGA believes by refining those analyses early in the process, PHMSA avoids further delays after rule language has already been established and vetted through the GPAC and the Liquid Pipeline Advisory Committee.

APGA understands some of the frustration that has resulted from the lengthy rulemakings at PHMSA. APGA suggests that these long timelines are not a result of the rulemaking process itself, but instead are

due to the depth and scope of requirements that are being addressed in each rule. APGA recommends a streamlining of the requirements within each rule. Instead of writing all-encompassing requirements that go beyond the scope of Congressional mandates, APGA believes that separating mandate rulemakings from other general regulatory improvement rulemakings will allow PHMSA to better prioritize and move rules to publication more quickly. Only after the Congressional mandates have been met should PHMSA allocate resources to other rulemakings to enhance the pipeline safety regulations.

APGA Supports Impactful Updates to Pipeline Safety Regulations

Pipeline safety is a "journey" – it is not simply a goal that is reached. Pipeline operators review data; technological advancements improve system management and operation; observations and daily monitoring provide knowledge about how to reduce risks in the future. The tragic accident in Massachusetts in September, 2018 highlights the ongoing need to constantly monitor and improve pipeline safety practices and standards, whether required by law or not. APGA recognizes additional actions that add layers of protection are needed and likely will be required.

Any potential new federal requirements should be promulgated through the PHMSA rulemaking process. Furthermore, APGA believes that new mandates should be evaluated in concert with existing requirements that are already in place. While some new requirements may appear to be beneficial on their own, they may prove to be redundant or their benefits are minimal when considered with existing rules and regulations. As highlighted earlier in this testimony, the scope of resources available to publicly owned natural gas systems are defined by rate payers, and every action requires resources.

Conclusion

Natural gas is critical to our economy, and millions of consumers depend on natural gas every day to meet their daily needs. It is critical that they receive their natural gas through safe, affordable and reliable delivery by their LDC. Public gas systems are proud of their safety record. Safety has been, and will continue to be, their primary and constant focus - there is no higher priority for a natural gas system, no matter the size or structure. AGPA and its members understand and embrace PHMSA's role in the pipeline safety "journey."

APGA appreciates Congress' focus on this critical part of our nations infrastructure, and we remain committed to working in concert with Congress, regulators, and industry counterparts to continue to provide natural gas to millions of Americans in the safest manner possible.

Interstate Natural Gas Association of America

April 29, 2019

To: The Honorable Bobby Rush
The Honorable Fred Upton
Committee on Energy and Commerce
Subcommittee on Energy
U.S. House of Representatives
Washington, DC 20515

From: Donald F. Santa
President and CEO
Interstate Natural Gas Association of America

Re: Reauthorization of the Pipeline Safety Act

Dear Chairman Rush, Ranking Member Upton, and Members of the Subcommittee:

The Interstate Natural Gas Association of America (INGAA) appreciates the opportunity to submit this testimony regarding the 2019 reauthorization of the Pipeline Safety Act. INGAA is a trade association that represents the interstate natural gas pipeline industry.

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.

INGAA's members bring the nation's natural gas to market. That natural gas is used to heat our homes, cook our food, power our nation's industries and generate electricity in an environmentally responsible manner.

INGAA asks that the subcommittee consider four principal points in its deliberations regarding reauthorization of the Pipeline Safety Act:

First, INGAA members will continue to incorporate new technologies and advanced engineering practices that enhance our pipeline safety performance. As an industry, we are relentlessly committed to transporting natural gas in a safe, reliable, and environmentally responsible manner. Not only does this make good business sense, but far more importantly, it is core to our function as operators of critical infrastructure. We are obligated to the communities we serve and in which we live to operate safely, reliably, and responsibly.

Second, our members support sensible regulation and completion of pending rulemakings in a timely and workable fashion. It is critical for an infrastructure industry of our national

importance to have regulatory certainty. Regulatory certainty fuels improvements to safety performance, supports ongoing investment, and sustains and creates jobs.

As you know, the Department of Transportation is finalizing a rulemaking to fulfill many of the gas transmission pipeline safety mandates that were at the center of the last two Pipeline Safety Act reauthorizations. All told, this rulemaking represents the most significant enhancement to gas transmission pipeline safety regulations since the federal code was first promulgated in 1970. INGAA members strongly support prompt completion of these new regulations.

INGAA applauds PHMSA for picking up the pace on this rulemaking within the last few years. Nevertheless, INGAA recommends that in the future PHMSA pursue more precise rulemakings, instead of the single, omnibus rulemaking that was used for the pending gas transmission safety rules. We believe this approach would expedite future rules.

Third, the PHMSA Gas Pipeline Advisory Committee (GPAC) process has proven effective in facilitating broad stakeholder review of proposed regulations. The GPAC should remain an active participant in PHMSA's work. The GPAC is a transparent and balanced forum that has demonstrated the ability to build consensus around complex regulatory issues, including the pending gas transmission pipeline safety regulations. In fact, several organizations that participated in the GPAC meetings recently sent a letter to Secretary Chao to express our support for expeditiously publishing a final gas transmission rule to address the outstanding congressional mandates. The signatories included INGAA, other pipeline trade associations, and public safety advocacy groups. Such consensus would not have been possible prior to the GPAC discussions.

Fourth, outdated regulations that do not reflect current technologies and engineering practices should be updated. These outdated regulations result from a code of federal standards established over the past 50 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 pace with advances in pipeline safety technology and modern engineering practices.

As an example, PHMSA should be commended for considering updates to the class location change regulations. With today's processes and technologies, pipeline safety can be managed effectively through data-driven inspection and maintenance, instead of the haphazard pipe replacements required by the current class location change regulations. These unnecessary replacement projects can disrupt natural gas service and require the release of up to 800 million standard cubic feet of natural gas every year, which is equivalent to the annual natural gas use of over 10,000 homes and the annual greenhouse gas emissions of over 80,000 passenger vehicles. And each year the class location change regulations divert hundreds of millions of dollars towards replacing less than 75 miles of pipe. There are much more productive ways to

invest these substantial resources to enhance pipeline safety. For example, we could instead assess 25,000 miles with internal inspection devices for the same cost of replacing 75 miles.

Congress directed PHMSA to consider updating the class location change regulations in prior reauthorizations. We hope Congress will continue to support this much-needed update.

1. **INGAA members have improved performance using new technologies and enhanced engineering practices**

In advance of PHMSA completing its pending rulemakings, INGAA members have committed to undertake major efforts in these same areas. For example, INGAA members have committed to utilize an existing American Society of Mechanical Engineers standard as the basis for expanding integrity management programs beyond high consequence areas. This commitment will cover 90 percent of the people living near our pipelines by 2020.

In addition, INGAA operators have been re-verifying records for pipelines constructed prior to the federal safety regulations and we have committed to reconfirming maximum allowable operating pressure (MAOP) for certain pipelines for which adequate records are not available. INGAA members have reconfirmed the MAOP of thousands of miles of pipelines since 2012. We have reduced the mileage of pipelines in high consequence (densely-populated) areas without complete pressure test records by more than 40 percent.

This work has contributed, in part, to an approximately 75 percent decrease in manufacturing-related incidents on onshore gas transmission pipelines since 2010[1], when a manufacturing-related failure on a pipeline in San Bruno, California prompted Congress to mandate new regulations for gas transmission pipelines.

2. **INGAA supports the completion of pending rulemakings in a timely and workable fashion**

Proactively implementing INGAA's pipeline safety commitments during the pendency of proposed regulations creates significant business risk for pipeline operators. This is because new regulations may require already completed actions to be redone at significant cost, effort and disruption to pipeline customers. Because our industry endeavors to keep pace with technological advancements and modern engineering practices, we have a vested interest in seeing pending rulemakings completed in a timely fashion.

[1] PHMSA public incident data for reportable onshore gas transmission pipeline incidents, 2010 – 2017.

For more than seven years, PHMSA has been developing a new gas transmission safety rule that will encompass a wide range of topics. INGAA members strongly support prompt completion of these new regulations.

This comprehensive update to PHMSA's gas transmission regulations will make great strides in incorporating modern technologies and engineering practices into our nation's pipeline safety program. Published as a proposed rule in 2016, this rulemaking will implement a number of Congressional mandates, including the expansion of the integrity management program beyond traditional high consequence areas and the reconfirmation of MAOP for pipelines constructed before 1970. The rulemaking also addresses numerous NTSB recommendations and includes PHMSA priorities that were not mandated by Congress.

All told, this rulemaking represents the most significant enhancement to gas transmission pipeline safety regulations since the federal code first was promulgated in 1970. For the next several years, natural gas transmission operators and federal and state regulators will be focused on implementing these important improvements to our pipeline safety programs. We ask Congress to recognize the sweeping changes that these pending rules will make to our industry's pipeline safety programs before adding any new gas transmission mandates.

INGAA applauds PHMSA for picking up the pace on this rulemaking within the last few years. Nevertheless, INGAA believes that there are opportunities to learn from this recent rulemaking in order to expedite future rulemakings. Going forward, INGAA recommends that PHMSA pursue more precise rulemakings, as opposed to the single, omnibus gas transmission pipeline safety rule that PHMSA proposed in 2016. While we are pleased to see the important changes that this rule will bring, in hindsight, INGAA believes that its development and review would have been substantially quicker had it instead been a series of individual rules organized by topic area.

INGAA members also anticipate a final underground natural gas storage rule. The PIPES Act of 2016 directed PHMSA to issue safety regulations for underground natural gas storage facilities and to consider consensus technical standards in developing those regulations. In advance of PHMSA's rulemaking, INGAA's members committed publicly to implement these technical standards, which describe integrity management program requirements for underground storage facilities. PHMSA elected in late 2016 to fulfill its underground storage mandate using an interim final rule, which allowed the rule to become effective without public comment. Unfortunately, PHMSA's IFR deviated substantially from the technical standards. These deviations are concerning and confusing for underground storage facility operators. In 2017, PHMSA issued a partial stay of enforcement and re-opened the comment period for this rulemaking as it considers how to ensure a clear and practicable underground natural gas storage final rule. We ask that a final rule be published as soon as possible.

Timely rulemakings are essential to PHMSA fulfilling its mission. Delays in completing important rulemakings slow improvements in pipeline safety and create uncertainty surrounding the industry's investment in the facilities and safety 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.

3. **The GPAC should remain an active participant in PHMSA's work**

The GPAC provides an important forum for stakeholder input. The GPAC is an advisory committee to the Department of Transportation and to PHMSA on matters of natural gas pipeline safety and regulatory oversight. The GPAC is comprised of 15 members, with equal representation from the natural gas industry, federal and state agencies, and the public (such as safety advocates and emergency managers). 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. This consultation is required by the Pipeline Safety Act.

GPAC can play an important role in completing our collective objective to enhance gas pipeline safety regulations. The time needed to complete a rulemaking is affected, in part, by the quantity and quality of dialogue with impacted stakeholders. Stakeholder dialogue is especially important when the subject of a rulemaking is a complex, technical topic such as pipeline safety regulation. New rules should leverage stakeholder knowledge and expertise to facilitate the deployment of new technologies and practices that are more effective, more efficient, and less disruptive than the legacy methods that may be reflected in existing regulations.

Additionally, the existing framework in the Pipeline Safety Act by which PHMSA conducts cost-benefit analysis is important for effective GPAC review of proposed regulations.[2] The Pipeline Safety Act requires PHMSA to submit its cost-benefit analysis of a proposed rule for peer review by one of PHMSA's advisory committees, such as the GPAC. This provides a unique opportunity for public discussion and input regarding the impacts of proposed rules. Furthermore, the Pipeline Safety Act provides clear and specific direction to PHMSA regarding how the agency's rulemakings must comply with various Executive Orders that require a cost-benefit analysis for significant regulatory actions.[3] The requirement under the Pipeline Safety

[2] *See* 49 U.S.C. §§ 60102(b)(2)(D) and (E) and 49 U.S.C § 60102(b)(3).

[3] PHMSA, like all federal executive agencies, is required to perform a cost-benefit analysis on significant regulatory actions under Executive Order 12866 issued by President Clinton on September 30, 1993, and Executive Order 13563 issued by President Obama on January 18, 2011.

Act to conduct a cost-benefit analysis is consistent with other environmental, health and safety statutes[4], but the transparent and specific framework provided by the Pipeline Safety Act is superior. No PHMSA regulation has ever been overturned on the basis of the cost-benefit analysis requirement in the Pipeline Safety Act, indicating that the Pipeline Safety Act provides a clear, legally-defensible standard for cost-benefit analyses.

PHMSA conducted a series of GPAC meetings in 2017 and 2018 to consider the pending gas transmission pipeline safety rules, including the information contained in PHMSA's cost-benefit analysis for the rulemaking. Five multi-day meetings were held over an 18-month period to review the pending regulations. During these meetings, PHMSA and the GPAC succeeded in building broad consensus around many important and challenging gas transmission pipeline safety topics. As evidence of a process that works, several organizations that participated in the GPAC meetings recently sent a letter to Secretary Chao to express our support for expeditiously publishing a final gas transmission rule to address the outstanding congressional mandates.[5] The signatories included INGAA, other pipeline trade associations, and public safety advocacy groups. Such consensus would not have been possible prior to the GPAC discussions.

4. **Outdated regulations should be updated to reflect current technologies and engineering practices**

It also is important that PHMSA review older regulations, especially where newer regulations address the same pipeline safety imperatives. The Department of Transportation is now reviewing older regulations to determine whether they effectively address today's challenges. This presents an opportunity to improve safety regulations by promoting the use of 21st-century technologies and engineering practices that did not exist when the federal pipeline safety regulations first were published in 1970.

As an example, last summer PHMSA published an advanced notice of proposed rulemaking to consider whether modern pipeline assessment technologies and engineering practices offer an alternative to existing class location change requirements for gas transmission pipelines. PHMSA should be commended for this effort. Several past reauthorization bills, including the

[4] For example, the Federal Mine Safety and Health Act (Mine Act) requires the Mine Safety and Health Administration (MSHA) to conduct a cost-benefit analysis as part of its rulemaking process. (30 U.S.C. § 811(a)(1)). MSHA is required to request the recommendations of an Advisory Committee (similar to PHMSA's technical advisory committees) appointed under Section 102(c) of the Mine Act for any regulation that will have a significant economic impact. (30 U.S.C. §§ 811(a)(1), 812(c)). As another example, Section 301 of the Clean Water Act requires the Environmental Protection Agency (EPA) to select the "best available technology economically achievable" (33 U.S.C. § 1311(b)(2)(A)), and then requires EPA to take into account the cost of achieving effluent reductions when assessing best available technology (33 U.S.C. § 1314(b)(2)(B)).

[5] *See* Exhibit A

PIPES Act of 2016[6], directed PHMSA to review this question. We hope Congress will continue to support this much-needed update.

The class location change regulations were published in 1970, based on industry standards from 1955, and have not been substantively updated since. These regulations often require operators to replace pipe when new structures are built near an existing pipeline, regardless of the pipe's condition. It makes little sense to require the replacement of safe, operable pipe solely for purposes of compliance with a regulation that was issued before most of the industry's inspection technology was invented. With today's processes and technologies, pipeline safety can be managed effectively through data-driven inspection and maintenance, instead of blanket pipe replacement requirements.

These unnecessary replacement projects can disrupt natural gas service and require the release of natural gas into the atmosphere. INGAA estimates that up to 800 million standard cubic feet of natural gas is released every year due to class location change pipe replacements, which is equivalent to the annual natural gas use of over 10,000 homes and the annual greenhouse gas emissions of over 80,000 passenger vehicles.

Furthermore, because of the high cost associated with construction work on existing pipelines, operators currently spend $200-$300 million annually replacing pipe under the class location change regulations. Unfortunately, we have little to show for these expenditures – less than 75 miles of pipe are replaced each year due to the class change regulations (less than 0.1% of all gas transmission pipeline mileage). There are much more productive ways to invest these substantial resources and enhance safety. For example, for the same cost of replacing 75 miles of pipe, we could instead assess 25,000 miles (8% of the system) with internal inspection devices. These types of assessments allow operators to learn a great deal about the condition of their whole pipeline network, in addition to addressing the segment of pipe where the class location happens to have changed. We encourage PHMSA to consider the comments received to its advanced notice of proposed rulemaking on class location changes and move soon to the next steps in the rulemaking process.

In conclusion, the interstate natural gas pipeline industry continues to support the fundamental mission of PHMSA, including completing the various statutory mandates for new regulations. Stakeholder outreach and involvement can improve and accelerate the end result of PHMSA's rulemakings, and the recent GPAC process appears to have produced such results for the pending gas transmission safety rules. As the Subcommittee considers the current reauthorization, we encourage you to continue to look for opportunities to leverage 21st-century technologies and engineering practices to enhance pipeline safety.

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

EXHIBIT A:

STAKEHOLDER LETTER TO
U.S. SECRETARY OF TRANSPORTATION
ELAINE L. CHAO

February 7, 2019

The Honorable Elaine L. Chao
Secretary
United States Department of Transportation
1200 New Jersey Ave. SE
Washington, DC 20590

Re: Support for PHMSA Safety of Gas Transmission Pipelines Final Rule

Secretary Chao:

Our organizations write to express support for the Department of Transportation's pending gas transmission pipeline safety rule.[1] As public safety advocates and representatives of natural gas transmission pipeline companies, we encourage you to act expeditiously to advance this important update to the regulations of the Pipeline and Hazardous Materials Safety Administration.

PHMSA's rule will advance gas transmission pipeline safety by defining specific requirements to facilitate the use of 21st-century pipeline safety technologies and processes. The rule provides a foundation upon which PHMSA can better promote the utilization of modern pipeline inspection technologies, recognizing the safety, environmental, and consumer benefits that such technologies can provide. For example, the rule will facilitate the deployment of non-invasive tools that can evaluate pipeline condition and identify pipe needing repair or replacement.

The rule also sets out requirements for operators to test certain existing pipelines to ensure that they meet today's safety standards. Thus, the rule provides a means for pipeline companies to continue advancing the safety initiatives identified by Congress in 2011.[2]

Our organizations are represented on the Department's pipeline advisory committees. During the public meetings convened by the Department throughout 2017-2018, the Gas Pipeline Advisory Committee provided PHMSA with recommendations on the technical feasibility, reasonableness, cost-effectiveness, and practicability of the proposed rule. While our organizations sometimes disagree about the specifics of pipeline safety regulations, in this case consensus was achieved on many important pipeline safety topics through the advisory committee process. The advisory committee ultimately provided PHMSA with recommendations to support finalizing the rule.

Thank you for considering our request to expedite the completion of this important rulemaking. We look forward to continuing to work with the Department on our shared goal of pipeline safety.

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[1] Pipeline Safety: Safety of Gas Transmission Pipelines, MAOP Reconfirmation, Expansion of Assessment Requirements and Other Related Amendments. RIN 2137-AE72.

[2] Pipeline Safety, Regulatory Certainty, and Job Creation Act of 2011

Sincerely,

[redacted]

Lynda K. Farrell
Executive Director
Pipeline Safety Coalition

[redacted]

Simona L. Perry, PhD
Assistant Executive Director
Pipeline Safety Coalition

[redacted]

Bert Kalisch
President and CEO
American Public Gas Association

[redacted]

Robin Rorick
Midstream Group Director
American Petroleum Institute

[redacted]

Dave McCurdy
President and CEO
American Gas Association

[redacted]

Donald F. Santa, Jr.
President and CEO
Interstate Natural Gas Association of America

[redacted]

Carl Weimer
Executive Director
Pipeline Safety Trust

N A R U C
National Association of Regulatory Utility Commissioners

April 30, 2019

The Honorable Bobby Rush
Chairman
Subcommittee on Energy
House Committee on Energy & Commerce
Washington, DC 20515

The Honorable Fred Upton
Ranking Member
Subcommittee on Energy
House Committee on Energy & Commerce
Washington, DC 20515

RE: "The State of Pipeline Safety and Security in America" Hearing

Dear Chairman Rush and Ranking Member Upton:

On behalf of the National Association of Regulatory Utility Commissioners (NARUC) and the National Association of Pipeline Safety Representatives (NAPSR), I would like to commend you for holding a hearing regarding pipeline safety. As the House Committee on Energy and Commerce, Subcommittee on Energy begins the legislative process to reauthorize the Pipeline Safety Act, we would like to bring to your attention three priority issues that State public utility regulators and State pipeline safety inspectors believe must be addressed in any reauthorization proposal. Additionally, we respectfully request that this letter be included in the record of the hearing on "The State of Pipeline Safety and Security in America" to be held on May 1, 2019.

Currently, State Utility Commissions and State inspectors have direct safety authority over 2.1 million of the approximately 2.5 million miles of pipelines in the United States. State regulators and State pipeline safety inspectors are the mainstay for pipeline safety, and do a majority of the pipeline safety work. This work provides states with the most intimate knowledge of pipelines located in our respective jurisdictions.

In the federal/State partnership (between the Pipeline and Hazardous Material Safety Administration (PHMSA) and the States), States retain responsibility for the safety of about 84% of the pipelines.

State safety inspectors are the first line of defense at the community level. We enforce pipeline safety, enact and enable underground utility damage prevention programs, and promote public education/public awareness campaigns regarding pipeline safety. The obvious focus of State pipeline safety programs is to ensure public safety.

To successfully complete our mission we are asking Congress to include the following provisions in any Pipeline Safety Act reauthorization legislation:

1. Increase PHMSA's State Funding Budget for State Pipeline Safety Programs BASE GRANT
The percentage of total reimbursement from PHMSA to the collective State programs has been averaging approximately 67% to 68% since 2016 (approximately $50 to $53 million dollars). FY 2018 and FY 2019 reimbursements are estimated to be $50 - $56 million dollars each but this has been accomplished by PHMSA repurposing dollars rather than placing them in the appropriate State program line item. States are authorized by Congress to receive up to 80%. This total aggregated percentage is comprised of 2 parts: direct costs and indirect costs. Direct costs are the majority of the expenses for State pipeline programs. This reimbursement is predominantly made up of labor and benefits. Indirect costs primarily consist of allocated costs of State computer systems and other centralized State systems used to support the programs. We request that the total State reimbursement and authorization level be increased to the full 80%, as authorized by Congress, which projects to approximately $70,750,000 for FY 2020, increases to $75,000,000 in FY 2021, increases to $79,500,000 in FY 2022, and increases to $84,250,000 for FY 2023.

2. Combining State Damage Prevention Grants with the One Call Grants
There are two supplementary grants for which State Programs are eligible. The first are known as **State Damage Prevention Grants** and were initially mandated in the 2006 Reauthorization. They were intended to support any entity that the Governors deemed worthy to receive them. Grantees are allowed up to $100,000 per applicant and

typically many States apply to use the funds for Damage Prevention enforcement. The total appropriation in a given year is $1,500,000. One Call Centers may also apply for the grants and may compete against State pipeline safety programs for the grant within a State.

The second type of supplementary grants are known as **One Call Grants.** They were mandated in 1993. This money is only available to the State pipeline safety programs. The total amount is approximately $1,000,000 spread out over the applicants (State programs). The $1,000,000 appropriation has not increased since 1993 (Section 6107 Pipes Act). The original intent was to bolster the creation of 811 centers and the application of the 811 Call Before You Dig initiative. Now, States primarily use the money for enforcement and for support of Damage Prevention education in their States.

We request that the State Damage Prevention Grants and the One Call Grants be combined into a single Damage Prevention Grant program. The availability should be limited to State pipeline safety programs only (modeled after the One Call Grants). If States desire to subcontract grants to One Call Centers, that is also currently allowable and would continue. If combined, we recommend the funding level to be increased to $5,000,000.

3. "Up to 4%" Penalty

The "up to 4%" penalty is found in 49 CFR Part 198.53 and may be accessed on States that have been deemed "inadequate" in their State damage prevention (i.e. Adequacy of One-Call law Enforcement Programs) evaluation by PHMSA. As the State pipeline safety programs are not in a position to legislate changes to the State damage prevention regulations but only advise, placing the burden of a 4% penalty on the State pipeline safety programs does not recognize that there are many other stakeholders that can contribute to a State receiving penalties and that should also share the burden of improving the State damage prevention laws. This system places the penalties on those who are responsible for safety instead of those who are causing the inadequacy. Penalizing State safety programs with reduced funding does little to advance pipeline safety.

Chairman Rush and Ranking Member Upton, thank you for your time and consideration and we look forward to working with you and your staff as the legislative process moves forward.

Sincerely,

[redacted]

Nick Wagner
NARUC President
Commissioner, Iowa Utilities Board

ALLIANCE FOR INNOVATION AND INFRASTRUCTURE

1001 19th St. North
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Arlington, VA 22209
Tel. (703) 574-7376

Via Electronic Delivery

May 1, 2019

The Honorable Bobby L. Rush
Chairman, Subcommittee on Energy
House Committee on Energy & Commerce
2125 Rayburn House Office Building
Washington, DC 20515

The Honorable Fred Upton
Ranking Member, Subcommittee on Energy
House Committee on Energy & Commerce
2125 Rayburn House Office Building
Washington, DC 20515

Dear Chairman Rush and Ranking Member Upton:

It is my distinct honor and privilege to submit this written testimony for the record on the critically important issue of pipeline safety, a topic which has been the focus of my professional career.

As the former head of the Pipeline and Hazardous Materials Safety Administration, better known as PHMSA, I served as the federal government's top energy and dangerous goods transportation safety regulator. PHMSA, an operating subsidiary of the United States Department of Transportation is responsible for overseeing the safety of the nearly 2.5 million daily shipments of hazardous materials traveling across our great nation by air, land, rail, sea, and our 2.8 million miles of pipelines. These products account for nearly two-thirds of all energy resources used by our country on a daily basis.

While I am proud to acknowledge our energy transportation infrastructure is extremely safe and efficient, there is more work to be done. My former boss and mentor, Secretary Norman Y. Mineta, once equated pipelines to our own arteries through which flows the lifeblood of our economy. These products are not optional, they are necessary for our economy and way of life, and while pipelines are the safest way to transport large volumes of energy supplies, more needs to be done.

Pipelines provide us with the fuel we need to heat our homes and factories, the fuel we require to make electricity, and to power every form of transportation. Pipelines are extremely efficient and safe, and that safety has continued to improve during the last two decades, all while energy transported through pipelines has also increased substantially.

That said, excavation damage continues to pose a serious threat to natural gas distribution lines. I am proud to have been at the helm of PHMSA when the 811 One Call system was introduced, a large step in creating a nationwide system that has significantly helped lower the risk of damage and incidents to all of our underground utilities. Despite all of these advances, challenges remain and that system which we activated all so many years ago, is in need of an overhaul. The recent incident in Durham, North Carolina on April 10, which killed two to date and injured more than 20 others serves as a stark reminder of the severe consequences of mistakes made during the excavation process.

It's too early to determine exactly what went wrong in Durham, but unfortunately these incidents occur more often than they should all over the country. According to PHMSA, the five years prior to 2019 accounted for 336 reported excavation damage incidents that caused 10 fatalities, 65 serious injuries, and more than $205 million in economic damages. On the positive side, in an August 2017 report to Congress, "A Study on Improving Damage Prevention Technology," PHMSA points Congress to a number of relatively simple measures that can significantly improve Damage Prevention programs – the state programs designed to protects against excavation damage. We must follow-up on PHMSA's report and translate these findings into action.

Many of PHMSA's recommendations zeroed in on better stakeholder communications practices and techniques, including ongoing communications throughout the entire excavation process enhanced by sharing of worksite information, images, and GPS locations through portable electronic devices, i.e., cell phones and tablets, that can be used for reference on the worksite. One process cited multiple times in PHMSA's report is "Enhanced Positive Response" (EPR). These disruptive technologies have the ability to change the ecosystem today because they exist, in the field, today. Maintaining the status quo however, will not result in the safety enhancements which are within our reach.

PHMSA describes EPR in the report as follows:[1]

> *"Enhanced positive response. After an underground facility locate has been completed, the excavator receives comprehensive information about the site, including the locate request information, facility maps, photos, and virtual manifests."*

In a later section of the report, PHMSA expands on EPR and how the process has performed in the field:[2]

> *"Enhanced positive response allows for completed ticket information, including photos and manifests of the dig site, to be provided to the excavator in advance of the digging project. This is often provided through the one-call centers. According to information submitted to the CGA by Utiliquest, users of enhanced positive response report up to a 67 percent decrease in damage rates."*

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[1] U.S. Department of Transportation, Pipeline and Hazardous Materials Safety Administration, "A Study on Improving Damage Prevention Technology," August 2017.
[2] *Id.*

Finally, PHMSA recommends adoption of enhanced positive response on its own and as part of its top recommendation for Congress to consider:[3]

> *"Enhanced positive response coordinated through one-call centers needs wider implementation; it can vastly improve communication among all involved in the digging process and has been shown to reduce damage rates."*
>
> *"1. Collaboration/communication tools: Communicating complete and accurate information about the proposed excavation, the locate-and-mark process, and project status minimizes damage incidents. A critical element to a successful excavation project is full communication among involved parties; this is generally not a requirement in state one- call laws and is not available in all states, but should be considered for more widespread implementation. Technology affords several ways to facilitate stakeholder communication, such as* ***enhanced positive response*** *(emphasis added) utilizing mobile devices."*

Based on my extensive experience in pipeline safety and PHMSA's recommendations, I strongly support Congress adopting Enhanced Positive Response as a required component of all state damage prevention programs in order to be certified by PHMSA under 49 USC 60105.

We all strive for the ultimate goal of zero pipeline incidents. Nationwide implementation of Enhanced Positive Response would be a very strong step towards reaching that goal and avoiding disastrous incidents that occur in highly populated areas when gas distribution lines are breached during the excavation process. Moreover, the deployment of such innovative technology will substantially reduce accidents and will also simultaneously cut economic damages associated with underground utility damage. A true win-win that improves safety, economic productivity, all while lowering ultimate costs for society, consumers, and regulated communities alike.

Thank you again for the opportunity to submit written testimony on this important topic. I would be pleased to answer any questions you may have. Please reach out to me at any time.

Sincerely,

[redacted]

Brigham A. McCown
Founder and Chairman

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[3] *Id.*

House Committee on Energy and Commerce
Subcommittee on Energy
Hearing: "The State of Pipeline Safety and Security in America"
May 1, 2019
Questions for the Record

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

The Honorable Fred Upton (R-MI)

Question 1. **You stated in your testimony that PHMSA has seven of 42 mandates remaining from the Pipeline Safety, Regulatory Certainty, and Job Creation Act of 2011; and four of 19 mandates remaining from the Protecting Our Infrastructure of Pipelines and Enhancing Safety Act of 2016. You stated further that completing rulemakings takes time simply because it is an interactive process that is designed to encourage maximum participation by all stakeholders, thus ensuring comprehensive rules that protect the public and stand up to cost/benefit scrutiny.**

a. What are the main drivers behind the pace of PHMSA's rulemakings?

PHMSA Response: PHMSA's rulemaking process is designed to ensure PHMSA regulations account for known safety issues, technical feasibility, and cost effectiveness. Therefore, the rulemaking process takes time because it encourages maximum participation, thus ensuring comprehensive rules that protect the public, and standup to cost-benefit scrutiny.

PHMSA continues to make progress on completing rulemaking mandates and has focused on addressing mandates that provide the greatest level of safety. PHMSA's Gas Pipeline Advisory Committee (GPAC) was originally scheduled to review the gas gathering rule and provide their recommendations on the rulemaking during scheduled meetings that had been scheduled on January 8-10, 2019. Unfortunately, the lapse in funding and the 35-day federal government shutdown forced the postponement of the January meetings. The meetings were rescheduled for June 25-26, 2019 and the GPAC has now reviewed and provided recommendations on the proposed rule.

b. Does the statutory requirement to conduct a risk assessment, including identifying the costs and benefits associated with a proposed standard, improve the quality of PHMSA's regulations?

PHMSA Response: PHMSA's statutory cost-benefit analysis requirement for pipeline rulemaking has been in place for almost 25 years. PHMSA complies with the statutory requirement at 49 U.S.C. 60102(b)(5), which requires a reasoned determination that the costs of the intended standard are justified by the benefits to the public.

PHMSA analyzes the costs and benefits of each pipeline safety rulemaking as part of its effort to comply with the Pipeline Safety Laws, two Executive Orders, and a DOT Order on Policies and Procedures for Rulemakings. The outcome is the approval of high-quality regulations that are effective and cost-benefit justified.

c. Would amending the statute by striking the requirement to identify the costs and benefits associated with a proposed standard speed the pace of rulemakings?

PHMSA Response: Striking the cost-benefit analysis is unlikely to speed the pace of rulemaking and publication of regulations because PHMSA will still be required to comply with the existing Executive Orders and DOT's policies and procedures, which separately require a comparison of proposed courses of action in terms of the projected economic impact of a proposed regulation. The absence of a strong economic analysis could result in increased scrutiny of rulemakings by stakeholders and the affected public – possibly culminating in legal actions challenging the proposed PHMSA action (or inaction), delaying a final rulemaking until the legal process initiated is resolved. In short, an effective cost-benefit analysis serves as a powerful tool to guard against frivolous or hasty rulemaking decisions as well as unwanted and potentially costly litigation.

d. Would amending the statute by inserting a new mandamus clause that encourages citizen-suits speed the pace of rulemakings?

PHMSA Response: An amendment to the statute is unnecessary, as there already exists a legal framework by which any person adversely affected by PHMSA's inaction may seek judicial review and obtain an order directing the Agency to perform a statutory duty. Under the Administrative Procedure Act, a reviewing court may "compel agency action unlawfully withheld or unreasonably delayed," which is the same type of relief sought under mandamus.

Question 2. **Section 60121 of the Pipeline Safety Act already includes a citizen-suit provision, which provides a private right of action for persons to bring civil suits in Federal court, seeking injunctive relief against other persons, including the U.S. government, for "a violation of [the Act] or a regulation prescribed or order issued under [the Act]." Congress intended this citizen-suit provision to assist PHMSA in its enforcement and compliance activities by authorizing suits alleging substantive statutory or regulatory violations.**

a. Please describe the multiple avenues available for judicial review of PHMSA's interpretation of the pipeline safety statute.

PHMSA Response: Any adversely affected person may seek judicial review of a final agency action taken by PHMSA pursuant to federal law under 49 U.S.C. § 60119, which provides in pertinent part:

> *(a) Review of Regulations, Orders, and Other Final Agency Actions. (1) Except as provided in subsection (b) of this section, a person adversely affected by a regulation prescribed under this chapter or an order issued*

> *under this chapter may apply for review of the regulation or order by filing a petition for review in the United States Court of Appeals for the District of Columbia Circuit or in the court of appeals of the United States for the circuit in which the person resides or has its principal place of business. The petition must be filed not later than 89 days after the regulation is prescribed or order is issued. The clerk of the court immediately shall send a copy of the petition to the Secretary of Transportation.*

Under the Administrative Procedure Act (APA), an agency "action" is defined as "the whole or a part of an agency rule, order, license, sanction, relief, or the equivalent or denial thereof, or failure to act." 5 U.S.C. §551(13). As it relates to PHMSA, the judicial review provision potentially applies to multiple types of final agency actions including a final regulation; a denial of a petition for rulemaking; and a final administrative order such as a Final Order, a Compliance Order, a Corrective Action Order, a Safety Order, or an Emergency Order; or a grant or denial of a regulatory waiver or special permit.

b. What are the potential implications of amending the statute to expand the citizen-suit provisions to include mandamus relief against PHMSA for failing to perform a non-discretionary act or duty?

PHMSA Response: Including mandamus relief is unnecessary, as there already exists a legal framework by which any person adversely affected by PHMSA's inaction may seek judicial review and obtain an order directing the Agency to perform a statutory duty. Under the Administrative Procedure Act, a reviewing court may "compel agency action unlawfully withheld or unreasonably delayed," which is the same type of relief sought under mandamus. In fact, there have already been occasions when persons have sought judicial review of PHMSA inaction under this provision. Adding additional mandamus relief provisions that encourage more law suits against PHMSA will unnecessarily result in a diversion of PHMSA's limited resources to defend against those actions, rather than continuing our focus on the completion of outstanding rulemakings.

The Honorable Richard Hudson (R-NC)

Question 1. **Thank you for being here today as we examine ways to increase the safety of our constituents and all Americans. While pipelines are the safest means of energy transportation, unfortunately, there are instances of failure. In these moments, it is critical our first responders are trained and prepared to handle these dangerous situations. Back home in North Carolina, some local and small fire stations do not have the budget to send their first responders to specific emergency pipeline safety training. Last year we had over 70 emergency responders take free online classes to receive pipeline emergency response training. By using technology, we are creating safer communities. In recent years' technology has been developed to internally scan pipelines to find issues early and detect leaks before they become a problem.**

a. In order to keep up with the innovations being made, what is PHMSA doing to remove barriers for the adoption of new technologies?

PHMSA Response: PHMSA encourages the use of special permits, which offer pipeline operators flexibility in using new technologies or operational methodologies to provide equal or greater levels of safety than can be achieved in lieu of the regulations. Further, more than half of PHMSA's rulemakings included in the 2018 Fall Agenda are responsive to stakeholder feedback, allowing the adoption of new technologies and reducing regulation without impacting safety. PHMSA published a final rule regarding the use of plastic pipe with annual cost savings of approximately $32 million while allowing pipeline operators to use additional new technologies for safer plastic pipelines when replacing older lines or building new ones. In addition, PHMSA has submitted for review under EO 12866 a notice of proposed rulemaking (NPRM) titled "Amendments to Parts 192 and 195 to require Valve Installation and Minimum Rupture Detection Standards." PHMSA believes that certain provisions in the NPRM will help foster the development of leak detection technology and may help drive operators to make decisions to improve the capability of their current leak detection systems to detect non-rupture events.

The Honorable Bill Flores (R-TX)

Question 1. **I am concerned regarding some recent attacks on pipelines that raise important safety concerns. Protest activities that create safety hazards, and/or environmental damage, must not be tolerated. In October 2016, anti-pipeline activists staged simultaneous attacks on 5 crude oil pipelines in 4 states along the U.S.-Canadian border. These assailants targeted valve stations maintained by pipeline operators. These valves have important, specific uses to stop the flow of product through the pipeline, such as isolating a pipeline segment during an emergency, or in order to conduct maintenance. After breaking the chains and locks on perimeter fencing, assailants entered the facility grounds and turned valves shutting off the flow of pipelines that together had a delivery capacity of 2.8 million barrels of crude oil a day, or a round 15 percent of daily U.S. consumption. The Pipeline Safety Trust, testifying on the second panel of this hearing, said at the time of the valve turnings that "closing valves on major pipelines can have unexpected consequences endangering people and the environment. We do not support this type of action, and think it is dangerous." Since 2016, additional attacks have happened in the states of Iowa, Minnesota, South Dakota, and Washington.**

a. Does PHMSA consider valve-turnings, gunfire, or torch attacks on pipelines under construction dangerous activities that endanger people and the environment?

PHMSA Response: Yes. Undetected damage to a pipeline that occurs can cause pipeline failures that endanger people and the environment years after the damage is made by weakening the integrity of the pipe. Bullet strikes and heating of metals change the properties and strength of steel or damage protective coatings that help prevent corrosion.

b. Would PHMSA support closing current loopholes in federal pipeline law to deter dangerous attacks on pipelines?

PHMSA Response: Yes. PHMSA supports safeguarding the nation's pipeline infrastructure and closing any loopholes in federal pipeline law to deter dangerous attacks on pipelines.

To illustrate our commitment, PHMSA, the lead agency for pipeline safety, coordinated closely with the Department of Homeland Security (DHS)/Transportation Safety Administration (TSA), the lead agency for pipeline security, and Department of Energy to publish an advisory bulletin titled Safeguarding and Securing Pipelines from Unauthorized Access.

The advisory bulletin was issued following coordinated efforts by environmental extremists in October 2016 to shut down pipelines transporting oil from Canada. The incidents and advisory bulletin, which encouraged innovative security measures, precipitated the development of advanced valve locks that have resisted valve tampering.

Further, PHMSA frequently provides necessary pipeline related information to law enforcement and to the Intelligence Community when there is a pipeline failure. PHMSA also participates in the Law Enforcement Working group under the Oil and Natural Gas Sector Coordinating Council to ensure industry and federal partners are aware of their respective roles and responsibilities during a security incident.

The Honorable Cathy McMorris Rodgers (R-WA)

Question 1. **I would like to talk about PHMSA's procedures for determining the potential risks posed by a pipeline. More specifically, PHMSA's class location requirements for pipelines located in areas where we've seen recent population growth.**

a. How does PHMSA treat pipelines in highly populated areas vs. rural areas with less people and development?

PHMSA Response: PHMSA's pipeline safety regulations include integrity management programs to ensure operators are adequately identifying and addressing the greatest risks. Under integrity management, operators are required to conduct integrity assessments of gas transmission and hazardous liquid pipeline systems in high consequence areas and apply lessons learned across their entire system.

Gas transmission pipelines are divided into classes from 1 (rural areas) to 4 (densely populated, high-rise areas) that are based on the number of buildings or dwellings for human occupancy in the area. This concept is to provide safety to people from the effects of a high-pressure natural gas pipeline leak or rupture that could explode or catch on fire. PHMSA uses class locations in 49 CFR part 192 to implement a graded approach in many areas that provides more conservative safety margins and more stringent safety standards commensurate with the potential consequences based on population density near the pipeline. When crafting the natural gas regulations, PHMSA determined that these more stringent standards were necessary because a greater number of people in proximity to the pipeline substantially increases the probabilities of personal injury and property damage in the event of an accident. At the same time, the external stresses, the potential for damage from third parties, and other factors that contribute to accidents increase along with the population; consequently, additional protective measures are often needed in areas with greater concentrations of population.

If an area around a pipeline experiences population growth to where the pipeline's class location increases or the area becomes a high-consequence area, the pipeline is subject to additional safety requirements.

For hazardous liquid operators, the provisions for integrity management in high consequence areas are specified in 49 CFR 195.452. Integrity management consists of multiple components, including adopting procedures and processes to identify High Consequence Areas (HCAs), which are areas with the greatest population density and environmental sensitivity; determining likely threats to the pipeline within the HCA; evaluating the physical integrity of the pipe within the HCA; and repairing or remediating any pipeline defects found.

Because these procedures and processes are complex and interconnected, effective implementation of an Integrity Management program relies on continual evaluation and data integration.

b. I understand there has been ongoing discussion about this since at least 2013. What's the current status of PHMSA's efforts to review class location requirements for pipelines?

PHMSA Response: PHMSA published an advanced notice of proposed rulemaking (ANPRM) on July 30, 2018, relative to the issue of class location change requirements and potential alternatives. PHMSA is currently drafting a notice of proposed rulemaking (NPRM) based on the feedback received from the ANPRM, and we anticipate publishing the NPRM in November this year.

c. Would you commit to working with Congress on this issue, so we can be assured that PHMSA is taking this matter seriously?

PHMSA Response: Yes. PHMSA takes all pipeline and hazardous materials matters seriously and will continue to work with Congress to improve safety.

Mr. W. William Russell
Acting Director, Government Accountability Office

Subcommittee on Energy
Hearing on
"The State of Pipeline Safety and Security in America"
May 1, 2019

Acting Director W. William Russell
Government Accountability Office

The Honorable Cathy McMorris Rodgers (R-WA)

1. As you know, TSA's pipeline security program is voluntary. TSA conducts interviews with operators, known as "Corporate Security Reviews," but TSA doesn't track this information or use it to measure risk.

    a. Are you concerned about the way these "corporate security reviews" are being conducted, and do you have any recommendations for TSA?

    RESPONSE:

    Based on our previous work evaluating TSA's pipeline security program, our key observations related to Corporate Security Reviews (CSRs) involve workforce planning and monitoring. First, it is important for TSA to implement our recommendation to develop a strategic workforce plan. A workforce plan could help TSA determine the number of personnel and level of cybersecurity expertise needed to effectively conduct CSRs and meet the goals set for the Pipeline Security Branch. Second, TSA should implement our recommendation to record information on its prior CSR recommendations to pipeline operators and monitor the status of those recommendations. This information is necessary for TSA to effectively track pipeline operators' progress in improving their security posture.

The Honorable Lawrence Friedeman
Commissioner, Public Utilities Commission of Ohio
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Subcommittee on Energy
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Commissioner Lawrence Friedeman
Public Utilities Commission of Ohio

The Honorable Richard Hudson (R-NC)

1. Thank you for being here today. As a public utility commissioner, you have to be mindful of the cost of services, and sometimes you have to make difficult decisions. Ultimately, it's the States' responsibility to balance reliability, safety, and affordability.

    a. Can you explain the process you use to balance safety and consumer costs?

RESPONSE:

The PUCO examines each issue that comes before it on a case-by-case basis. Safety is always at the forefront of concerns, but the Commission recognizes that resources are not unlimited. In addition to that, each operator under Commission regulation faces unique challenges and circumstances that must be addressed. Important to note as well, the responsibility for safety falls first and foremost on the owner/operator of the facility/plant. It is this owner/operator that has responsibility to assess risks and to address risks. In some cases, safety related performance of a firm or firms is overseen by an agency such as the PUCO and the supervising agency may take action to address inadequate performance. But these supervising agencies do so within the legal framework, including rules, established by legislatures (local, state and federal or other delegating authorities).

Under traditional regulation (cost-plus regulation), the cost of meeting safety requirements is but one of the costs that are taken into account by regulatory authorities to set the overall compensation for firms that are subject to economic regulation by a regulator such as the PUCO. Costs prudently incurred to meet legitimate safety needs are typically included in the overall compensation. Excessive or imprudent expenditures may be excluded. However, the rates and charges which the regulator may authorize a firm to bill and collect does not necessarily mean that the firm will recover all its costs of providing service since competition and other forces may limit the amount of such authorized rate or charge which is actually collectable.

In the PUCO's case, the scope of its economic regulation authority does not include all firms that may be obligated to meet safety requirements. For example, while the PUCO may have pipeline safety related responsibilities in the case of a master meter natural gas system operator, this type of operator may not be subject to the economic regulation authority of the PUCO.

However, when a pipeline safety issue does arise, PUCO staff has been invested with the statutory authority to perform a thorough audit and investigation into the matter. This examination attempts to look at the many factors involved and balance them in a way that maximizes the benefits to Ohioans. Risk analysis plays an important role in the process. Staff consults with the operator on the various safety risks that the company faces. These risks can vary based on many factors such as the amount of pipe the operator has, the materials used to make the pipe and other infrastructure, the age of the pipe, the location of the pipe, the population density, the terrain of the operators' various territories, the type and quality of the gas being passed through the pipes, and any other factors that the operator believes contribute to the safety risk of the pipe. Staff uses its own experience with these factors in consultation with industry guidelines, guidance from PHMSA, and information from other states to evaluate the information provided by the operator and works to come to a consensus on the risks that most need addressed.

This is important because, as mentioned before, resources are not unlimited. Families rely on natural gas to keep them warm and safe and businesses rely on natural gas to keep running. If that product is unaffordable, it is to the detriment of Ohio's businesses and families. Therefore, the funds collected from ratepayers must be used prudently and efficiently to address the risks on a given system.

The pipeline safety code has evolved with the industry over the years and addresses the minimum standards that must be maintained by the operator to keep its system safe. In addition to that, operators must address its aging infrastructure and technological improvements in the industry. It takes time and money to replace facilities so operators must consider relative risk when trying to determine what facilities to replace. The Commission has placed an emphasis on balancing safety and costs by placing appropriate cost caps so that impacts to customers are minimized while still providing utilities adequate cost recovery to make necessary replacements.

In sum, balancing safety with consumer costs is a difficult task. We try to ensure that operators have the funds needed to maintain and improve safety and that they make prudent investments with the funds, while at the same time account for the impact this will have on consumers' bills and the effect it will have on their ability to afford these essential services.

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

The Honorable Cathy McMorris Rodgers (R-WA)

1. I know your pipeline companies are serious about improving their safety records and incorporating lessons learned from prior accidents.

    a. Can you provide some recent examples of lessons learned, or recommendations made by PHMSA or NTSB that have been implemented?

Answer:

Pipeline company safety records are improving. Over the last 5 years, pipeline operators have reduced the number of liquids pipeline incidents impacting people or the environment by 20%. This is government data publicly available from the U.S. Pipeline and Hazardous Materials Safety Administration (PHMSA). PHMSA data also shows pipeline incidents impacting people or the environment caused by incorrect operation are down 38% over the last 5 years, and pipeline incidents impacting people or the environment caused by corrosion, cracking or weld failures are down 35% over the last 5 years.

The improved pipeline safety record is due in large part to industry and AOPL member companies work hard to improve pipeline safety. We are transparent about where we are doing well and where we can do better. The statistics above come from the performance report we develop jointly each year with the American Petroleum Institute (API) analyzing pipeline safety data. We use this analysis to guide our industry-wide safety programs focusing on key pipeline safety issues.

Through this strategic effort the pipeline industry has addressed key safety recommendations from Congress, the U.S. National Transportation Safety Board (NTSB), PHMSA. NTSB recommendations after a major pipeline incident in Marshall, MI in 2010 led to pipeline operators working together through AOPL and API to develop new

industry-wide recommended practices (RP) to help operators find and fix cracking in pipelines (API RP 1176), manage leak detection programs (API RP 1175), respond to pipeline emergencies (API 1174) and apply safety management systems to pipelines (API 1173). Industry's work to apply holistic safety management programs found successful in the aviation, nuclear and chemical industry to the pipelines industry earned the pipeline industry a rare commendation from NTSB that our response to their recommendation "exceeded their expectations."

The pipeline industry is also diligent in taking PHMSA advisory bulletins to heart. A lesson learned from the Marshall, MI incident was the need to integrate inspection results and safety factors from multiple sources to determine if their additive factor separately was insufficient to indicate a serious safety threat, but when combined pointed to a potential issue requiring attention. PHMSA issued an advisory bulletin on this issue and industry responded by developing a technical report on pipeline integrity data management and integration. Industry has also incorporated lessons learned from PHMSA bulletins on extreme weather by expanding its recommended practice for assessing river crossings to guard against river scouring or bank washouts.

That said, the pipeline industry is not waiting to respond to recommendations from other safety stakeholders. This spring, the pipeline industry issued an updated recommended practice for its core integrity management inspection and maintenance program and is driving to complete a new recommended practice for assessing dents in pipelines accompanied by cracking or corrosion. Both industry documents contain recommended best practices that go beyond PHMSA's regulations in areas where PHMSA requirements are out of date or contain gaps. For these reasons, industry continues to support tools to help modernize PHMSA's requirements, such as the proposed technology demonstration pilot program, the Voluntary Information Sharing program, and incorporating the latest safety recommendations by reference into PHMSA regulations.

Mrs. Christina Sames
Vice President, Operations and Engineering
American Gas Association

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Mrs. Christina Sames
American Gas Association

The Honorable Cathy McMorris Rodgers (R-WA)

1. I know your pipeline companies are serious about improving their safety records and incorporating lessons-learned from prior accidents.

    a. Can you provide some recent examples of lessons-learned, or recommendations made by PHMSA or NTSB that have been implemented?

RESPONSE:

AGA works closely with its members to share information and promote the implementation of practices that have the potential to prevent similar incidents from occurring, which would appear to have same cause as those being investigated by NTSB. AGA can provide several examples from past incidents, but will limit its response to the incident which occurred on September 13, 2018, in the Merrimack Valley in Massachusetts

Following the Merrimack Valley incident, AGA and the industry took quick action based on the apparent circumstances of the incident, including the information initially shared by NTSB in its preliminary report on October 11, 2018

- Issuing a survey to its members to gather practices in place that are intended to prevent over-pressurization
- Collecting information from a variety of sources including technical publications and industry experts
- Holding a roundtable of several hundred operators and service providers to review the practices submitted
- Bringing together subject matters experts from over 30 companies to analyze the cumulative results and identify leading practices

Using this information, AGA and its members developed a white paper: *Leading Practices to Reduce the Possibility of a Natural Gas Over-Pressurization Event,* which was issued just two and a half months after the incident. The paper identifies 63 practices which address over-pressurization across the gas delivery system, and which go beyond low pressure systems. Based on conversations with its members, AGA knows that operators are performing a gap analysis to compare their operating practices against those in the document.

Pipeline Safety Management Systems is another example of AGA members being pro-active. On May 21, AGA's Board issued a resolution for all AGA member companies to implement Pipeline Safety Management Systems or API RP1173 within the next 3 years.

To address the NTSB recommendation following the Merrimack Valley incident that operators have certain documents or plans sealed by a professional engineer prior to commencing work, AGA created a white paper *Skills and Experience for Effectively Designing Natural Gas Systems.* The purpose of this document is to provide guidance to operators on how to develop, maintain, and enhance the key technical competencies required to safely and effectively perform engineering work functions for natural gas systems. AGA's member companies are relying on this document to identify any needed changes in their procedures for approving work packages involving engineering design.

PHMSA periodically issues advisory bulletins on any items that warrant added consideration from operators. While these advisory bulletins do not represent new regulatory requirements, operators pay close attention to the information shared by PHMSA and sometimes even make enhancements to operating procedures based on the information conveyed in the bulletins.

In addition to the above, AGA holds an annual Executive Leadership Safety Summit to share lessons learned from incidents and how other industries approach safety. AGA has held approximately a dozen Safety Summits in response to a recommendation from NTSB's Christopher Hart. AGA also created the Plastic Pipe Database and the Plastic Pipe Database Committee which collects and analyzes plastic pipe failures. This was in response to an NTSB recommendation and the database currently has over 85,000 failures. Finally, AGA has worked with state commissioners on programs that allow for the quicker replacement of older pipelines. This was in response to Secretary LaHood's Call to Action and 43 states and the District of Columbia now have programs.

The Honorable Tim Walberg (R-MI)

1. What is the difference between manual valves, Automatic Shut-off Valves and Remote Control Valves?

    a. Can you please provide the benefits, challenges, and performance expectations associated with the installation of Automatic Shut-off Valves and Remote Control Valves on existing and new natural gas pipelines.

RESPONSE:

There are several important differences between these three types of valves, and how they are potentially used on a transmission pipeline in a gas distribution operator's system.

Manual Valves – A valve that has a closure element that is controlled locally by operating personnel. These valves do not have powered actuators that allow for automated or remote control of natural gas flow and they require personnel to be on site to manually turn the valve to closure.

Automatic Shut-off Valves (ASV) – A valve that has a powered actuator to close the valve automatically based on data sent to the actuator from pipeline sensors. The sensors send a signal to close the valve based on predetermined criteria, generally based on pipeline operating pressure or flow rate. The ASV does not require human evaluation or interpretation of information surrounding an event to determine if the event is a legitimate pipeline issue and closes automatically based on the established criteria (e.g., the valve closes when the pressure in the line drops below a certain point).

Remote Control Valve (RCV) – A valve equipped with an actuator that allows an individual to operate (open, throttle or close) the valve based on an order (signal) from a remote location, such as a control room. The use of an RCV requires operating personnel in the remote location to review and evaluate data in their pipeline system and make a determination of whether a pipeline issue exists based on available information. This available information can be changes in the operating pressure and flow data transmitted from the pipeline, or communications from the public, emergency responders or company personnel on site. Based on the available information, if the gas controller determines that there is a problem that would require a valve operation, they may execute a command to operate the valve remotely.

AGA members have been voluntarily installing ASVs and RCVs on new transmission pipeline construction for the past 5 years, where practicable and feasible, under AGA's Commitment to Enhancing Safety[1]. AGA's members have also retrofitted existing transmission lines where their analysis has shown safety benefits. AGA members recognize that the potential benefits of installing ASVs and/or RCVs include the following[2]:

- Timely interruption of the fuel source to a pipeline event allowing improved emergency response to the affected area.
- Providing a means to close valves more rapidly as compared to manually operated valves in remote or difficult to access areas.

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[1] *AGA's Commitment to Enhancing Safety*, AGA's Operations Managing Committee, https://www.aga.org/sites/default/files/agas_commitment_to_enhancing_safety_-_revised_october_2015.pdf Revised October 2015.

[2] *Design Guidelines for Installation of Automatic Shut-off Valves (ASV) and Remote Control Valve (RCV) Systems in Natural Gas Transmission Pipelines*, American Gas Association Distribution and Transmission Engineering Committee, October 2012

- Closing valves more rapidly provides the opportunity for maintaining gas service to customers located outside of the affected pipe section by maintaining gas pressure to these customers.
- Reducing the economic and environmental issues associated with a large unplanned gas release.
- Providing additional system control functionality to deal with planned pipeline maintenance and shutdowns, and abnormal operating situations other than unplanned gas releases.

When utilizing ASVs and/or RCVs, there are a number of concerns that need to be taken into consideration. These include the following[2]:

- Unintended or inappropriate automated valve closure. For ASVs, this could possibly result from increased flow rates or reduced pipeline pressures during winter peak load conditions and other less frequently occurring operational variations at normal times. For RCVs, this could potentially be caused by a human decision-making error in deciding when to close an RCV. Industry experience has shown that ASVs are much more susceptible to unintended or inappropriate valve closure than RCVs.
- A valve closure, whether intended or unintended, may lead to widespread customer outages where re-establishing service could take days or weeks with the potential for human hardship and property damage in certain climate conditions.
- Susceptibility to physical and cyber security threats.
- Possibility of equipment failures causing the valve control system and the automated valve to fail to function as designed.
- Realization that not all unplanned gas releases would necessarily trigger an ASV to operate, or for an RCV, be identified by the SCADA system for a gas controller to take action.

b. What considerations must natural gas pipeline operators take into account when installing Automatic Shut-off Valves and Remote Control Valves on transmission lines that are integrated within distribution systems, and how do these vary by operator?

RESPONSE:

Every pipeline operator should begin with a clear and consistently applied set of guidelines and criteria for the utilization and installation of ASVs and/or RSVs. The 2013 GAO report on Pipeline Safety and Operator Incident Response[3] reported that "*The primary advantage of installing*

[3] *GAO Report to Congressional Committee: Pipeline Safety – Better Data and Guidance Needed to Improve*

automated valves is that operators can respond quickly to isolate the affected pipeline segment and reduce the amount of product released; however, automated valves can have disadvantages, including the potential for accidental closures—which can lead to loss of service to customers or even cause a rupture—and monetary costs. Because the advantages and disadvantages of installing an automated valve are closely related to the specifics of the valve's location, it is appropriate to decide whether to install automated valves on a case-by-case basis."

In developing these guidelines and criteria, the following factors may be considered:

- Specific physical criteria of the pipeline such as diameter, operating pressure, predicted impact radius if failure were to occur, material strength, pipe condition and material fabrication. Pipeline properties vary between pipelines and operators must take these factors into account when determining the type of valve to install and its potential benefits.
- For ASVs, the flow and pressure within the pipeline and pressure and flow fluctuations. ASVs close when they sense a drop in pressure and an increased flow of gas. For lines that have the potential for large pressure or flow fluctuations, such as many intrastate transmission lines that feed natural gas distribution systems, ASVs are not effective since they will not work as designed.
- Threats from natural forces, such as earthquakes, landslides, flooding, subsidence zones and other special geographic features.
- Valve location and accessibility to account for geographic conditions, permitting, and other constraints.
- Human impact consequence factors if the pipe were to fail, such as population density around near the pipeline and structures that may be challenging to evacuate.
- Expected time to identify and isolate an affected pipeline section and subsequently to depressurize the pipeline based on current system design.
- Capital and operating costs. For example, the cost to install a new ASV or RCV on a new transmission pipeline for fully replaced transmission pipeline typically range from $100,000 to $1,000,000 per valve. However, the cost doubles when installing a new ASV or RCV in an existing transmission pipeline
- Minimum magnitude of a pipeline event that realistically can be detected and managed through ASV or RCV operations.
- Magnitude of customer service impacts (customer loss of gas and customer restoration efforts).

Pipeline Operator Incident Response, Governmental Accountability Office, GAO-13-168, January 2013.