U.S. House of Representatives
Committee on Transportation and Infrastructure
Subcommittee on Railroads, Pipelines and Hazardous Materials
"Building a 21st Century Infrastructure for America: The State of Railroad, Pipeline, and Hazardous Materials Safety Regulations and Opportunities for Reform"

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April 26, 2017

Good morning Chairman Denham, Ranking Member Capuano, and Members of the subcommittee. Thank you for the opportunity to speak today about opportunities to improve the regulatory process to enhance the safe transport of oil and natural gas products while ensuring American families and workers have access to reliable and affordable energy through all available infrastructure.

The American Petroleum Institute (API) is the only national trade association representing all facets of the oil and natural gas industry, which supports 9.8 million jobs and 8 percent of the U.S. economy. API's more than 625 members include large integrated companies, as well as exploration and production, refining, marketing, pipeline, and marine businesses and service and supply firms. As Group Director of API Midstream and Industry Operations, I am responsible for all energy infrastructure issues, including those related to the gathering, processing, storage, and transportation of oil and natural gas.

The United States is leading the world both in the production and refining of oil and natural gas[1] and in the reduction of carbon emissions which are at their lowest levels in almost 25 years.[2] Carbon emissions from electricity generation have declined 17 percent since 2000 and are at their lowest level in nearly 30 years; more than 60 percent of the decrease in power generation-related CO2 emissions since 2005 was due to fuel switching to natural gas.[3] In less than a decade, we have transitioned from an era of energy scarcity and dependence to one of energy abundance and security. This energy renaissance has helped U.S. families save on their energy bills, created greater job opportunities for American workers, bolstered U.S. manufacturing, strengthened our economy, and helped to enhance our national security interests abroad.

Our energy infrastructure is a critical component of the oil and natural gas supply chain, consisting of terminals, underground storage facilities, pipelines, railcars, trucks, ships, and barges. Ensuring we have a robust energy infrastructure system that keeps pace with growing production and demand is essential to helping American families and businesses have reliable access to affordable energy. A recent study found that the U.S. will need up to $1.3 trillion in energy infrastructure investment through 2035. This

[1] https://www.eia.gov/beta/international/
[2] U.S. DOE, Energy Information Administration, Monthly Energy Review March 2017. Lowest since 1992.
[3] http://energytomorrow.org/blog/2017/03/31/energy-and-declining-emissions

investment, on average, will support up to 1 million jobs annually and add up to $100 billion to GDP annually. Whether it is powering our nation's electricity grid, delivering natural gas to heat homes during harsh winters, or providing emergency fuel for first responders during natural disasters, this investment will ensure that these critical fuels are delivered when and where they are needed most.

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

THE IMPORTANCE OF SCIENCE AND PERFORMANCE-BASED STANDARDS

In order to ensure that American consumers, workers and the environment can continue to benefit from the U.S. energy renaissance, we need rational and science-based energy policies which recognize that the oil and natural gas industry is part of the solution to advancing U.S. economic and national security goals. Well-designed policies are predicated on following a formal process—established by the Administrative Procedures Act—that provides all stakeholders with the opportunity to provide input for consideration. Additionally, wherever possible, collaborative engagement by the public sector with the experts in the regulated community ensures that policies are using the latest information available. If done well, effective and efficient policies can be established that do not hinder growth and contribute to the economy while at the same time significantly advancing safety.

Historically, PHMSA has pursued performance-based regulations versus prescriptive ones. This is compliant with direction given by the Office of Management and Budget (OMB) to give preference to performance-based standards. A performance-based regulatory model allows operators to utilize a variety of options to maximize the safety of their pipeline systems. For instance, in 2004, PHMSA issued Integrity Management (IM) regulations that give the operators the capability to use the tools most suitable for their assets in ensuring the continued integrity of their pipelines. Specifically, the regulation provides operators with the flexibility to use different in-line inspection (ILI) tools that are better at

detecting a defect that one type of pipe may be more susceptible to than another. This flexibility is essential given pipeline systems are complex and vary greatly from operator to operator and system to system. Each pipeline operates uniquely; therefore, companies need flexibility to implement the tools and methodologies to help them appropriately manage the safety risk associated with their assets. We are concerned, however, that recent regulatory action by PHMSA takes a much more simplistic and narrow-minded assessment that solely considers one factor—such as the type of steel used in the pipeline—to determine which in line inspection tool is used. A more comprehensive, risk-based approach that allows consideration of all factors (type of pipeline steel being one factor of many) through an appropriate analysis will ensure proper tools are used to establish preventive measures and, if necessary, make repairs. As such, API and its members strongly encourage PHMSA to modify pending rulemakings to revert back to a traditional performance-based regulatory scheme, which ensures that the latest advances in new technologies and understanding of pipeline anomalies are utilized fully to improve pipeline safety.

PIPELINES

Pipelines safely and efficiently move crude oil, natural gas, and other products from production areas to consumers, delivering energy and feedstocks for everyday goods, affordable heat for homes, and fuel for power generation and motor vehicles. In addition to the benefits derived from the delivery of oil and natural gas, pipeline companies support the economy during construction of the pipeline by hiring skilled construction and building trades' workers and during operation of the pipeline through local tax revenue that supports communities through which the pipelines pass.

Industry's commitment to safe operations is evident by the fact that more than 99.99 percent of crude oil, petroleum products, and natural gas are delivered safely via pipeline. Protecting the public and the environment is a top priority for pipeline operators and a central component to pipeline design, construction and maintenance. For instance, during development, pipeline operators design routes to avoid environmentally sensitive areas. All pipelines are constructed from certified steel pipe that meets or exceeds federal quality regulations. Every project undergoes rigorous environmental review and must comply with existing environmental laws such as the Clean Air and Clean Water Acts before it can be built and placed into operation. PHMSA also routinely inspects these projects during their construction and throughout their operation to ensure that the pipelines are being maintained safely and responsibly.

API and AOPL members are fully committed to maintaining the highest standards and establishing a strong foundation with the public by holding ourselves accountable and continually striving for improvement. Not satisfied with this near-perfect record, however, pipeline companies are striving to achieve an industry-wide goal of zero incidents. This requires selecting effective prevention, mitigation, and response strategies based on a number of factors that are most appropriate for their unique assets and operations.

Since 2014, the pipeline industry has worked collaboratively through the API-AOPL Pipeline Safety Excellence Initiative to establish shared safety principles and commit to a long-term strategy that

promotes continuous improvement and excellent safety performance. Our 2017-2019 Pipeline Safety Excellence Strategic Plan will drive the industry to achieve advances in pipeline safety technology, improve ways to engage with our key stakeholders, strengthen emergency preparedness and response planning, and adopt holistic pipeline safety management systems.

API has also developed a number of standards for prevention, mitigation, and response activities to address pipeline safety in close coordination with subject matter experts from government, academia and industry. API Recommended Practice (RP) 1173, *Pipeline Safety Management Systems*, provides the framework for managing complex operations with safety as the top priority. It provides operators with established guidelines to manage risk, promote best practices, continuously improve safety performance and build a strong organizational safety culture. As U.S. production continues and pipeline capacity keeps apace, operators are motivated to develop a management system that ensures new pipelines are built to the appropriate specifications, keeping safety a priority. The upcoming API RP 1177, *Steel Pipeline Construction Quality Management Systems*, outlines the steps needed for constructing safe steel pipelines, from purchasing the correct material to completing the right inspections prior to initiating operation.

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

Should an incident occur, pipeline operators are ready to respond. Through coordinated emergency response programs with federal, state and local first responders and agencies, operators ensure timely, seamless and effective responses. API RP 1174, *Onshore Hazardous Liquid Pipeline Emergency Preparedness and Response*, recently completed by pipeline operators, federal regulators, and first responders, seeks to improve emergency response capabilities by providing a framework for immediate notification and continued coordination with first responders. The aforementioned RPs are just a few of the available recommended practices developed in collaboration with federal and state regulators, academics and interested stakeholders which through effective implementation and training will help improve safety across the industry.

NATURAL GAS TRANSMISSION AND GATHERING LINE RULE

API members are dedicated to a risk-based approach to pipeline safety—one that strives for continuous improvement through addressing known, quantifiable risks. Importantly, that is the same approach that

Congress has used over the decades in its directives to DOT and PHMSA for regulating pipeline safety. However, API believes that the proposals in the Safety of Gas Transmission and Gathering Pipelines Notice of Proposed Rulemaking (NPRM) do not reflect a risk management approach, as directed by Congress, targeted toward eliminating the most significant risks posed to public safety and the environment.

The NPRM sets forth prescriptive repair criteria requirements following pipeline inspections. According to the NPRM, if an operator discovers an anomaly in their pipeline, the operator is not allowed to holistically assess the conditions of their pipeline and operate based on available data. The operator is instead forced to repair all discovered anomalies despite the level of risk posed to the pipeline and potential disruption to the public. As such, the proposal is not based on risk, but is instead based on a misguided principle that more is better without grounding that determination in potential pipeline safety improvements and benefits to the public and the environment.

Pipeline safety regulations should be based on sound data collection and risk analyses that support increases in safety for the public and minimize impacts to the environment. The NPRM proposes to regulate small-diameter rural gathering lines without regard to congressional mandates that required adequate data collection and appropriate risk-based analysis in order to demonstrate that such regulations would increase public safety. PHMSA failed to conduct a thorough risk analysis and provide both qualitative and quantitative data demonstrating that small-diameter gathering lines pose a direct risk to the public as required by the Pipeline Safety, Regulatory Certainty and Job Creation Act of 2011.

Additionally, the Regulatory Impact Assessment (RIA) completed along with the NPRM significantly underestimates the cost that would be required to implement these proposed regulations. The benefits provided were also grossly inaccurate. The NPRM suggests that implementation costs would be surprisingly low, $597 million, and greatly outweighed by an equally surprising high estimate of benefit, between roughly $3.2 billion and $3.7 billion. By PHMSA's own accounting however, roughly $3 billion of the benefits are cost savings to industry - not safety or environmental benefits. API sought an external party, ICF International, to further evaluate PHMSA's work. ICF International evaluated the benefits and cost impacts of the proposed rule and found that when properly accounted for, the total cost of the proposed rule increases by almost two orders of magnitude from $597 million to $33.4 billion to achieve safety and environmental benefits of approximately $437million.

API and its members ask that PHMSA allow operators to focus their resources on the highest risks to their pipelines and subsequently provide operators with the flexibility to apply these requirements to operating pipeline systems. PHMSA should only publish regulations based on comprehensive data. Further, prior to publication, PHMSA should endeavor to fully understand how industry operates and how proposed changes in regulations impact industry operations.

HAZARDOUS LIQUID PIPELINES RULE

Industry shares PHMSA's goal of increasing pipeline safety and is supportive of developing a final rule, but achieving this objective must be done in an effective and efficient manner, which does not appear evident through the text published by the agency on January 13th of this year. There were positive

changes made, and API appreciates PHMSA's consideration of the input received during the notice and comment period, as well as the Liquid Pipeline Advisory Committee meetings. However, a few issues still remain, mostly around the repair criterion that continues to contain unworkable changes to the methodology used to identify and assess when to repair certain pipeline defects. Unfortunately, this proposed provision is another example that illustrates the earlier point of PHMSA moving from performance-based to more prescriptive regulations by forcing operators to fix and repair a particular anomaly even if an engineering analysis says differently. Additionally, while industry is grateful for including engineering assessments as a tool in the integrity management process, the methodology proposed is too restrictive, complex, and unnecessarily conservative, not allowing for assessments to defer the remediation of all repairs, and should be revised to provide industry with greater flexibility and certainty. Industry recognizes the important role advanced internal inspection technologies such as in line inspection (ILI) tools can play in identifying risks and is supportive of using more of these inspection methods as appropriate. However, they must be fit for purpose for the anomaly being examined. The regulator should not mandate that all types of internal inspection tools be run on all lines, as that approach can create unintended safety risks as a result of increasing unnecessary activity on a pipeline. Finally, pipelines categorized as "stump lines" because of their location and short distance pose a low risk and should therefore be exempted, further providing for a performance-based regime best utilizing industry resources.

Industry stands ready to work collaboratively with PHMSA and relevant stakeholders to develop regulatory language that meets the desired outcomes. There is also an opportunity to incorporate new API standards, such as one on assessing and managing pipeline anomaly, cracking. This could replace existing regulatory text, complementing administrative goals. Dialogue on incorporating other API standards, RPs, and Technical Reports holds the potential to safely decrease the regulatory burden, since these are best practices on which stakeholders, including the public and PHMSA, have concurred with industry.

UNDERGROUND NATURAL GAS STORAGE FACILITIES RULE

Underground natural gas storage facilities play a critical role in the reliable delivery of natural gas. They allow operators to store gas produced when demand is low, typically in the warmer months, and release it during periods of high demand, during the heating season in the winter. Late 2015, prior to the Aliso Canyon storage facility incident, API along with Interstate Natural Gas Association (INGAA) and American Gas Association (AGA), published two recommended practices on underground storage facilities. After the incident, API, INGAA, and AGA created a joint industry task force to cooperatively address storage safety. This task force has been working cooperatively with PHMSA and state agencies to address the further ways to improve the safety of storage facilities. Unfortunately, PHMSA's interim final rule on underground natural gas storage facilities, released in December 2016, improperly incorporates by reference API Recommend Practices 1170 and 1171 by "adopting the non-mandatory provisions of API RPs 1170 and 1171 in a manner that would make them mandatory (i.e., provisions containing the word "should" or other non-mandatory language will be considered mandatory)" and by requiring compliance within 12 months of the issuance of the rule. This unwisely takes a performance-based standard and attempts to make it prescriptive. While PHMSA has tried to address some of the shortcomings of the

rule via FAQs, we believe that changes should be made to the final version of the rule to incorporate by reference RP 1170 and 1171 without modification, codify the reasonable implementation periods outlined in the current PHMSA Underground Storage FAQs 5 and 6, and incorporate underground natural gas storage facilities into a new "Part 19X," separate from Part 192.

RAIL

In recent years, the United States has seen a dramatic increase in the amount of crude oil transported by rail, much of it from newly-developed shale resources that are located far from existing energy infrastructure. Rail infrastructure also plays an important role in the shipment of other key petroleum products such as heating oil, propane, diesel, lubricants, chemicals, plastics, and other necessities people rely on every day. While the amount of crude being moved by rail has declined somewhat from its peak in 2015, due in part to increased pipeline infrastructure, rail is still an important tool supporting the nation's energy renaissance. Like pipelines, the industry places the highest priority on safety and 99.99 percent of crude oil deliveries reach their destinations without incident.[4]

However, our industry's goal for safety is always zero incidents.[5] This is not a goal that can be reached through any single action or step but requires instead continual attention and focus. Furthermore, in instances such as these where more than one industry is involved, API and its members partner with industries such as the rail industry to collaborate on holistically improving safety in crude by rail operations.

In 2011, API, as a member of the Association of American Railroad's Tank Car Committee, petitioned PHMSA to adopt new tank car standards. The industry worked collectively to develop a stricter tank car standard – known as the CPC 1232 car - and began building and using these cars prior to any action from PHMSA. PHMSA was petitioned multiple times by industry between 2011 and 2014 to approve this standard. A new tank car rule was finally adopted in early 2015—building on the 1232 design—creating the current DOT 117 standard. API also supported provisions in the 2015 FAST Act which added additional requirements to the 117 standard including thermal blankets and top fittings.

API worked with the best experts from our industry, the railroad industry and others to develop API RP 3000, *Classifying and Loading of Crude Oil into Rail Tank Cars*, a standard for characterizing, testing and quantifying crude oil transported by rail. We continue to be an active participant on the AAR's Tank Car Committee, and we have worked cooperatively with railroads and tank car builders to further advance safer designs for tank cars. We are also a member of Federal Railroad Administration's Railroad Safety Advisory Committee and the Transportation Research Board's Crude Oil Transportation Subcommittee; cooperatively working with regulators to address issues related to moving crude by rail. In addition, we are an organizing partner, along with railroads and academia, of an international conference on safety culture to be held this October, which will provide opportunities to share safety lessons learned across the rail, oil and gas and other industries.

[4] http://www.energytomorrow.org/our-energy-today
[5] http://www.infrastructurereportcard.org/

Our work on rail safety is not just limited to accident prevention. API worked closely with railroads and safety experts to develop a training video, released last year, to educate first responders on specific tank car markings and other visual depictions of what to consider when responding to a crude by rail incident, should one occur. The video complements an instructor-led course released in 2015 to educate first responders and firefighters on the characteristics of crude oil, the rail cars in which it is shipped, considerations and strategies for spill response and firefighting, and the importance of following training and the incident command system. API is committed to cooperation with our railroad partners in advancing a goal of zero incidents in the shipment of crude by rail.

REGULATORY REFORMS

API works with regulators to achieve our goal of zero incidents while at the same time helping ensure that American families and businesses have access to affordable energy. We can achieve our shared goals without imposing requirements that are unachievable, not cost-effective, or that will not accomplish the intended results. That often leads industry to litigate flawed final rules to obtain the necessary relief from unnecessary, duplicative or misguided agency actions.

Technological innovations and industry leadership have propelled the oil and natural gas industry forward despite the unprecedented onslaught of new and pending federal regulatory and other administrative actions targeting our industry. The oil and natural gas industry remains committed to regulatory structures that promote safety, environmental protection, and responsible operations and it continues to look for ways to collaborate with regulators. In particular, we appreciate the recent efforts by Congress taken to pass the FAST Act and the President's recent Executive Orders pertaining to pipeline streamlining and regulatory reform. We look forward to working with both Congress and the Administration as the details of these initiatives develop. At the same time, we believe that many other regulatory reform opportunities still exist.

Above all else, our members need certainty and consistency in the regulatory and permitting process for the purpose of planning the construction or expansion of energy infrastructure projects. When it comes to long term investment, pipeline operators typically are looking at 10, 20 or 30 year planning horizons based on contractual agreements with customers. Thus, the impacts of large regulatory and policy swings that can occur with changing political landscapes can create angst and hesitation on the part of gas and liquid pipeline operators to make longer term investments. Thus, it is critical that actions are taken on a several fronts without delay to ensure investments in critical energy infrastructure continues to keep pace with our country's energy needs and demands. Specifically, FERC currently lacks a quorum, with three out of five seats vacant, and potentially a fourth seat coming vacant this summer. The absence of a quorum, has put a freeze in final permitting and siting approvals preventing natural gas infrastructure projects moving forward toward construction and operation. We strongly urge the President to put forward nominations to fill those seats and for the Senate to confirm those individuals as soon as possible so that current projects are not continually and unnecessarily delayed. Additionally, as it relates to permitting, it is important that Congress continue to encourage Federal agencies and the states toward streamlining and synchronizing their separate reviews and permitting processes and

decisions, while holding them accountable for following prescribed permitting activities and deadlines. The reforms should be used to improve confidence of investors and to facilitate and expedite the interagency review process and not act as a roadblock to building infrastructure.

Consistency is also needed as it relates to regulatory oversight. The oil and gas industry supports rulemaking that improves the safety of the industry in an effective and efficient manner. As such, we also urge the President to move forward with appointing leadership at agencies like PHMSA that have a key regulatory role over energy infrastructure. With good leadership in place, the agency can develop a workforce that is not only suitably staffed but also properly trained and qualified to carry-out their mandates such as the development of appropriate regulations and policies and the conducting of timely inspections.

In conclusion, let me reiterate once more that the oil and natural gas industry is committed to delivering 100 percent of our product to its destination without incident. We look forward to continuing our work with Congress and the Administration to ensure that American families and businesses can safely and efficiently access affordable and reliable energy. Thank you and I would be happy to answer any questions that you may have.