



MEMORANDUM

April 29, 2019

To: Subcommittee on Energy Members and Staff

Fr: Committee on Energy and Commerce Staff

Re: Hearing on “The State of Pipeline Safety and Security in America”

On Wednesday, May 1, 2019, at 10 a.m. in the John D. Dingell Room, 2123 of the Rayburn House Office Building, the Subcommittee on Energy will hold a hearing entitled “The State of Pipeline Safety and Security in America.”

I. BACKGROUND

A. Federal Pipeline Safety Programs

The pipeline network in the United States is comprised of approximately three million miles of mainline and other pipelines that connect production areas, storage facilities, and consumers.¹ The Department of Transportation (DOT) is responsible for administering federal programs that ensure the safety of the network through the Pipeline and Hazardous Materials Safety Administration (PHMSA). It is supported in its efforts by the Federal Energy Regulatory Commission (FERC) and National Transportation Safety Board (NTSB) through memoranda of understanding (MOUs).

PHMSA collects data on the nation’s pipeline infrastructure in order to develop and implement federal safety regulations. The agency provides oversight of over 2.2 million miles of natural gas and hazardous liquid pipelines.² PHMSA administers the minimum pipeline safety standards, accident and safety reporting procedures, pipeline integrity management, data monitoring, leak detection, and emergency response plans.

¹ U.S. Energy Information Administration, *Natural Gas Explained: Natural Gas Pipelines* (www.eia.gov/energyexplained/index.php?page=natural_gas_pipelines) (accessed Apr. 18, 2019).

² Pipeline and Hazardous Materials Safety Administration, *Annual Report Mileage Summary Statistics* (Apr. 3, 2019) (www.cms.phmsa.dot.gov/data-and-statistics/pipeline/annual-report-mileage-gas-distribution-systems).

B. Legislative History

The Norman Y. Mineta Research and Special Programs Improvement Act established PHMSA within DOT, including in its legislative mandate the consideration of safety as the Administration's highest priority.³ Congress has since passed a series of measures to provide PHMSA with additional authorities and guidance to ensure the safety of the nation's energy pipeline network.

The Pipeline Safety, Regulatory Certainty, and Job Creation Act of 2011 (2011 Act) reauthorized PHMSA through fiscal year 2015 and made several reforms to the Administration's pipeline safety program. Among the broad range of modifications Congress included in the legislation are those to address staffing shortages, require the installation of automatic or remote-controlled shut-off valves for transmission pipelines, and the increase of civil penalties for safety violations.⁴ All told, Congress incorporated 42 mandates to PHMSA in the 2011 Act with regard to the federal pipeline safety program.⁵ While PHMSA has fulfilled some of these mandates, eight remain incomplete.⁶

The Protecting Our Infrastructure of Pipelines and Enhancing Safety (PIPES) Act of 2016 reauthorized the federal pipeline safety program through fiscal year 2019.⁷ The law requires PHMSA to issue federal safety standards for underground natural gas storage facilities and report regularly on the status of unmet statutory mandates.⁸ The PIPES Act also grants PHMSA the authority to issue emergency orders to address urgent "industry-wide safety conditions" without advanced notice.⁹ Several Congressional mandates from this law remain unfulfilled.

C. Federal Pipeline Security

The Transportation Security Administration (TSA), within the Department of Homeland Security (DHS), has primary oversight responsibility for the physical security and cybersecurity

³ Public Law 108-426 (2004).

⁴ Congressional Research Service, *DOT's Federal Pipeline Safety Program: Background and Key Issues for Congress* (Mar. 29, 2019) (R44201).

⁵ Public Law 112-90 (2012).

⁶ PHMSA, *Statutory and Non-Statutory Tasks and Deliverables Executive Summary by Section* (www.phmsa.dot.gov/sites/phmsa.dot.gov/files/docs/legislative-mandates/pipeline-safety-act/70686/psa-2011-summary-3519.pdf) (accessed Apr. 19, 2019)

⁷ Public Law 114-183 (2016).

⁸ See note 4.

⁹ *Id.*

of transmission and distribution pipeline systems.¹⁰ In 2006, TSA and PHMSA signed an annex to a 2004 MOU which defined lines of authority and responsibility. The annex made clear that TSA is the lead federal entity for transportation security, including hazardous materials and pipeline security, and PHMSA is responsible for a national safety program in natural gas and hazardous liquid pipeline transportation. While TSA is responsible for overseeing interstate pipeline security, private sector pipeline operators are responsible for implementing asset-specific protective security measures.

In December 2018, the Government Accountability Office (GAO) issued a report entitled *Critical Infrastructure Protection: Actions Needed to Address Significant Weaknesses in TSA's Pipeline Security Program Management*. The report covers key findings and provides 10 recommendations to TSA to improve its pipeline security program management including developing a strategic workforce plan and implementing a documented process for reviewing and revising security guidelines at regularly defined intervals.¹¹

II. RECENT INCIDENTS

A. Cottonwood, Minnesota

On April 24, 2019, Magellan Pipeline notified the National Response Center (NRC) of a diesel release into a drainage ditch in Cottonwood, Minnesota from its eight-inch pipeline that runs from Sioux Falls, South Dakota to Alexandria, Minnesota. The ditch flows into the Yellow Medicine River. PHMSA currently estimates the spill to be 8,400 gallons.¹² PHMSA's initial reports indicate that the failure was likely due to the pipeline having been shot multiple times from a rifle.¹³ Local law enforcement has identified a suspect and has referred the matter to the county attorney's office for potential charges.¹⁴

¹⁰ Transportation Security Administration, *Biennial National Strategy for Transportation Security: Report to Congress* (Washington, D.C.: Apr. 4, 2018).

¹¹ United State Government Accountability Office, *Critical Infrastructure Protection: Actions Needed to Address Significant Weaknesses in TSA's Pipeline Security Program Management* (December 2018).

¹² Marshall Independent, *Damaged pipeline spills 8,000 gallons of diesel fuel* (April 26, 2019) (<http://www.marshallindependent.com/news/local-news/2019/04/damaged-pipeline-spills-8000-gallons-of-diesel-fuel/>).

¹³ PHMSA notification to Congressional Staff April 25, 2019.

¹⁴ See note 12.

B. Merrimack Valley, Massachusetts

On September 13, 2018, the accidental release of high-pressure natural gas into a low-pressure gas distribution system caused a series of explosions and fires in the northeast region of Merrimack Valley in Massachusetts.¹⁵ The system, owned and operated by Columbia Gas of Massachusetts, a subsidiary of NiSource, caused damage to over 130 structures—including the destruction of five residential properties in the city of Lawrence and the towns of Andover and North Andover—primarily as a result of structure fires ignited by gas-fueled appliances.¹⁶ NTSB’s preliminary report records the death of one person and the injury of “at least” 21 individuals, including two firefighters.¹⁷

C. Dallas, Texas

On February 23, 2018, a natural gas-fueled explosion occurred at a recently renovated residence in Dallas, Texas.¹⁸ The Dallas Fire-Rescue Department reported significant structural damage while noting the lack of visible smoke or fire.¹⁹ More than 300 nearby homes were evacuated due to the quantity and severity of the natural gas leaks discovered in the residential neighborhood.²⁰ NTSB’s preliminary report of the incident details the death of a 12-year-old and injury of four family members as a result of the explosion as well as the injuries of other nearby residents.²¹

D. Los Angeles, California

In October 2015, the Aliso Canyon natural gas storage field in Los Angeles, California was discovered to be leaking substantial amounts of methane into the environment. By the beginning of 2016, over 78,000 metric tons of methane had been estimated to have escaped into

¹⁵ National Transportation Safety Board, *Preliminary Report: Over-pressure of a Columbia Gas of Massachusetts Low-pressure Natural Gas Distribution System* (www.nts.gov/investigations/AccidentReports/Reports/PLD18MR003-preliminary-report.pdf) (accessed Apr. 19, 2019).

¹⁶ *Id.*

¹⁷ *See* note 13.

¹⁸ National Transportation Safety Board, *Preliminary Report: Natural Gas-Fueled Explosion of Residence Dallas, Texas* (www.nts.gov/investigations/AccidentReports/Reports/PLD18FR002-preliminary.pdf) (accessed Apr. 19, 2019).

¹⁹ *Id.*

²⁰ *See* note 15.

²¹ *Id.*

the atmosphere from the facility. Thousands of households were relocated as nearby residents reported adverse health impacts including nausea, nosebleeds, headaches, and vomiting.²² The Southern California Gas Company, a subsidiary of Sempra Energy, which owns the facility, announced that it had temporarily plugged the leak and was in the process of permanently sealing the well.²³ According to press reports, the cause of the leak may have been a company practice wherein Southern California Gas Company had been using both narrow metal tubing and a steel casing surrounding the tubing to deliver larger volumes of gas. The outer casing, which would otherwise have served as a safety barrier in case of failure of the narrow tube, may have failed under high pressure, resulting in the subsequent release.²⁴

E. San Bruno, California

On September 9, 2010, a natural gas pipeline operated by Pacific Gas & Electric (PG&E) exploded in San Bruno, California in the suburbs of San Francisco. The explosion left a crater 167 feet long and 26 feet wide, resulting in eight deaths and multiple injuries.²⁵ The blast and ensuing fire also destroyed 38 homes and additionally damaged 70 homes.²⁶

On January 3, 2011, NTSB released a report revealing that the ruptured area was not made of seamless API 5L Grade X45, as stated in PG&E records, but was actually comprised of five sections of pipe including short pieces, called “pups,” with various seam welds. NTSB’s report recommendations called upon PG&E to “[a]ggressively and diligently” search for all verifiable pipeline construction and testing records and use them to find valid maximum allowable operating pressure to avoid future incidents.²⁷

²² 2016: *California’s ‘Staggering’ Leak Could Spew Methane for Months*, Inside Climate News (Jan. 4, 2016).

²³ *Energy Secretary: Porter Ranch Gas Leak Symptom of Age*, CBS News (Feb. 16, 2016) (online at losangeles.cbslocal.com/2016/02/16/energy-secretary-porter-ranch-gas-leak-symptom-of-age).

²⁴ *Aliso Canyon Gas Operations Won’t Resume Anytime Soon*, Associated Press (Feb. 23, 2016) (online at ww2.kqed.org/news/2016/02/23/aliso-canyon-gas-operations-wont-resume-anytime-soon).

²⁵ California Public Utilities Commission, *Report of the Independent Review Panel, San Bruno Explosion* (June 8, 2011).

²⁶ *Id.*

²⁷ National Transportation Safety Board, *Safety Recommendation P-10-2, P-10-3, and P-10-4* (Jan. 3, 2011).

III. ISSUES FOR CONSIDERATION

A. Cost-Benefit Analysis

In the 1996 reauthorization of the pipeline safety program, Congress added a requirement that PHMSA propose or issue standards “only upon a reasoned determination that the benefits of the intended standard justify its costs.”²⁸ This cost-benefit standard is a major factor contributing to the slow pace at which PHMSA finalizes safety rules.

B. Mandamus

On February 14, 2012, the City and County of San Francisco sued DOT in District Court for having “abjectly failed” to enforce federal gas pipeline safety standards for more than a decade prior to the deadly San Bruno explosion.²⁹ On July 30, 2015, the Ninth Circuit affirmed the District Court’s dismissal of the suit as well as the ruling that the Pipeline Safety Act’s citizen suit provision does not authorize mandamus-type citizen suits against PHMSA. Since the ruling, safety advocates have pushed Congress to restore what they believe was Congress’ intent to allow citizens to sue PHMSA to compel it to carry out its non-discretionary responsibilities under the Act (mandamus).³⁰ Advocates argue that this is particularly important to all stakeholders given PHMSA’s long record of failing to carry out its mandated responsibilities.

C. Automatic and Remote-Controlled Shut-off Valves

In the 2011 Act, Congress required the use of automatic or remote-controlled shut-off valves on transmission pipelines constructed or replaced after the issuance of a final rule.³¹ In the aftermath of the San Bruno explosion, NTSB found that the “use of automatic shutoff valves or remote control valves along the entire length of [the pipeline] would have significantly reduced the amount of time taken to stop the flow of gas and to isolate the rupture.”³² To date, PHMSA has not implemented this mandate.

²⁸ 49 U.S.C. § 60102 (b)

²⁹ San Francisco City Attorney, *Herrera sues feds for failing to enforce gas pipeline safety standards before and after San Bruno blast* (Feb. 14, 2012).

³⁰ House Committee on Energy and Commerce, *Legislative Hearing to Examine Pipeline Safety Reauthorization*, 114th Cong. (Mar. 1, 2016)

³¹ 49 U.S.C. § 60102 (n)

³² National Transportation Safety Board, *Pipeline Accident Report, Pacific Gas and Electric Company Natural Gas Transmission Pipeline Rupture and Fire* (Aug. 30, 2011).

D. Leak Detection

Congress, in the 2011 Act, required pipeline operators to install leak detection systems on hazardous liquid pipelines. The law also required PHMSA to establish performance standards for such systems.³³ PHMSA still has not implemented this mandate.

IV. WITNESSES

The following witnesses have been invited to testify:

Panel I

The Honorable Howard R. “Skip” Elliott

Administrator

Pipeline and Hazardous Materials Safety Administration (PHMSA)

Mr. W. William Russell

Acting Director

Government Accountability Office (GAO)

Commissioner Lawrence Friedeman

Public Utilities Commission of Ohio

Panel II

Mr. Andrew J. Black

President and CEO

Association of Oil Pipelines (AOPL)

Mr. Carl Weimer

Executive Director

The Pipeline Safety Trust

Mrs. Christina Sames

Vice President, Operations & Engineering

American Gas Association (AGA)

³³ See note 5.