

# Advisory Bulletins, NTSB Reports, PIPES ACT of 2020 and other general updates

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# PHMSA Advisory Bulletins

Advisory Bulletin No/ Alert Notice No	Docket No	Date	Subject
<a href="#">ABD-21-01</a>	2021-0050	Jun 10, 21	Statutory Mandate To Update Inspection and Maintenance Plans To Address Eliminating Hazardous Leaks and Minimizing Releases of Natural Gas From Pipeline Facilities
<a href="#">ADB-20-02</a>	2020-0025	Sep 29, 20	Overpressure Protection on Low-pressure Natural Gas Distribution Systems
<a href="#">ADB-20-01</a>	2020-0115	Sep 29, 20	Requirements for Inside Meters and Regulators
<a href="#">ADB-19-02</a>	2019-0087	May 2, 19	Potential for Damage to Pipeline Facilities Caused by Earth Movement and Other Geological Hazards
<a href="#">ADB-19-01</a>	2019-0047	Apr 11, 19	Potential for Damage to Pipeline Facilities Caused by Severe Flooding
<a href="#">ADB-17-02</a>	2016-0067	Apr 10, 17	Guidance on Training and Qualifications for the Integrity Management Program
<a href="#">ADB-17-01</a>	2016-0131	Mar 16, 17	Deactivation of Threats
<a href="#">ADB-16-07</a>	2016-0065	Dec 14, 16	High Consequence Area Identification Methods for Gas Transmission Pipelines
<a href="#">ADB-16-06</a>	2016-0137	Dec 9, 16	Safeguarding and Securing Pipelines from Unauthorized Access
<a href="#">ADB-16-05</a>	2016-0075	Aug 16, 16	Clarification of Terms Relating to Pipeline Operational Status
<a href="#">ADB-16-04</a>	2016-0071	Jun 21, 16	Ineffective Protection, Detection, and Mitigation of Corrosion Resulting From Insulated Coatings on Buried Pipelines

# Most recent Advisory Bulletins

- ▶ ADB-2021—01 [Draft 2 Clean \(dot.gov\)](#)
- ▶ **Pipeline Safety: Statutory Mandate To Update Inspection and Maintenance Plans To Address Eliminating Hazardous Leaks and Minimizing Releases of Natural Gas From Pipeline Facilities**
  - Self-executing mandate requiring operators to update their inspection and maintenance plans to address eliminating hazardous leaks and minimizing releases of natural gas (including intentional venting during normal operations) from their pipeline facilities.
  - Operators must also revise their plans to address the replacement or remediation of pipeline facilities that are known to leak based on their material, design, or past operating and maintenance history. The statute requires pipeline operators to complete these updates by December 27, 2021.
  - PUC/ PHMSA will inspection in 2022.

# Silver Spring, MD

- ▶ **ADB 2020-01 - Inside Meters and Regulators:** The advisory alerts owners and operators of natural gas distribution pipelines to the consequences of failures of inside meters and regulators. The advisory also reminds operators of existing federal regulations covering the installation and maintenance of inside meters and regulators, including the integrity management regulations for natural gas distribution systems to reduce the risks associated with failures of inside meter and regulator installations.

# Merrimack Valley, MA

- ❖ **ADB-2020-02 – Overpressure Protection on Low-Pressure Natural Gas Distribution Systems:** The advisory reminds owners and operators of natural gas distribution pipelines of the possibility of failure due to an overpressurization on low-pressure distribution systems. The advisory also reminds such owners and operators of existing federal integrity management regulations for gas distribution systems.

# Some, not all recommendations in ADB-2020-02

- Review NTSB Pipeline Accident Report
- Clear roles and responsibilities across all departments involved in the planning and execution of construction or pipe replacement projects;
- Description and delineated scope of work to be conducted, with a materials list, necessary schematics, and maps of the location of the work;
- Requirements to review and ensure that all records and documentation of the affected gas system(s) are traceable, reliable, and complete;
- The sequential process of how the work is to be carried out and who or what group is responsible for each step;

# Some, not all recommendations in ADB-2020-02 (continued)

- Application of a “management of change” process to identify all changes that could threaten system integrity, particularly where there is a risk emanating from a common mode of failure, including a list of individuals and groups necessary for review along with their comment and approval before work commences; and
- Implement a review process sufficiently robust to detect the omission of critical process and procedural steps that could prevent possible overpressurization events.
- Installing a full-capacity relief valve downstream of the low-pressure regulator station, including in applications where there is only worker-monitor pressure control;
- Installing a “slam shut” device;
- Using telemetered pressure recordings at district regulator stations to signal failures immediately to operators at control centers; and
- Completely and accurately documenting the location for all control (*i.e.*, sensing) lines on the system.

# Some, not all recommendations in ADB-2020-02 (continued)

- ▶ PHMSA reminds operators that they are required to develop procedures in their DIMP that demonstrate an understanding of their gas distribution systems
- ▶ PHMSA reminds operators of their obligation under DIMP regulations (part 192, subpart P) to consider available information when identifying all potential and existing threats to the integrity of their systems
- ▶ PHMSA reminds operators that they must determine and implement measures designed to reduce the risk of failure on their pipeline systems



# NTSB Reports and Information

- ▶ [NTSB Issues 5 Urgent Safety Recommendations as Investigation of Merrimack Valley Gas Explosions, Fires Continues](#)
  - the elimination of the professional engineer licensure exemption for public utility work
  - Revision to the engineering plan and constructability review process across all of NiSource, Inc.'s subsidiaries to ensure all applicable departments review construction documents for accuracy, completeness and correctness, and that documents or plans be sealed by a professional engineer prior to work commencing.
  - A review and of all of NiSource, Inc.'s records and documentation of natural gas systems to ensure they are traceable, reliable and complete.

# NTSB Reports and Information

## 5 urgent Safety Recommendations(Continued)

- Application of management of change process to all changes to adequately identify system threats that could result in a common mode failure.
- Development and implementation of control procedures during modifications to gas mains to mitigate risks identified during management of change operations, with gas main pressures continually monitored during modifications and assets placed at critical locations to immediately shut down the system if abnormal operations are detected.

[PAR1902.pdf \(ntsb.gov\)](#)

# NTSB Reports and Information

- ▶ [Building Explosion and Fire, Silver Spring, Maryland \(ntsb.gov\)](#)
- the location and inspection of service regulators within a structure
- the inspection of the gas meter assembly
- the notification of the natural gas odor to Washington Gas Light Company
- the detection of natural gas through odorants and methane

# NTSB Reports and Information



- ▶ Leak-detection and mitigation tools are essential and can make the difference between a minor incident and a deadly explosion. Pipeline systems equipped with leak-detection systems and automatic shutoff valves, or remote-control valves, can warn operators of an imminent accident and allow for quick mitigation.

# NTSB Reports and Information



- ▶ Placing service regulators outside buildings is another mitigation tool. Yet many older homes and multifamily structures still have regulators inside, which can trap accumulating gas and lead to an explosion. Methane detection also helps mitigate consequences by alerting the public to natural gas leaks, thereby minimizing public exposure.

# NTSB Reports and Information



2021-2022 NTSB

**MOST WANTED LIST**  
OF TRANSPORTATION SAFETY IMPROVEMENTS



## Regulators should:

- ▶ Require all operators of natural gas transmission and distribution pipelines to equip their supervisory control and data acquisition systems with tools to assist in recognizing and pinpointing the location of leaks.
- ▶ Require the installation of automatic shutoff valves or remote-control valves in high-consequence areas and in class 3 and 4 locations.
- ▶ Require all new service regulators be installed outside occupied structures and existing interior service regulators be relocated whenever the gas service line, meter, or regulator is replaced. Multifamily structures should be prioritized over single-family dwellings.
- ▶ Require methane-detection systems in residential occupancies with gas service.

# NTSB Reports and Information



2021-2022 NTSB

**MOST WANTED LIST**  
OF TRANSPORTATION SAFETY IMPROVEMENTS



## Industry groups should:

- ▶ Revise the National Fuel Gas Code, National Fire Protection Association 54 to require methane-detection systems for all types of residential occupancies with gas service.
- ▶ Develop additional guidance that identifies steps gas distribution operators can take to safely respond to leaks, fires, explosions, and emergency calls.



# NTSB Reports and Information



## 2021-2022 NTSB MOST WANTED LIST OF TRANSPORTATION SAFETY IMPROVEMENTS



### Operators should:

- ▶ Review and update as needed:
  - ▶ incident-reporting practices;
  - ▶ policies and procedures for responding to leaks, fires, explosions, and emergency calls; and
  - ▶ integrity management programs.
- ▶ Equip supervisory control and data-acquisition systems with tools to assist in leak detection.
- ▶ Install remote-closure and automatic-shutoff valves in high-consequence areas and class 3 and 4 locations.



# NTSB Safety Alert for Pipeline

## ▶ SA-047 Safety Through Reliable Fusion Joints



## **NTSB** ***SAFETY ALERT*** National Transportation Safety Board

### ★ **Safety Through Reliable Fusion Joints** ★

***Proper cleaning and surface preparation procedures can ensure fusion joint reliability in plastic natural gas pipelines***

#### ***The problem***

Fusion joints in high-density polyethylene (HDPE) piping are of great utility in the natural gas service and distribution industry. In a recent NTSB investigation of a New York City building explosion that caused eight deaths and dozens of injuries, NTSB investigators discovered that—

- Inadequate surface preparation or inadvertent contamination of plastic pipe surfaces prior to saddle fusion welding led to a joint with incomplete fusion.
- A weld joint with incomplete fusion can be strong enough to pass initial pressure testing of the piping system but could eventually fail or leak after the joint is placed in service.

A fusion weld joint with incomplete fusion results in a weld joint having reduced bond strength. Incomplete fusion is an internal weld defect. It cannot be detected by visual inspection methods and can be present in a weld joint having a normal external appearance.



# NTSB Reports

## ► [Pipeline Accident Reports \(nts.gov\)](https://www.nts.gov)

### Pipeline Accident Reports

The NTSB issues an accident report following the investigation. These reports are available online for reports issued since 1996, with older reports coming online soon. The reports listing is sortable by the event date, report date, city, and state. Click on any of those headings to sort the data.

Showing 1 to 10 of 144 entries

[First](#) [Previous](#) [1](#) [2](#) [3](#) [4](#) [5](#) [Next](#) [Last](#)

Report Number	NTSB Title	Accident Date	Report Date	City	State	Country	NTIS Number	Report
PLD21FR002-preliminary-report	Preliminary Report: PLD21FR002	6/28/2021	8/2/2021	Farmersville	TX	USA		PDF
PAR-21-02	Pacific Gas & Electric Third-Party Line Strike and Fire	2/6/2019	7/27/2021	San Francisco	CA		PB2021-100925	PDF
PAR-21-01	Atmos Energy Corporation Natural Gas-Fueled Explosion	2/23/2018	1/12/2021	Dallas	TX	USA	PB2021-100901	PDF
PLD20LR001-preliminary-report	Enbridge Inc. Natural Gas Pipeline Rupture and Fire	5/4/2020	6/22/2020	Hillsboro	KY	USA		PDF
PAB2001	Pipeline Accident Brief: Magellan Pipeline Anhydrous Ammonia Release	10/17/2016	1/29/2020	Tekamah	NE	USA		PDF
PAB-19-04	Gasoline Transmission Pipeline Explosion/Fire	10/31/2016	12/10/2019	Helena	AL	USA		PDF
PAB-19-03	Pipeline Accident Brief: Natural Gas Explosion at Educational Facility	8/7/2017	12/2/2019	Minneapolis	MN	USA		PDF
PAB-19-02	Natural Gas Explosion at Family Residence	4/17/2017	10/18/2019	Firestone	CO	USA		PDF
PLD19FR002-preliminary-report	Preliminary Report Pipeline: Enbridge Inc. Natural Gas Pipeline Rupture and Fire	8/1/2019	10/8/2019	Danville	KY	USA		PDF
PAR-19-02	Overpressurization of Natural Gas Distribution System, Explosions, and Fires in Merrimack Valley, Massachusetts	9/13/2018	9/24/2019	Merrimack Valley	MA	USA	PB2019-101365	PDF

# NTSB Reports

- ▶ [Preliminary Report: PLD21FR002](#) Atmos Energy Farmersville Texas

On June 28, 2021, about 3:35 p.m. local time, natural gas ignited causing an explosion during routine maintenance activities involving the insertion of an in-line inspection tool (pig) into a launcher, near Farmersville, Texas.<sup>1</sup> (See figure.) The pig ejected from the pipeline shortly after it was inserted into the launcher while employees were manually removing the metal insertion tool.<sup>2</sup> Before the insertion tool was completely removed, employees at the site heard a loud sound, and one employee observed a flash near the open launcher door. Employees from Atmos Energy Corporation (Atmos), FESCO, Ltd., and Bobcat Contracting L.L.C. were onsite at the time of the accident performing work for Atmos. The explosion was directed toward four employees, injuring all of them, two fatally. Three employees working nearby were not injured.

# NTSB Reports

[PDF](#) Pacific Gas & Electric Third-Party Line Strike and Fire, San Francisco, California, February 6, 2019. NTSB/PAR-21/02. Washington, DC: NTSB. Abstract: On February 6, 2019, at 1:07 p.m. local time, the excavator operator for a third-party contractor, Kilford Engineering Inc., impacted a Pacific Gas & Electric Company (PG&E) branch connection with a mini excavator trenching bucket attachment during mechanical excavation for fiberoptic conduit installation, which resulted in the release and ignition of natural gas. The accident occurred in the Richmond District of San Francisco, California. A nearby restaurant with a rental unit above caught fire. There were no injuries. Estimated damages to nearby buildings and the pipeline system exceeded \$10 million. The National Transportation Safety Board (NTSB) determined that the probable cause of the accident was the failure of the Kilford operator and spotter to follow safe excavation practices within the tolerance zone, which resulted in the mini excavator trenching bucket attachment impacting the pipeline's branch connection. The investigators focused on the safety issues of third-party excavation damage to buried natural gas pipelines, enforcement challenges of California's damage prevention law, PG&E's data integration gaps during the development of the valve isolation plan, and insufficient joint emergency response planning between PG&E and San Francisco emergency response agencies. As a result of the investigation, the NTSB makes one recommendation each to the San Francisco Police Department, Fire Department, and Department of Emergency Management and two recommendations to PG&E.

# NTSB Reports

[PDF](#) Atmos Energy Corp, Dallas Texas

Abstract: On February 23, 2018, at 6:38 a.m. local time, a natural gas-fueled explosion occurred at 3534 Espanola Drive, Dallas, Texas. The residence sustained major structural damage, but when first responders arrived on scene at 6:44 a.m., they observed no smoke or fire. Four family members were injured, and one was killed in the explosion. Following the explosion, National Transportation Safety Board (NTSB) investigators located a through-wall crack in the 71-year-old natural gas main that served the residence. In the 2 days before this explosion, two gas-related incidents occurred on the same block at houses that were served by the same natural gas main, each resulting in significant structural damage and burn injuries to one occupant. The first occurred on February 21, 2018, at 5:49 a.m., and resulted in one injury involving second-degree burns and significant structural damage to 3527 Durango Drive. The second incident occurred on February 22, 2018, at 10:21 a.m., and resulted in one injury involving second-degree burns and significant structural damage to 3515 Durango Drive. As a result of this investigation, the NTSB issued new safety recommendations to the Pipeline and Hazardous Materials Safety Administration, the Railroad Commission of Texas, the Dallas Fire-Rescue Department, Atmos Energy Corporation, and the Gas Piping Technology Committee. The NTSB is also reiterating safety recommendations to the International Code Council, the National Fire Protection Association, and the Gas Technology Institute



# NTSB Reports



**Figure 1.** Location of explosion, preceding incidents, and shared utilities.

## Snips from Tristan Brown (PHMSA Acting Administrator)

- ▶ “While PHMSA’s mission of safety and environmental protection—had largely not changed in nearly a half-century, the new PIPES Act, explicitly expanded our mission related to protecting the environment. This was one of dozens of new provisions and mandates from Congress...
- ▶ In addition, Secretary Buttigieg’s priorities includes recovering from the pandemic by building back better through infrastructure investments, maintaining our safety mission, and adopting climate change mitigation measures, across the Department.
- ▶ an “acceptable level of release into the environment” is a long-outdated concept—for gas and for hazardous liquids. We must work to change the industry’s thinking about small releases, because they, too, add up, and can—and do—have a big impact on the environment.
- ▶ This underscores the importance of addressing the causes of all incidents including excavation damage to pipelines. Having effective state damage prevention programs is very important both from safety and from climate solution perspectives. Because, as we know, excavation damage to pipelines continues to be one of the leading causes of pipeline accidents, PHMSA strongly encourages all states to do all you can to reduce these damages and the resulting safety and environmental consequences
- ▶ Minimize emissions

# PIPES ACT of 2020

- ▶ Reauthorization- “Protecting our Infrastructure of Pipelines and Enhancing Safety (PIPES Act) of 2020” -[PIPES Act of 2020 Overview | PHMSA \(dot.gov\)](#)
- ▶ **Section 113 and 114:** The PIPES Act of 2020, Section 113, mandates that the Secretary promulgate a final rule pertaining to gas pipeline leak detection and repair by December 27, 2021, which is one year from the enactment of the law. In addition, Section 114 of the PIPES Act of 2020, a self executing provision of the Act, requires pipeline operators to revise their inspection and maintenance plans to contribute to eliminating hazardous leaks and minimizing releases of natural gas from pipeline facilities and requires PHMSA and its state partners to inspect these plans. Section 114 also mandates that PHMSA conduct a study and provide a report to Congress discussing best available technologies or practices for preventing or minimizing the release of natural gas by June 27, 2022.
- ▶ **Section 110- LNG regulations amendments-** Anticipated in 2022. Update O&M Standards and risk based approach, update to NFPA 59(a)
- ▶ **Section 117: Drug and Alcohol – Minimize Duplicate Audits.** Allow operators to use other states or federal audit to meet inspection requirements to reduce duplications and strain on operator resources. Prior, the same D&A plan could be reviewed by multiple states and the federal gov. States have the option of inspecting or accepting review by another state/fed.



# PIPES ACT of 2020 (continued)

- ▶ Reauthorization- “Protecting our Infrastructure of Pipelines and Enhancing Safety (PIPES Act) of 2020” -[PIPES Act of 2020 Overview | PHMSA \(dot.gov\)](#)
- **Section 202 -206: Distribution based changes based on Merrimack Valley overpressure event. Named after Leonel Rondon, the young man killed tragically in Massachusetts Merrimack Valley incident.**
  - **Section 202- DIMP Update**
  - **Section 203- Emergency response plans and communications with first responders, public officials and the public**
  - **Section 204-O&M manual procedures for:**
    - responding to possible over-pressurization, immediately reducing pressure and or shutting down portions of the system
    - “management of change” MOC for construction plans
  - **Section 205- PSMS Pipeline Safety Management Systems. Reference API RP 1173. PHMSA to report to congress.**
  - **Section 206- Distribution operators req to have traceable reliable and complete... records for pressure controls**

# Some additional topics.

▶ **Infrastructure Investment and Jobs Act** provides \$1 billion to community owned gas operators. \$200 million per year for 5 years. The bill includes \$1 billion for a new Natural Gas Distribution Infrastructure Safety and Modernization Grant Program” to help replace cast iron and other pipelines which are prone to safety issues, leaks, and fugitive methane emissions, located in community owned gas distribution systems.

▶ **Cyber Security-** Colonial Pipeline incident. PHMSA is coordinating with TSA and other federal agencies to ensure there is a collaborative and efficient approach to monitoring, inspecting, and promulgating regulations related to cyber security in the pipeline industry.

▶ Cyber Safeguarding- Voluntary PHMSA discussion with operators during CRM

▶ Gas Transmission regulations including RIN 1-3 and rupture detections/automated valves.

▶ Gas Distribution regulations

# Just a few take-aways from this morning. :

DIMP, IM, MOC, MCA, Traceable, Verifiable, Complete, Engineering Critical Assessment, Cyber Security, PIPES ACT, methane reduction, climate change, D&A audit efficiency, MAOP reconfirmation / July 2028 and July 2035, plastic fusion, training, contaminants, fusion preparation, Assessment outside HCAs, ILI, Pig launchers, Pressure reduction per Potential Impact Radius, Class 1 Gathering, FAQs for gas transmission, methane detectors, damage prevention, DPC, AVR, PA One Call, 811, non compliance, NTSB, AGA, ASTM F2620-12, visual test, oversight, installation error, OQ, Farm Tap, jurisdiction, Interpretation, pressure gauge placement, butt fusion, incidents, fatalities, near miss, Act 50, administrative penalties, damage prevention education, complex projects, photographic evidence, Call 911 when there is a release of gas, hit kit, Rin 1, Rin 2 and Rin 3, automated valves, rupture and leak detection, NTSB most wanted, NTSB reports, PHMSA Advisory Bulletins, self executing mandate, eliminate hazardous leaks, Silver Spring, Merrimack Valley, Atmos Energy in Dallas Texas, full-capacity relief valve, protecting the environment, outdated concept of acceptable level of methane release, Leonel Rondon

The background features abstract, overlapping geometric shapes in various shades of blue, primarily on the left and right sides, framing a central white area. The shapes include triangles and polygons, some semi-transparent, creating a modern, layered effect.

Thank You