CARBON CAPTURE COALITION

PHMSA/Pipeline Safety Fact Sheet

SAFETY RECORD OF EXISTING CO_2 PIPELINE NETWORK

CO_2 pipelines have been operating safely in the United States for more than 50 years. Currently, 50 operating pipelines span over 5,000 miles with individual pipelines safely transporting millions of tons of CO_2 annually over hundreds of miles and across entire regions of the country. These pipelines have an excellent safety record—one that easily surpasses other climate-essential energy infrastructure, such as electric transmission and distribution systems. Safety data reported by the Pipeline and Hazardous Materials Safety Administration (PHMSA), the agency charged with overseeing CO_2 pipeline safety, shows that CO_2 pipelines have been and can be operated at the highest level of safety by best-practice operators. Since reporting began, CO_2 pipelines have had a strong safety record, though a rare, but serious pipeline failure in Satartia, Mississippi in 2020 has increased public and policymaker concerns about pipeline safety and the overall reliability of these systems as they scale.

Over the course of the past several decades, well-respected international climate assessments have continued to emphasize the need for carbon management technologies to help meet midcentury climate targets. Congress has, in turn, heeded this call, investing in significant federal policy support to incentivize the widescale deployment of the full suite of these technologies. This has directly resulted in a significant increase in announced projects to capture emissions from industrial and power sources, as well as directly from the atmosphere. **In order for these technologies to reach their full potential, a substantial buildout of safe and reliable CO_2 pipeline infrastructure will be needed to transport large quantities of captured CO_2 from emissions sources to points of reuse and permanent geologic storage.**

The Carbon Capture Coalition (the Coalition) has long-supported rigorous safety design, inspection, and maintenance protocols associated with carbon capture, transport, and storage infrastructure. Full confidence from the public, as well as policymakers, in the safe design, construction and operation of CO_2 pipelines is essential to scale these infrastructure systems and help meet net zero emissions targets.

CURRENT SAFETY STANDARDS UNDER PHMSA

The U.S. Department of Transportation (DOT) has regulated the safety of CO_2 pipelines since the Hazardous Liquid Pipeline Act of 1979. PHMSA was established in 2004 as an agency within the U.S. Department of Transportation and currently oversees CO_2 pipeline safety. Under current statute, there are multiple steps that CO_2 pipeline operators must take to ensure pipelines are operated safely, including:

- ☑ **attention to pipeline design**
- ☑ **monitoring for leaks**
- ☑ **protection against corrosion**
- ☑ **safeguards against overpressure**

Operators must have pressure monitors on their pipelines to know when a leak or rupture occurs and can initiate shut-off valves to mitigate the release of CO_2 from the pipeline.

Additionally, CO_2 pipeline operators are required to submit an annual report to PHMSA, including information such as the length (miles) of the operated pipeline, the barrel-miles of CO_2 transported (total barrels of CO_2 transported multiplied by miles of pipeline), along with various safety inspections and structural integrity assessments conducted that year.

PHMSA also has a number of required safety programs that CO_2 pipeline operators must follow, including:

Operations Maintenance Emergency: The Operations & Maintenance Enforcement Guidance document provides guidance and regulations for operators.

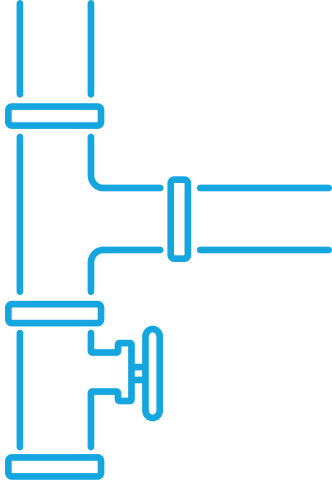
Control Room Management: Most CO_2 pipeline operators monitor and manage their pipelines remotely through a control room. The Control Room Management safety program provides regulations for operators monitoring and managing pipelines to help reduce control room errors, especially in emergency situations.

Public Awareness: CO_2 pipeline operators are required to have a public awareness program that provides pipeline safety information to the affected public, emergency officials, local public officials, and excavators.

Damage Prevention: Regulations for excavations around CO_2 pipelines to prevent damage to pipelines. Damage to pipelines is a leading cause of pipeline incidents.

Operator Qualification: Require that operators have designated employees that are trained to respond to abnormal operating conditions, such as severe weather, related to their pipelines.

Drug and Alcohol Testing: Operators must have a drug and alcohol testing plan for employees who work on certain aspects of pipeline operations.



In PHMSA's current regulations, all newly constructed CO_2 pipelines must include automatic shut-off valves, contributing to faster shut down times. Faster shut down times will help improve safety by allowing faster access to emergency first responders who respond to fires and injuries.

COALITION'S ADVOCACY ON PIPELINE SAFETY

In 2022, PHMSA released the incident report for the 2020 pipeline failure in Satartia, Mississippi, which provided insights into probable operator violations that led to the rupture. Along with the report, the agency announced several additional measures the agency is undertaking to ensure that the further buildout of CO_2 transport infrastructure is done to the highest safety standards, including a new rulemaking that will build upon existing comprehensive CO_2 pipeline regulations.

The Coalition supports the implementation of common-sense steps to ensure these projects can safely scale, responsibly, and with urgency. To that end, the Coalition's 2023 Federal Policy Blueprint details a comprehensive and targeted set of measures Congress and the Administration should take to ensure these transport and storage networks are designed, constructed, and maintained at rigorous standards delivering the highest levels of reliability and safety. These measures can further enable the deployment of these technologies at levels sufficient to meet decarbonization goals and should include the following:

- ☑ **Expand first responder training for CO_2 pipeline safety incidents.**
- ☑ **Require that project proponents more rigorously consider potential geohazard impacts on CO_2 pipelines during design, siting, construction, and maintenance.**
- ☑ **Request that PHMSA conduct additional reporting on the public safety record of CO_2 pipelines.**
- ☑ **Carry out a national assessment of the CO_2 network necessary to meet net-zero emissions.**

The Carbon Capture Coalition champions common-sense steps to build upon comprehensive existing CO_2 pipeline regulations and looks forward to continuing to engage with the agency and bipartisan members of Congress to take steps to support the responsible buildout of these systems.