



U.S. Department
of Transportation

**Pipeline and
Hazardous Materials
Safety Administration**

July 9, 2026

VIA EMAIL TO: steven_romano@kindermorgan.com

Steven Romano
Chief Operating Officer
Tennessee Gas Pipeline Company, L.L.C.
1001 Louisiana Street, Suite 1000
Houston, Texas 77002

CPF 2-2026-011-CAO

Dear Mr. Romano:

Enclosed please find a Corrective Action Order (“CAO” or “Order”) issued by the Pipeline and Hazardous Materials Safety Administration (PHMSA), Office of Pipeline Safety (OPS). The CAO requires Tennessee Gas Pipeline Company, L.L.C., a subsidiary of Kinder Morgan, Inc., to take certain corrective actions with respect to the pipeline failure that occurred on July 7, 2026, on the 24-inch interstate natural gas pipeline Line 100-2 in Boyd County, Kentucky.

Service of the CAO by email is effective upon the date of transmission and acknowledgment of receipt as provided under 49 CFR § 190.5. The terms and conditions of this Order are effective upon completion of service.

Sincerely,

**KEITH J
COYLE**

 Digitally signed by KEITH
J COYLE
Date: 2026.07.09
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Keith Coyle
Chief Counsel
Pipeline and Hazardous Materials Safety
Administration

Enclosure: CAO

cc: James Urisko, Director, Southern Region, Office of Pipeline Safety, PHMSA

Zachary Ragain, Director of Engineering, Compliance, Codes and Standards
Kinder Morgan, zach_ragain@kindermorgan.com
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CONFIRMATION OF RECEIPT REQUESTED

**DEPARTMENT OF TRANSPORTATION
PIPELINE AND HAZARDOUS MATERIALS SAFETY ADMINISTRATION
OFFICE OF PIPELINE SAFETY
WASHINGTON, D.C. 20590**

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In the Matter of	)	
	)	
Tennessee Gas Pipeline Company, L.L.C.,	)	CPF No. 2-2026-011-CAO
a subsidiary of Kinder Morgan, Inc.	)	
	)	
Respondent	)	
	)	

CORRECTIVE ACTION ORDER

Background and Purpose

The Pipeline and Hazardous Materials Safety Administration (PHMSA), Office of Pipeline Safety (OPS), is issuing this Corrective Action Order (CAO or Order) pursuant to the authority provided in 49 U.S.C. § 60112. The CAO requires Tennessee Gas Pipeline Company, L.L.C., (TGP or Respondent), a subsidiary of Kinder Morgan, Inc.,¹ to take certain necessary corrective actions to protect the public, property, and the environment from the potential hazards associated with the continued operation of the 24-inch interstate natural gas pipeline Line 100-2 (TGP Line 100-2) in Boyd County, Kentucky. TGP Line 100-2 is a part of the TGP pipeline system that transports natural gas from the Gulf Coast to the central part of the United States. The system also transports natural gas from the shale gas production areas of Ohio, West Virginia, and southern Pennsylvania.

On the evening of July 7, 2026, TGP Line 100-2 ruptured, resulting in the release of 10,135 mcf of natural gas (Failure). The force of the rupture caused a 25-foot section of the pipeline to eject from the ground and created a crater measuring 56 feet long by 34 feet wide. In response to the rupture, TGP shut-in the pipeline between valves 113-2 and 114-2 and stopped the flow of gas. The local fire department also issued a temporary evacuation order for residents within a one-mile radius of the Failure site. There were no reported fatalities or injuries.

Pursuant to 49 U.S.C. § 60117, PHMSA has initiated an investigation of the Failure. The preliminary findings of PHMSA’s ongoing investigation are as follows:

¹ See Tennessee Gas Pipeline Company, L.L.C., KINDER MORGAN, <https://pipeportal.kindermorgan.com/portalui/DefaultKM.aspx?TSP=TGPD> (last accessed July 8, 2026).

- On July 7, 2026, at approximately 7:42 PM Central Time, TGP Line 100-2 ruptured in Boyd County, Kentucky, resulting in the release of natural gas. A local caller reported the rupture. The town nearest to the Failure site is Buchanan, Kentucky.
- The Failure resulted in: the ejection of a 25-foot section of the pipeline from the ground, creating a crater measuring 56 feet long by 34 feet wide, and damage to nearby vegetation; the reported release of 10,135 mcf of natural gas; the closure of a nearby road; and an evacuation order for residents within a one-mile radius of the Failure site. The fire department lifted the evacuation order at approximately 11:30 PM Central Time on July 7.
- There were no reported injuries or fatalities.
- Following the rupture, TGP isolated the pipeline between valves 113-2 and 114-2 and stopped the flow of gas. TGP notified the National Response Center at 7:55 PM Central Time on July 7, 2026. The pipeline remains isolated and removed from service.
- PHMSA Accident Investigation Division deployed and arrived onsite on July 8, 2026. An investigation is ongoing.
- TGP Line 100-2 is a 24-inch nominal diameter, 0.25-inch nominal wall thickness, X-52 Grade pipe manufactured by A.O. Smith in 1948 with an electric fusion welded (EFW) seam. The pipe coating is coal tar enamel. The maximum allowable operating pressure of Line 100-2 is 765 pounds per square inch gauge (psig).
- Prior to the release, at 6:33 PM Central Time, TGP Line 100-2 was operating at 758 psig as measured at Compressor Station 114. Preliminary information from the same location indicates that operating pressure decreased to 610 psig by 7:12 PM Central Time.
- This vintage A.O. Smith pipe has a history of being susceptible to significant anomalies due to inconsistent weld seam quality and hard spots.
- An operator-known wrinkle bend is located near the Failure site. Wrinkle bends are a vintage construction technique known to be susceptible to various integrity threats, primarily various forms of cracking.
- TGP Line 100-2 is a part of the TGP pipeline system that transports natural gas from the Gulf Coast to the central part of the United States. The system also transports natural gas from the shale gas production areas of Ohio, West Virginia, and southern Pennsylvania.
- TGP Line 100-2 operates as part of a looped system. Other looped pipelines in the system continue to operate, relieving any immediate supply issues.
- On February 11, 2026, PHMSA issued a Corrective Action Order (CPF 2-2026-005-CAO) for a pipeline failure that occurred two days earlier on TGP Line 100-3 in Clark County, Kentucky. The failure involved a wrinkle bend that was visible on the top of the pipe and which had been formed during original construction. The rupture of that pipeline formed a crater and exposed the pipeline.

Determination of Necessity for Corrective Action Order and Right to Hearing

Section 60112 of title 49, United States Code, authorizes PHMSA to determine that a pipeline facility is or would be hazardous to life, property, or the environment and if there is a likelihood of serious harm, to expeditiously order the operator of the facility to take necessary corrective

action, including suspended or restricted use of the facility, physical inspection, testing, repair, replacement, or other appropriate action. An order issued expeditiously must provide an opportunity for a hearing as soon as practicable after the order is issued.

In deciding whether to issue an order, PHMSA must consider the following, if relevant: (1) the characteristics of the pipe and other equipment used in the pipeline facility, including the age, manufacture, physical properties, and method of manufacturing, constructing, or assembling the equipment; (2) the nature of the material the pipeline facility transports, the corrosive and deteriorative qualities of the material, the sequence in which the material is transported, and the pressure required for transporting the material; (3) the aspects of the area in which the pipeline facility is located, including climatic and geologic conditions and soil characteristics; (4) the proximity of the area in which the facility is located to environmentally sensitive areas; (5) the population density and population and growth patterns of the area in which the pipeline facility is located; (6) any recommendation of the National Transportation Safety Board made under another law; and (7) any other factors PHMSA may consider as appropriate.

After evaluating the foregoing preliminary findings of fact, and having considered the characteristics of the pipeline; the nature of the Failure; the currently unknown cause of the Failure; the presence of A.O. Smith pipe with known history of manufacturing defects; the recent and potentially similar failure of TGP Line 100-3, which had a wrinkle bend on the top of the pipe formed during original construction; the presence of a wrinkle bend near the location of the Failure location; the possibility that the cause of the Failure may be present elsewhere on the Affected Segment, as defined below; the hazardous nature of the material transported (natural gas); the damage to the nearby environment; and the existing and potential additional impacts to life, property, or the environment; it is hereby determined that continued operation of the Affected Segment of TGP Line 100-2, as defined below, without corrective measures is or would be hazardous to life, property, or the environment, and that failure to issue this Order expeditiously would result in the likelihood of serious harm.

Accordingly, this Order mandating immediate corrective action is issued expeditiously without prior notice and opportunity for a hearing. The terms and conditions of this Order are effective upon completion of service.

Within 10 days of receipt of this Order, Respondent may request a hearing, to be held as soon as practicable, by notifying the Associate Administrator for Pipeline Safety in writing, with a copy to the Director, PHMSA, OPS Southern Region. If a hearing is requested, it will be held in accordance with 49 CFR § 190.211.

After receiving and analyzing additional data in the course of this investigation, PHMSA may identify other corrective measures that need to be taken. Respondent will be notified of any additional measures required and, if appropriate, PHMSA will consider a further amended order. To the extent consistent with safety, Respondent will be afforded notice and an opportunity for a hearing prior to the imposition of any additional corrective measures.

Corrective Measures

Definitions

Affected Segment – The “Affected Segment” means the approximately 45.0 miles of TGP Line 100-2 bounded by Compressor Station 110 to the west and Compressor Station 114 to the east.

Isolated Segment – The “Isolated Segment” means the approximately 10.8 miles of TGP Line 100-2 bounded by Mainline Valve 113-2 to the west and Compressor Station 114 to the east.

Failure – The “Failure” means the rupture of TGP’s 24-inch interstate natural gas pipeline Line 100-2 that occurred at approximately 7:42 PM Central Time on July 7, 2026, in Boyd County, Kentucky.

Director – The “Director” means the Director, PHMSA, OPS Southern Region.

1. ***Shut Down.*** TGP must not operate the Isolated Segment until authorized to do so by the Director.
2. ***Operating Pressure Restriction.*** TGP must reduce and maintain a twenty percent (20%) pressure reduction in the actual operating pressure along the entire length of the Affected Segment such that the operating pressure along the Affected Segment will not exceed eighty percent (80%) of the actual operating pressure in effect immediately prior to the Failure.
 - a. This pressure restriction is to remain in effect until written approval to increase the pressure or return the pipeline to its pre-failure operating pressure is obtained from the Director.
 - b. Within 15 days of receipt of this Order, TGP must provide the Director the actual operating pressures of each compressor station and each main line pressure regulating station on the Affected Segment at the time of failure and the reduced pressure restriction set-points at these same locations.
 - c. This pressure restriction requires any relevant remote or local alarm limits, software programming set-points or control points, and mechanical over-pressure devices to be adjusted accordingly.
 - d. When determining the pressure restriction set-points, TGP must take into account any in-line inspection (ILI) features or anomalies present in the Affected Segment to provide for continued safe operation while further corrective actions are completed.
 - e. TGP must review the pressure restriction monthly by analyzing the operating pressure data. TGP must take into account any ILI features or anomalies present in the Affected Segment and immediately reduce the operating pressure to maintain the safe operations of the Affected Segment, if warranted by the monthly review. TGP must submit the results of the monthly review to the Director. The results must include, at a minimum, the current discharge set-points (including any additional pressure reductions), and any pressure exceedance at discharge set-points.

3. **Restart Plan.** Prior to resuming operation of the Isolated Segment, TGP must develop and submit a written Restart Plan to the Director for prior approval.
 - a. The Director may approve the Restart Plan incrementally without approving the entire plan but the Isolated Segment cannot resume operation until the Restart Plan is approved in its entirety.
 - b. Once approved by the Director, the Restart Plan will be incorporated by reference into this Order.
 - c. The Restart Plan must provide for adequate patrolling of the Isolated Segment during the restart process and must include incremental pressure increases during start up, with each increment to be held for at least 2 hours.
 - d. The Restart Plan must specify a day-light restart and include advance communications with local emergency response officials.
 - e. The Restart Plan must provide for a review of the Isolated Segment for conditions similar to those of the Failure including a review of construction, operating and maintenance (O&M), and integrity management records such as ILI results, hydrostatic tests, root cause failure analysis of prior failures, aerial and ground patrols, corrosion, cathodic protection, excavations, and pipe replacements. TGP must address any findings that require remedial measures to be implemented prior to restart.
 - f. The Restart Plan must also include documentation of the completion of all mandated actions, and a management of change plan to ensure that all procedural modifications are incorporated into TGP's operations and maintenance procedures manual.
4. **Return to Service.** After the Director approves the Restart Plan, TGP may return the Isolated Segment to service but the operating pressure must not exceed eighty percent (80%) of the actual operating pressure in effect immediately prior to the Failure on July 7, 2026, in accordance with Item 2 above.
5. **Removal of Pressure Restriction.** The Director may allow the removal or modification of the pressure restriction upon a written request from TGP demonstrating that restoring the pipeline to its pre-failure operating pressure is justified based on a reliable engineering analysis showing that the pressure increase is safe considering all known defects, anomalies, and operating parameters of the pipeline.
6. **Temporary Modification of Pressure Restrictions.** The Director may allow the temporary removal or modification of the pressure restrictions upon a written request from TGP demonstrating that temporary mitigative and preventive measures are implemented prior to and during the temporary removal or modification of the pressure restriction. The Director's determination will be based on the Failure cause and provision of evidence that preventative and mitigative actions taken by the operator provide for the safe operation of the Affected Segment during the temporary removal or modification of the pressure restriction. Appeals to determinations of the Director in this regard will be decided by the Associate Administrator for Pipeline Safety.

7. **Mechanical and Metallurgical Testing.** Within 45 days of receipt of this Order, TGP must complete mechanical and metallurgical testing and failure analysis of the failed pipe, including an analysis of soil samples and any foreign materials. TGP must submit the completed final report of this testing and analysis to the Director for review and approval. TGP must ensure that all reports, whether draft or final, are made available in their entirety to the Director at the same time they are made available to TGP. Soil analysis and mechanical and metallurgical testing must be conducted by an independent third-party approved by the Director prior to commencing testing and must document the decision-making process and all factors contributing to the failure. Respondent must complete the testing and analysis as follows:
 - a. Document the chain-of-custody when handling and transporting the failed pipe section and other evidence from the Failure site.
 - b. Within 10 days of receipt of this Order, develop and submit the testing protocol and the proposed testing laboratory to the Director for prior approval.
 - c. Prior to beginning the soil analysis and mechanical and metallurgical testing, provide the Director with the scheduled date, time, and location of the testing to allow for an OPS representative to witness the testing.
 - d. Ensure the testing laboratory distributes all reports whether draft or final in their entirety to the Director at the same time they are made available to TGP.
8. **Root Cause Failure Analysis.** Within 90 days following receipt of this Order, TGP must complete a root cause failure analysis (RCFA) and submit a final report of this RCFA to the Director for review and approval. No later than 30 days following receipt of this Order, TGP must provide the scope and protocol of the RCFA to the Director for review and approval. The RCFA must be conducted by an independent third-party approved by the Director prior to commencing the analysis, and must document the decision-making process and all factors contributing to the Failure. TGP must direct the third-party to engage in once-a-week calls with PHMSA to provide updates as to the progress of the RCFA. These calls shall be done virtually and continue until the RCFA has been submitted to the Director. TGP must ensure that all reports, whether draft or final, are made available in their entirety to the Director at the same time they are made available to TGP. The final report must include findings, and any lessons learned and whether the findings and any lessons learned are applicable to other locations within TGP's pipeline system.
9. **Remedial Work Plan (RWP).**
 - a. Within 60 days of approval of the RCFA required above, TGP must submit a Remedial Work Plan (RWP) to the Director for approval.
 - b. The Director may approve the RWP incrementally without approving the entire RWP.
 - c. Once approved by the Director, the RWP will be incorporated by reference into this Order.
 - d. The RWP must specify the tests, inspections, assessments, evaluations, and remedial measures TGP will use to verify the integrity of the Affected Segment. It must address all known or suspected factors and causes of the Failure. TGP should

consider both the risk of another failure and the consequence of another failure to develop a prioritized schedule for RWP related work along the Affected Segment.

- e. The RWP must include a procedure or process to:
- i. Identify pipe in the Affected Segment with characteristics similar to the contributing factors identified for the Failure.
 - ii. Gather all data necessary to review the failure history (in service and pressure test failures) of the Affected Segment and to prepare a written report containing all the available information such as the locations, dates, and causes of leaks and failures.
 - iii. Integrate the results of the metallurgical testing, the RCFA, and other corrective actions required by this Order with all relevant pre-existing operational and assessment data for the Affected Segment. Pre-existing operational data includes, but is not limited to, construction, operations, maintenance, testing, repairs, prior metallurgical analyses, and any third-party consultation information. Pre-existing assessment data includes, but is not limited to, ILI tool runs, hydrostatic pressure testing, direct assessments, close interval surveys, and DCVG/ACVG surveys.
 - iv. Determine if conditions similar to those contributing to the Failure are likely to exist elsewhere on the Affected Segment. Conduct additional field tests, inspections, assessments, and/or evaluations to determine whether, and to what extent, the conditions associated with the Failure and other failures from the failure history (see (e)(ii) above) or any other integrity threats are present elsewhere on the Affected Segment. At a minimum, this process must consider all failure causes and specify the use of one or more of the following:
 - 1) ILI tools that are technically appropriate for assessing the pipeline system based on the cause of the Failure and that can reliably detect and identify anomalies,
 - 2) Hydrostatic pressure testing,
 - 3) Corrosion control methods including cathodic protection and coating evaluations, close-interval surveys, evaluation of stray current, and stress corrosion cracking and selective seam corrosion surveys, if applicable,
 - 4) Other tests, inspections, assessments, and evaluations appropriate for the Failure causes.

Note: TGP may use the results of previous tests, inspections, assessments, and evaluations if approved by the Director, provided the results of the tests, inspections, assessments, and evaluations are analyzed with regard to the factors known or suspected to have caused the Failure.

- v. Describe the inspection and repair criteria TGP will use to prioritize, excavate, evaluate, and repair anomalies, imperfections, and other identified integrity threats, including those related to processes applied per (e)(iv) above. Include a description of how any defects will be graded and a schedule for repairs or replacement.
 - vi. Based on the known history and condition of the Affected Segment, describe the methods TGP will use to repair, replace, or take other corrective measures to remediate the conditions associated with the Failure and to address other known integrity threats along the Affected Segment. The repair, replacement, or other corrective measures must meet the criteria specified in (9)(e)(v) above.
 - vii. Incorporate findings and lessons learned in response to the Failure in all related programs and procedures to ensure the ongoing safe operation of the Affected Segment considering the results of the analyses, inspections, and evaluations resulting from actions taken in response to this Order.
 - f. Include a proposed schedule for completion of the RWP.
 - g. TGP must revise the RWP as necessary to incorporate new information obtained during the failure investigation and remedial activities, to incorporate the results of actions undertaken pursuant to this Order, and to incorporate modifications required by the Director. TGP must submit any plan revisions to the Director for prior approval. The Director may approve plan revisions incrementally. Any and all revisions to the RWP after it has been approved and incorporated by reference into this Order will be fully described and documented in the CAO Documentation Report (CDR).
 - h. TGP must implement the RWP as it is approved by the Director, including any revisions to the plan.
10. **CAO Documentation Report (CDR).** TGP must create and revise, as necessary, CDR. When TGP has concluded all the items in this Order it will submit the final CDR in its entirety to the Director. This will allow the Director to complete a thorough review of all actions taken by TGP with regards to this Order prior to approving the closure of this Order. The intent is for the CDR to summarize all activities and documentation associated with this Order in one document.
- a. The Director may approve the CDR incrementally without approving the entire CDR.
 - b. Once approved by the Director, the CDR will be incorporated by reference into this Order.
 - c. The CDR must include but not be limited to:
 - i. Table of Contents;
 - ii. Summary of the pipeline Failure, and the response activities;
 - iii. Summary of pipe data and properties and all prior assessments of the Affected Segment;

- iv. Summary of all tests, inspections, assessments, evaluations, and analysis required by the Order;
 - v. Summary of the Mechanical and Metallurgical Testing as required by the Order;
 - vi. Summary of the RCFA with all root causes as required by the Order;
 - vii. Documentation of all actions taken by TGP to implement the RWP, the results of those actions, and the inspection and repair criteria used;
 - viii. Documentation of any revisions to the RWP including those necessary to incorporate the results of actions undertaken pursuant to this Order and whenever necessary to incorporate new information obtained during the failure investigation and remedial activities;
 - ix. Lessons learned while completing this Order;
 - x. A path forward describing specific actions TGP will take on its entire pipeline system as a result of the lessons learned from work on this Order; and
 - xi. Appendices (if required).
11. **Reporting.** TGP must submit quarterly reports to the Director that: (1) include all available data and results of the testing and evaluations required by this Order; and (2) describe the progress of the repairs or other remedial actions being undertaken. The first quarterly report is due on October 6, 2026, covering the period through the date the first quarterly report is submitted. The Director may change the interval for the submission of these reports.
12. **Documentation of the Costs.** It is requested that Respondent maintain documentation of the costs associated with implementation of this CAO. Include in each quarterly report submitted the to-date total costs associated with: (1) preparation and revision of procedures, studies, and analyses; (2) physical changes to pipeline infrastructure, including repairs, replacements, and other modifications; and (3) environmental remediation, if applicable.

Administrative Actions

13. **Approvals.** With respect to each submission under this Order that requires the approval of the Director, the Director may: (a) approve, in whole or part, the submission; (b) approve the submission on specified conditions; (c) modify the submission to cure any deficiencies; (d) disapprove in whole or in part, the submission, directing that Respondent modify the submission, or (e) any combination of the above. In the event of approval, approval upon conditions, or modification by the Director, Respondent shall proceed to take all action required by the submission as approved or modified by the Director. If the Director disapproves all or any portion of the submission, Respondent must correct all deficiencies within the time specified by the Director and resubmit it for approval.
14. **Extensions of Time.** The Director may grant an extension of time for compliance with any of the terms of this Order upon a written request timely submitted demonstrating good cause for an extension.

Be advised that all material submitted in response to this enforcement action is subject to being made publicly available. If you believe that any portion of your responsive material qualifies for confidential treatment under 5 U.S.C. § 552(b), along with the complete original document you must provide a second copy of the document with the portions you believe qualify for confidential treatment redacted and an explanation of why you believe the redacted information qualifies for confidential treatment under 5 U.S.C. § 552(b).

In your correspondence on this matter, please refer to **“CPF No. 2-2026-011-CAO”** and for each document you submit, please provide a copy in electronic format whenever possible. The actions required by this Order are in addition to and do not waive any requirements that apply to Respondent’s pipeline system under 49 CFR Parts 190 through 199, under any other order issued to Respondent under authority of 49 U.S.C. Chapter 601, or under any other provision of federal or state law.

Respondent may appeal any decision of the Director to the Associate Administrator for Pipeline Safety. Decisions of the Associate Administrator shall be final.

Failure to comply with this Order may result in the assessment of civil penalties and in referral to the Attorney General for appropriate relief in United States District Court pursuant to 49 U.S.C. § 60120.

The terms and conditions of this Order are effective upon service in accordance with 49 CFR § 190.5.

KEITH J
COYLE

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J COYLE
Date: 2026.07.09
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Keith Coyle
Chief Counsel

Pipeline and Hazardous Materials Safety
Administration

July 9, 2026

Date Issued