



U.S. Department
of Transportation
**Pipeline and Hazardous
Materials Safety
Administration**

1200 New Jersey Avenue, SE
Washington, DC 20590

January 31, 2026

VIA EMAIL TO: david_brast@tcenergy.com

David Brast
President, US Natural Gas Pipelines
TC Energy
700 Louisiana Street
Houston, Texas 77002

CPF 1-2026-031-CAO

Dear Mr. Brast:

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 ANR Pipeline Co. (ANR or Respondent) to take certain corrective actions with respect to the pipeline failure that occurred on January 27, 2026, on the Loop Line 1-501 near Columbus, Indiana.

Service of the CAO by electronic transmission is deemed complete upon transmission and acknowledgment of receipt, or as otherwise provided under 49 CFR § 190.5. The terms and conditions of this Order are effective upon completion of service.

Sincerely,

LINDA GAIL
DAUGHERTY
Linda Daugherty
Acting Associate Administrator
for Pipeline Safety

Digitally signed by LINDA
GAIL DAUGHERTY
Date: 2026.01.31
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Enclosure: CAO

cc: Robert Burrough, Director, Eastern Region, Office of Pipeline Safety, PHMSA
Amy Willis, Director, Pipeline Safety Compliance, US Natural Gas, TC Energy,
amy_willis@tcenergy.com

CONFIRMATION OF RECEIPT REQUESTED

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

In the Matter of	)	
	)	
ANR Pipeline Co., a subsidiary of TC Energy,	)	CPF No. 1-2026-031-CAO
	)	
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 ANR Pipeline Co. (ANR or Respondent), a subsidiary of TC Energy,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 Loop Line 1-501. Part of the ANR Pipeline System, the Loop Line 1-501 is a 30-inch diameter interstate natural gas transmission pipeline that begins near Eunice, Louisiana, and ends near Ann Arbor, Michigan. The ANR Pipeline System consists of approximately 9,250 miles of natural gas transmission pipelines that transports natural gas from Texas, Oklahoma and Louisiana to Wisconsin, Michigan, Illinois and Ohio, with two segments converging near Chicago.²

On January 27, 2026, at approximately 6:29 PM CST, the Loop Line 1-501 pipeline ruptured at milepost (MP) 715.36 near Columbus, Indiana (the Failure) likely due to stress corrosion cracking. The Failure resulted in the release of more than 3,000 MCF of natural gas and the evacuation of 10 residential homes. There were no reported injuries or fatalities, there was no ignition of the escaping gas.

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 TC Energy operates 58,222 miles of natural gas pipelines and has more than 653 billion cubic feet (Bcf) of natural gas storage in Canada, the U.S. and Mexico. TC Energy, About, <https://www.tcenergy.com/about/> (last visited Jan. 31, 2026).

² TC, Energy, ANR Pipeline, <https://www.tcenergy.com/operations/natural-gas/anr-pipeline/#facts> (last visited Jan. 31, 2026).

Preliminary Findings

- ANR owns and operates Loop Line 1-501, an interstate gas transmission pipeline that begins near Eunice, Louisiana, and ends near Ann Arbor, Michigan and is part of the ANR Pipeline System.
- Loop Line 1-501 was constructed in 1965 by U.S. Steel and consists of X-60 grade steel and has 0.298-inch wall thickness with a maximum allowable operating pressure (MAOP) of 858 pounds per square inch (psi).
- Loop Line 1-501 runs parallel to Mainline 501, a 30-inch interstate gas transmission pipeline.
- On January 27, 2026, at 6:29 PM CST, the Loop Line 1-501 pipeline ruptured at milepost (MP) 715.36 near Columbus, Indiana while operating at 782 psi.
- ANR's control center did not observe a noticeable pressure drop throughout the Failure.
- The Failure occurred in a Class 2 location.
- At least 10 homes were evacuated by the fire department within a half-mile radius of the Failure. There were no reported injuries or fatalities, and there was no ignition of the escaping gas.
- ANR notified the National Response Center (NRC) of the failure on January 27, 2026, at approximately 7:51 PM CST (NRC Incident Report #1453552).
- PHMSA launched an investigation, with investigators arriving on January 28, 2026.
- On January 30, 2026, PHMSA preliminarily determined that the source of the Failure was a circumferential crack oriented from the 5 to 8 o'clock position. The crack is approximately 3 feet long and $\frac{3}{4}$ inches wide and located about 2 inches from a girth weld.
- The crack characteristics are consistent with circumferential stress corrosion cracking.

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 pipelines; the nature of the failure; the hazardous nature of the material transported; the existing and potential additional impacts to life, property, or the environment; and the likelihood that stress corrosion cracking may be present elsewhere on the pipelines, it is hereby determined that continued operation of the *Affected Segments* of the Loop Line 1-501 and Mainline 501 pipelines, 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 Eastern 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.

Required Corrective Actions

Definitions:

Affected Segments – The “Affected Segments” means Loop Line 1-501 and Mainline 501 from the Shelbyville compressor station (approximately MP 738) to the Celestine compressor station (approximately MP 648).

The Failure – The “Failure” means the January 27, 2026 rupture near MP 715.36 on Loop Line 1-501.

Isolated Segment – The “Isolated Segment” means the 18.8-mile segment of Loop Line 1-501 line from main line valve (MLV) 501-55-1 to MLV 501-56-1.

Director – The “Director” means the Director, Eastern Region, OPS, PHMSA. The Director’s address is 840 Bear Tavern Road, Suite 300 West Trenton, NJ 08628.

1. ***Operating Pressure Restriction.*** ANR must reduce and maintain a twenty percent (20%) pressure reduction in the actual operating pressure along the entire length of the Affected Segments, such that the operating pressure along the Affected Segments will not exceed eighty percent (80%) of the actual operating pressure in effect immediately prior to the failure on January 27, 2026.
 - a. This pressure restriction must 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 10 days of issuance of the Order, ANR must provide the Director the actual operating pressures of each compressor station and each main line pressure regulating station on the Affected Segments 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, ANR must take into account any in-line inspection (ILI) features or anomalies present in the Affected Segments to provide for continued safe operation while further corrective actions are completed.
 - e. ANR must review the pressure restriction monthly by analyzing the operating pressure data. ANR must take into account any ILI features or anomalies present in the Affected Segments and immediately reduce the operating pressure to maintain the safe operations of the Affected Segments, if warranted by the monthly review. ANR 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.
 - f. ANR may request approval from the Director to increase the operating pressure on individual segments on the Affected Pipeline based on an engineering analysis or other justification that the segment does not pose a safety risk.
2. ***Restart Plan.*** Prior to resuming operation of the Isolated Segment, ANR must develop and submit a written Restart Plan to the Director for prior approval.
 - a. The Restart Plan must include a Repair Plan for the Director’s approval.
 - b. The Director may approve the Restart Plan incrementally, including the Repair Plan, without approving the entire plan.
 - c. Once approved by the Director, the Restart Plan will be incorporated by reference into this Order.

- d. The Restart Plan must provide for adequate patrolling and sufficient surveillance of the Isolated Segment during the restart process to ensure that no leaks are present when operation of the line resumes.
 - e. The Restart Plan must specify a day-light restart and include advance communications with local emergency response officials.
- 3. ***Return to Service.*** After the Director approves the Restart Plan, ANR may return the Isolated Segment to service according to the terms of the Restart Plan, but the operating pressure must not exceed the limit in accordance with Item 1 above.
- 4. ***Removal of Pressure Restriction.***
 - a. The Director may allow the removal or modification of the pressure restriction upon a written request from ANR 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.
 - b. The Director may allow the temporary removal or modification of the pressure restrictions upon a written request from ANR 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 available information, including the failure cause and provision of evidence that preventative and mitigative actions taken by the operator provide for the safe operation of the Affected Segments during the temporary removal or modification of the pressure restriction. Appeals of determinations of the Director in this regard will be decided by the Associate Administrator for Pipeline Safety.
- 5. ***Mechanical and Metallurgical Testing.*** Within 45 days of receipt of this Order, ANR must complete mechanical and metallurgical testing and failure analysis of the failed pipe, including an analysis of soil samples and any foreign materials. 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 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 ANR.
- 6. ***Root Cause Failure Analysis.*** Within 90 days following receipt of this Order, ANR must complete a root cause failure analysis (RCFA) and submit a final report of this RCFA to the Director. The RCFA must be supplemented/facilitated by an independent third-party acceptable to the Director and must document the decision-making process and all factors contributing to the failure. The final report must include findings, and any lessons learned and whether the findings and any lessons learned are applicable to other locations within

ANR's pipeline system. The independent third-party must distribute all RCFA reports (whether draft or final) in their entirety to the Director at the same time they are made available to ANR.

7. ***Remedial Work Plan (RWP).***

- a. Within 120 days following receipt of this Order, ANR 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 ANR will use to verify the integrity of the Affected Segments. It must address all known or suspected factors and causes of the January 27, 2026 failure. ANR must 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 Segments.
- e. The RWP must include a procedure or process to:
 - i. Identify pipe in the Affected Segments with characteristics similar to the contributing factors identified for the January 27, 2026 failure.
 - ii. Gather all data necessary to review the failure history (in service and pressure test failures) of the Affected Segments 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, RCFA, and other corrective actions required by this Order with all relevant pre-existing operational and assessment data for the Affected Segments. 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 on January 27, 2026, are likely to exist elsewhere on the Affected Segments.
 - v. Conduct additional field tests, inspections, assessments, and/or evaluations to determine whether, and to what extent, the conditions associated with the failure on January 27, 2026, and other failures from the failure history (see (e)(ii) above) or any other integrity threats are present elsewhere on the Affected Segments. 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 failure on January 27, 2026, and that can reliably detect and identify anomalies,
 - 2) Hydrostatic pressure testing,
 - 3) Close-interval surveys,

- 4) Cathodic protection surveys, to include interference surveys in coordination with other utilities (e.g., underground utilities, overhead power lines, etc.) in the area,
- 5) Coating surveys,
- 6) Stress corrosion cracking surveys,
- 7) Selective seam corrosion surveys; and,
- 8) Other tests, inspections, assessments, and evaluations appropriate for the failure causes.

Note: ANR 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 January 27, 2026 failure.

- vi. Describe the inspection and repair criteria ANR will use to prioritize, excavate, evaluate, and repair anomalies, imperfections, and other identified integrity threats. Include a description of how any defects will be graded and a schedule for repairs or replacement.
 - vii. Describe the methods ANR will use to repair, replace, or take other corrective measures to remediate the conditions associated with the pipeline failure on January 27, 2026, and to address other known integrity threats along the Affected Segments. The repair, replacement, or other corrective measures must meet the criteria specified in 7(e)(vi) above.
 - viii. Implement continuing long-term periodic testing and integrity verification measures to ensure the ongoing safe operation of the Affected Segments considering the results of the analyses, inspections, evaluations, and corrective measures undertaken pursuant to the Order.
- f. Include a proposed schedule for completion of the RWP.
 - g. ANR 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/or to incorporate modifications required by the Director.
 - i. Submit any plan revisions to the Director for prior approval.
 - ii. The Director may approve plan revisions incrementally.
 - iii. 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.
 - h. Implement the RWP as it is approved by the Director, including any revisions to the plan.
8. **CAO Documentation Report.** ANR must create and revise, as necessary, a CAO Documentation Report (CDR). When ANR 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 ANR 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 of January 27, 2026, and the response activities;
 - iii. Summary of pipe data/properties and all prior assessments of the Affected Segments;
 - 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 ANR 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 ANR will take on its entire pipeline system as a result of the lessons learned from work on this Order; and
 - xi. Appendices (if required).

Other Requirements:

- 9. ***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.

10. ***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.
11. ***Reporting.*** 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 April 30, 2026, covering the period through March 31, 2026. 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.

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. 1-2026-031-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.

**LINDA GAIL
DAUGHERTY**

Linda Daugherty
Acting Associate Administrator
for Pipeline Safety

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DAUGHERTY
Date: 2026.01.31 16:26:22 -05'00'

Date Issued