



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

1200 New Jersey Avenue, SE
Washington, DC 20590

July 23, 2021

VIA ELECTRONIC MAIL TO: kenneth_grubb@kindermorgan.com

Kenneth W. Grubb
Chief Operating Officer of Gas
PipelinesKinder Morgan, Inc.
1001 Louisiana Street, Suite 1000
Houston, Texas 77002

CPF No. 2-2021-010-CAO

Dear Mr. Grubb:

Enclosed please find the Amended Corrective Action Order (ACAO or Order) issued by the Pipeline and Hazardous Materials Safety Administration (PHMSA), Office of Pipeline Safety (OPS), in the above-referenced case. It requires Tennessee Gas Pipeline Company, LLC, (TGP or Respondent), operated by Kinder Morgan, Inc., to take certain corrective actions with respect to a rupture that occurred on the 24-inch Tennessee Gas Pipeline located in West Bloomfield, New York.

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

Sincerely,

ALAN KRAMER
MAYBERRY

Digitally signed by ALAN
KRAMER MAYBERRY
Date: 2021.07.23
13:43:17 -04'00'

Alan K. Mayberry
Associate Administrator
for Pipeline Safety

Enclosure: ACAO

cc: Ms. Linda Daugherty, Deputy Associate Administrator for Field Operations, OPS
Mr. James Urisko, Director, Southern Region, OPS
Mr. Jaime Hernandez, Director—Engineering, Compliance/Codes & Standards,
Kinder Morgan, jaime_hernandez@kindermorgan.com

CONFIRMATION OF RECEIPT REQUESTED

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

In the Matter of

Tennessee Gas Pipeline Company, LLC,

Petitioner.

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CPF No. 2-2021-010-CAO

AMENDED CORRECTIVE ACTION ORDER

Purpose and Background

This Amended Corrective Action Order (ACAO or Order) is being issued under the authority of 49 U.S.C. § 60112 to require Tennessee Gas Pipeline Company, LLC, (TGP or Respondent), operated by Kinder Morgan, Inc.,¹ to take the necessary corrective actions to protect the public, property, and the environment from potential hazards associated with the June 26, 2021 rupture of its 24-inch natural gas pipeline located in West Bloomfield, New York.

At approximately 7:25 pm EDT on June 26, 2021, TGP's 24-inch Tennessee Gas Pipeline² ruptured and reportedly released approximately 11,000 MCF of natural gas (Incident). The Ontario County Sheriff's Department notified Kinder Morgan's control room in Houston, Texas of the event. Prior to the rupture, the line was operating at 659 psig. Kinder Morgan dispatched personnel to the site, who, at approximately 9:45 pm EDT, identified the rupture location near West Bloomfield, New York, southeast of Lima, New York. Kinder Morgan discovered a 12-foot long section of pipeline ejected and laying in a crater. Kinder Morgan personnel also reported that the termini of the remaining buried pipeline were exposed, one of which was deflected 45-degrees upward from the force of the rupture. Kinder Morgan confirmed the upstream and downstream valves had closed automatically. There were no reports of fires, injuries, fatalities, or evacuations.

Pursuant to 49 U.S.C. §§ 60117 and 60106, PHMSA, Office of Pipeline Safety (OPS) and the New York State Department of Public Service (NY DPS), initiated an investigation of the Incident and, on July 9, 2021, issued a Corrective Action Order (CAO). The ACAO amends the preliminary

¹ The Tennessee Gas Pipeline is an approximately 11,750-mile pipeline system that transports natural gas from Louisiana, the Gulf of Mexico and South Texas to the Northeast section of the United States, including New York City and Boston. TGP is owned and operated by Kinder Morgan, Inc. *See* <https://www.kindermorgan.com/Operations/Natural-Gas/Index> (last accessed July 1, 2021).

² The rupture occurred on the Line 200-1 segment of the Tennessee Gas Pipeline.

findings, one corrective action and the scope of the corrective actions prescribed in the CAO. The preliminary findings of the agencies' ongoing investigation are as follows:

Amended Preliminary Findings

- At approximately 7:25 pm EDT on June 26, 2021, TGP's Tennessee Gas Pipeline ruptured.³ The Ontario County Sheriff's Department notified Kinder Morgan's control room in Houston, Texas of the event. Kinder Morgan dispatched personnel to the site who discovered the rupture location near West Bloomfield, New York, southeast of Lima, New York. Per Kinder Morgan, the rupture location was 9.6322 miles downstream from Mainline Valve (MLV) 234-1 on TGP's Line 200-1. Kinder Morgan confirmed that the bounding upstream and downstream MLVs (234-1 and 235-1, respectively) closed automatically.
- Kinder Morgan initially reported the Incident to the National Response Center (NRC) at 10:23 pm EDT on June 26, 2021 (NRC Report No. 1308933), indicating there was a release of approximately 11,000 MCF of natural gas from a transmission line. Kinder Morgan submitted a second NRC report on June 28, 2021 (NRC Report No. 1309098), updating the coordinates for the location of the incident.
- The natural gas was released to the atmosphere with no fires, injuries, fatalities or evacuations associated with this incident. Kinder Morgan discovered a 12-foot long section of pipeline ejected and laying in a crater. Kinder Morgan personnel also reported that the termini of the remaining buried pipeline were exposed, one of which was deflected 45-degrees upward from the force of the rupture.
- Prior to the rupture, Line 200-1 was operating at 659 psig. The maximum allowable operating pressure (MAOP) of the Line is 760 psig.
- Line 200-1 was shut in soon after 7:25 pm EDT, when MLV 234-1 and MLV 235-1 closed automatically. Kinder Morgan reported approximately 12 miles of pipeline remains shutdown and isolated.
- TGP delineates its Line 200-1 in to two sections – the South Section and the North Section. The South Section of Line 200-1 is 382.63 miles long. It starts in Greenup County, Kentucky and ends in Erie County, New York. The North Section of Line 200-1, the failed segment, is 419.75 miles long. It starts in Erie County, New York and ends in Middlesex County, Massachusetts. The entire Line 200-1 is 802.38 miles long.
- The failed portion of the pipeline was constructed in 1951 with a 24-inch nominal diameter, 0.281-inch wall thickness, X-52 grade pipe that was manufactured by A.O. Smith. The pipe has an electric flash welded (EFW) longitudinal seam and has a coal tar coating. Kinder

³ The exact time of failure is unknown by TGP.

Morgan reported that approximately 401.36 miles of Line 200-1 is of similar vintage and manufacture.⁴

- Kinder Morgan operates TGP Line 200-2, a 30-inch natural gas pipeline that is located approximately 20 feet parallel to Line 200-1. Kinder Morgan crews did not identify any leaks on the parallel line during a leak survey conducted on June 30, 2021.
- The Incident occurred in a Class 1 location, non-high consequence area. Kinder Morgan reported that Line 200-1 pipeline has 564.49 miles in Class 1 locations, 173.34 miles in Class 2 locations, 64.04 miles in Class 3 locations, 0.51 miles in Class 4 locations, and 13.51 miles in tribal lands.
- Kinder Morgan performed an in-line inspection tool run of this pipeline in 2020 to detect hard spots. Kinder Morgan reported there were no indications of hard spots along this section of pipeline.
- Kinder Morgan initially reported to PHMSA that it believes the failure occurred due to a wrinkle bend in the line, but later reported the failure may have been due to a buckle. A Kinder Morgan metallurgist at the scene reported discovering three wrinkles or buckles in the failed pipeline. PHMSA's interstate agent (NY DPS) reported a wrinkle or buckle in the ejected pipe. PHMSA has not yet confirmed whether wrinkles or buckles were present at the location of the Incident. Kinder Morgan also reported at least one wrinkle bend potentially exists in the same line approximately 50 feet away from the site of the Incident.
- Kinder Morgan records indicate that TGP Line 200-1 crosses a steel water line immediately west of the failure location, near Rochester Water Authority Road. Preliminary information is that this water line was recently replaced, although the exact date of replacement is unknown at this time.
- Kinder Morgan reported the Incident occurred in the vicinity of an overbend in the pipeline at a 50-foot downhill slope.
- Kinder Morgan has attributed other failures on its TGP System to wrinkle bends, including a failure on its Line 100-2 in 2010.⁵
- PHMSA has issued Advisory Bulletins on the safety risks of electric resistance welded (ERW) and EFW pipe manufactured prior to 1970. It also issued Alert Notice, ALN-88-01, in January 1988, advising owners and operators of natural gas and hazardous liquids pipelines to consider the threat from ERW pipe manufactured prior to 1970.

⁴ Kinder Morgan reported that the entire Line 200-1 pipeline is 802.38 miles long.

⁵ See In the Matter of Tennessee Gas Pipeline Company, CPF No. 4-2010-1007H, 2010 WL 5761102 (Dec. 2, 2010).

- Concerns exist among the pipeline industry about the effects of wrinkle bends on the long-term integrity of pipelines as well as the known threat of unintended buckling.

On July 14, 2021, Kinder Morgan submitted technical data on Line 200-1, which included prior inspection reports and updated ILI analyses. Kinder Morgan reported to PHMSA that it believes the failure was caused by a buckle in the line. Kinder Morgan informed PHMSA that geotechnical and soil analyses are ongoing to determine whether there has been any land movement or soil subsidence in the area of the failure location. Kinder Morgan also presented data regarding the potential impact a 20 percent pressure reduction on the Affected Pipeline, as defined in the CAO, would have on its system and consumer supply. Based upon a review of this data, the preliminary indications of the failure cause, and the operating conditions, PHMSA is limiting the scope of ACAO by amending the definition of the Affected Pipeline to include approximately 75 miles of the TGP's Line 200-1 pipeline rather than the entire 800 miles of Line 200-1. The ACAO also amends the corrective actions Kinder Morgan will be required to perform. 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 issue an order without prior notice to 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 without notice 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 are 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 hazardous liquid pipeline 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) other factors PHMSA may consider appropriate.

After evaluating the foregoing preliminary findings of fact, and having considered the age of the pipeline, the known issues with the manufacturer of the pipeline, the material properties of pipeline, the significant length of the pipeline of this same vintage and manufacture, the

hazardous nature of the product transported, the proximity of the pipeline to populated areas, the pressure required for transporting the material, the uncertainty as to the cause of the failure, and the possibility that the same condition(s) that may have caused the failure remain present in the pipeline, I find that continued operation of the pipeline without corrective measures is or would be hazardous to life, property, or the environment, and that failure to issue this Order without notice would result in the likelihood of serious harm.

Accordingly, this Amended Corrective Action Order mandating immediate corrective action is issued without prior notice and opportunity for a hearing. The terms and conditions of this Order are effective upon receipt.

Within 10 days of receipt of this Amended 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, Southern Region, PHMSA (Director). If a hearing is requested, it will be held in accordance with 49 C.F.R. § 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 amending this 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 Pipeline – The “*Affected Pipeline*” means the segment of TGP’s Line 200-1 between Compressor Stations 230 and 237. This segment of Line 200-1 starts in Erie County, NY (MLV 230; Map Station 0+00) and ends in Ontario County, NY (MLV 236, Map Station 474+49). This segment of TGP’s Line 200-1 is 74.47 miles long.

Isolated Segment – The “*Isolated Segment*” means the approximately 12-mile segment of Kinder Morgan’s 24-inch TGP Line 200-1 from MLV 234-1 to MLV 235-1. It is the portion of the “*Affected Pipeline*” that was shut-in with the above-referenced upstream and downstream valves.

Pursuant to 49 U.S.C. § 60112, I hereby order TGP to immediately take the following corrective actions:

1. ***Shutdown of the Isolated Segment.*** The *Isolated Segment* must remain shut in and may not be operated until authorized to be restarted by the Director in accordance with the terms of this order.

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 Pipeline* such that upon restart the operating pressure along the *Affected Pipeline* will not exceed eighty percent (80%) of the actual operating pressure in effect at the failure location immediately prior to the failure on June 26, 2021.
 - 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 the ACAO, TGP must provide the Director the actual operating pressures of each compressor station and each main line pressure regulating station on the *Affected Pipeline* 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 Pipeline* 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, taking into account any ILI features or anomalies present in the *Affected Pipeline*. TGP must immediately reduce the operating pressure further to maintain the safe operations of the *Affected Pipeline*, if warranted by the monthly review. Further, TGP must submit the results of the monthly review to the Director including, at a minimum, the current discharge set-points (including any additional pressure reductions), and any pressure exceedance at discharge set-points. Submittals may be made quarterly, in accordance with Item 15 below.
3. ***Restart Plan.*** Prior to resuming operation of the *Isolated Segment*, 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 include sufficient surveillance of the pipeline during each pressure increment 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 and adjacent landowners.
 - f. 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.
 - g. 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 O&M procedures manual.
4. ***Return to Service.*** After the Director approves the *Restart Plan*, TGP 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 2 above.
5. ***Removal of Pressure Restriction.***
- a. 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.
 - b. 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 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 Pipeline 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.
6. ***Instrumented Leakage Survey.*** Within 30 days of receipt of the ACAO, TGP must perform an aerial or ground instrumented leakage survey of the *Affected Pipeline*. TGP must investigate all leak indications and remedy all leaks discovered. TGP must submit documentation of this survey to the Director within 45 days of receipt of the ACAO.
7. ***Records Verification.*** TGP must verify the records for the *Affected Pipeline* that were used to establish the MAOP in accordance with § 192.619, including any adjustments

needed for the current class locations per §§ 192.609 and 192.611. TGP must submit documentation of this this record verification to the Director within 45 days of receipt of the ACAO.

8. ***Review of Prior Inline Inspection (ILI) Results.***

- a. Within 30 days of receipt of the ACAO, TGP must conduct a review of any previous ILI results of the Affected Pipeline. In its review, TGP must re-evaluate all ILI results from the past five calendar years, including a review of the ILI vendors' raw data and analysis. TGP must determine whether any features were present in the failed pipe joints from the June 26, 2021 failure. Also, TGP must determine if any features with similar characteristics are present elsewhere on the Affected Pipeline. TGP must submit documentation of this ILI review to the Director within 45 days of receipt of the ACAO, as follows:
 - i. List all ILI tool runs, tool types, and the calendar years of the tool runs.
 - ii. List, describe (type, size, wall loss, etc.), and identify the specific location of all ILI features present in the failed joint and other pipe removed.
 - iii. List, describe (type, size, wall loss, etc.), and identify the specific location of all ILI features with similar characteristics present elsewhere on the *Affected Pipeline*.
 - iv. Explain the process used to review the ILI results and the results of the reevaluation.
- b. Within 180 days of receipt of the ACAO, TGP must conduct a review of any previous ILI results for the entirety of TGP Line 200-1. TGP must determine if any features with similar characteristics to the June 26, 2021 failure are present elsewhere on Line 200-1. Line 200-1 starts in Greenup County, Kentucky (Station 200-1, Mile Post (MP) 0+00) and ends in Middlesex County, Massachusetts (Station 270-1, MP 46+05). TGP must make the results of this review available for PHMSA's review upon request.

9. ***Mechanical and Metallurgical Testing.*** Within 45 days of receipt of the July 9, 2021 CAO, TGP must complete mechanical and metallurgical testing and failure analysis of the failed pipe, including an analysis of soil samples and any foreign materials. Mechanical and metallurgical testing must be conducted by an independent third-party acceptable to the Director, and must document the decision-making process and all factors contributing to the failure. TGP 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 the July 9, 2021 CAO, 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 TGP.
10. ***Root Cause Failure Analysis.*** Within 90 days following receipt of the ACAO, complete a root cause failure analysis (RCFA) and submit a final report of this RCFA to the Director. The RCFA must be supplemented or 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 lessons learned are applicable to other locations within TGP's pipeline system.
11. ***Remedial Work Plan (RWP).***
- a. Within 90 days following receipt of the ACAO, 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 Pipeline*. It must address all known or suspected factors and causes of the June 26, 2021 failure. TGP must consider the risks and consequences of another failure to develop a prioritized schedule for RWP-related work along the *Affected Pipeline*.
 - e. The RWP must include a procedure or process to:
 - i. Identify pipe in the *Affected Pipeline* with characteristics similar to the contributing factors identified for the June 26, 2021 failure, including the age and manufacture of the entire length of the *Affected Pipeline*.
 - ii. Gather all data necessary to review the failure history (in service and pressure test failures) of the *Affected Pipeline* 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, root cause failure analysis, and other corrective actions required by this Order with all relevant pre-existing operational and assessment data for the *Affected Pipeline*. Pre-existing operational data includes, but is not limited to, design, 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 June 26,

2021 are likely to exist elsewhere on the *Affected Pipeline*.

- v. Conduct additional field tests, inspections, assessments, and evaluations to determine whether, and to what extent, the conditions associated with the failure on June 26, 2021 and other failures from the failure history (see (e)(ii) above) or any other integrity threats are present elsewhere on the *Affected Pipeline*. 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 June 26, 2021, 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: 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 June 26, 2021 failure.
- vi. Describe the inspection and repair criteria TGP 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. Based on the known history and condition of the *Affected Pipeline*, describe the methods TGP will use to repair, replace, or take other corrective measures to remediate the conditions associated with the pipeline failure on June 26, 2021 and to address other known integrity threats along the *Affected Pipeline*. The repair, replacement, or other corrective measures must meet the criteria specified in (e)(vi) above.
- viii. Implement continuing long-term periodic testing and integrity verification measures to ensure the ongoing safe operation of the *Affected Pipeline* 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. 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.

- i. Submit any plan revisions to the Director for prior approval.
- ii. The Director may approve plan revisions incrementally.
- iii. 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.

12. ***CAO Documentation Report (CDR)***. TGP must create and revise, as necessary, a CAO Documentation Report (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 is not necessarily limited to, the following:

- i. Table of Contents;
- ii. Summary of the pipeline failure of June 26, 2021 and the response activities;
- iii. Summary of pipe data, material properties and all prior assessments of the *Affected Pipeline*;
- 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).

Other Requirements:

13. **Approvals.** With respect to each submission that under this Order 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.
15. **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 September 30, 2021. The Director may change the interval for the submission of these reports.
16. **Documentation of the Costs.** It is requested that Respondent maintain documentation of the costs associated with implementation of this Corrective Action Order. Include in each monthly 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 you submit 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. 2-2021-010-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 C.F.R. 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 C.F.R. § 190.5.

ALAN KRAMER MAYBERRY

Digitally signed by ALAN
KRAMER MAYBERRY
Date: 2021.07.23
13:42:53 -04'00'

Alan K. Mayberry
Associate Administrator
for Pipeline Safety

July 23, 2021

Date Issued