VIA E-MAIL TO: tdeal@csu.org

October 21, 2024

Travas Deal
President/CEO
Colorado Springs Utilities
PO BOX 1103
Colorado Springs, CO 80947

CPF 5-2024-034-NOPSO

Dear Mr. Deal:

Enclosed is a Notice of Proposed Safety Order (Notice) issued in the above-referenced case. The Notice proposes that you take certain measures with respect to your natural gas distribution system in Colorado Springs, Colorado[1] to ensure pipeline safety. Your options for responding are set forth in the Notice. Your receipt of the Notice constitutes service of that document under 49 C.F.R. § 190.5.

We look forward to a successful resolution to ensure pipeline safety. Please direct any questions on this matter to me at 720-963-3160.

Sincerely,

Dustin Hubbard
Director, Western Region, Office of Pipeline Safety
Pipeline and Hazardous Materials Safety Administration

Enclosure: Notice of Proposed Safety Order

[1] The OPID for this asset is: 2568 (City of Colorado Springs).

DEPARTMENT OF TRANSPORTATION
PIPELINE AND HAZARDOUS MATERIALS SAFETY ADMINISTRATION
OFFICE OF PIPELINE SAFETY
WESTERN REGION
LAKEWOOD, CO 80228

In the Matter of	)	
City of Colorado Springs, Colorado,	)	**CPF No. 5-2024-034-NOPSO**
Respondent	)	

NOTICE OF PROPOSED SAFETY ORDER

Background and Purpose

Pursuant to Chapter 601 of title 49, United States Code (U.S.C.), the Colorado Public Utilities Commission (COPUC) and the Pipeline and Hazardous Materials Safety Administration (PHMSA) have initiated an on-site inspection and information review of the safety of Colorado Spring Utility's (CSU) natural gas distribution system and Distribution Integrity Management Program (DIMP) in Colorado Springs, Colorado.

As a result of the inspection, it appears that conditions exist on your pipeline facilities that pose a pipeline integrity risk to public safety, property, or the environment. Pursuant to 49 U.S.C. § 60117(l), PHMSA issues this Notice of Proposed Safety Order, notifying you of the preliminary findings of the investigation, and proposing that you take measures to ensure that the public, property, and the environment are protected from the potential risk.

Preliminary Findings

- The affected pipeline system is located in Colorado Springs, Colorado and is a natural gas distribution system composed of 2,751.70 miles of main lines and 185,677 service lines.[2] This includes 1.87 miles of bare unprotected steel main lines, 0.22 miles of coated unprotected steel main lines, 808.49 miles of coated protected steel main lines, and 1,941.12 miles of plastic main lines. The main lines vary in size, from diameters ranging 2" or less to over 12". The system also includes 8,001 bare unprotected steel service lines, 2,412 coated unprotected steel service lines, 15,616 coated protected steel service lines,

[2] *See,* CSU's 2023 Annual Report, Part B – System Description, 1. General.

155,301 plastic service lines, and 4,347 unknown or "other" service lines.[3] The service lines vary in size, from diameters ranging 1" or less to over 4" thru 8".

- The "affected pipe" includes all bare unprotected steel pipelines within the affected pipeline system including all main lines and all service lines fitting this description.

- Approximately 320.5 miles of CSU's main lines and 5,696 of CSU's service lines were installed before 1970.[4] In addition, 25.9 miles of CSU's main lines and 15,982 of CSU's service lines have an unknown installation date. Corrosion impairs the serviceability or integrity of pipelines, leading to an increased threat of failure.

- On August 16, 2012, CSU implemented its DIMP Plan, Revision 1. This plan included a bare steel replacement program.[5]

- Beginning in August 2017 and continuing through March 2018, COPUC conducted a "Comprehensive Corrosion Audit" of CSU's pipeline corrosion program procedures and records for its gas distribution pipeline system.

- On December 22, 2017, COPUC issued a Request for Information (RFI): Requirements for Corrosion Control, 49 CFR Part 192, Subpart I.[6] In its February 14, 2018, RFI Response, CSU provided requested data for Items 1-3 of the RFI and requested an extension until March 30, 2018, for Item 4 of the RFI related to the requirements of 49 C.F.R. § 192.465(e).[7]

- In its March 30, 2018, RFI Response, CSU committed to a "systematic approach to enhance (its) Corrosion Control Program and to identify areas of Active Corrosion[8] on non-cathodically protected buried steel pipe", which included retention of outside consultant expertise to make appropriate changes to its Corrosion Control Program by March 2020.[9]

- On April 18, 2018, COPUC issued a Notice of Probable Violation to CSU for violating 49 C.F.R §§ 192.457, 192.463, and 192.465.[10] CSU documented the existence of the affected pipe in its system, however CSU failed to cathodically protect its affected pipe as required by § 192.457(b)(3) and CSU failed to provide records of the initial and 3-year evaluations for active corrosion on these lines as required by §192.465(e).

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[3] "Other" indicates an unidentified pipe of any material not specifically designated on Form PHMSA F 7100.1-1 Annual Report for Calendar Year 2023 Gas Distribution System.
[4] *See*, CSU 2023 Annual Report, Part B – System Description, 4. Miles of Main and Number of Services by Decade of Installation
[5] *See*, CSU's DIMP Revision 1, August 16, 2012, Section 8.2.1 Corrosion
[6] *See*, RFI-060-1347 Letter, December 22, 2017
[7] *See*, CSU's RFI Response, February 14, 2018
[8] *See* § 192.3 Definitions, Active corrosion is defined as continuing corrosion, unless controlled, which could result in a condition detrimental to public safety.
[9] *See*, CSU's RFI Response, March 30, 2018
[10] *See*, COPUC NPV 01-060-2018, April 18, 2018

- On June 28, 2018, CSU and COPUC agreed on an alternate enforcement plan that addressed the compliance issues in lieu of issuing a civil penalty. As part of this plan, CSU hired a third-party consultant to conduct a Strength, Weakness, Opportunity, and Threats (SWOT) analysis of CSU's Pipeline Safety Compliance Program (PSCP) and agreed to purchase Business Intelligence (BI) software to better manage its compliance work.[11]

- From October 17 to 21, 2022, COPUC inspected CSU's distribution pipeline system and DIMP. COPUC found CSU was not in compliance with §§ 192.457(b)(3) and § 192.465(e) for its affected pipe. In 2023, PHMSA assumed responsibility for the enforcement of COPUC investigations.

- On April 12, 2023, CSU agreed to provide status reports to COPUC regarding CSU's Active Corrosion Analysis Program.[12] This improvement project plan was initiated in CSU's March 30, 2018, RFI response, but CSU failed to produce any documents until 2023. The following status reports were provided: The Generation 1 report titled "2020 Records Only Analysis of Bare/Unprotected Steel Main Lines" was submitted on May 31, 2023. The Generation 2 report titled "2023 Records Only Analysis of Bare/Unprotected Steel Service Lines" was submitted on December 31, 2023.

- The 2023 Active Corrosion Analysis report showed CSU had still failed to cathodically protect its affected pipe as required by § 192.457(b)(3), despite finding multiple indications of active corrosion through direct assessment and leak surveys. Cathodic protection testing records show CSU had *never* cathodically protected its affected pipe, resulting in active corrosion and a high number of Grade 1 and Grade 2 leaks.[13] As of December 2023, 85% of approximately 3.47 miles of affected main line pipe was directly assessed and documented three instances of active corrosion. Leak surveys of CSU's affected service line pipe from 2020 through 2022, identified 51 corrosion leaks and one instance of pipe exposure with pitting. Of the 51 active corrosion leaks found, 32 were classified as Grade 1 and 19 as Grade 2, all of which were hazardous to public safety.[14] Many of these service line leaks are located in residential neighborhoods and business districts, including high-occupancy and multi-story buildings.[15] Any leak of natural gas

[11] *See*, CSU's Response to NPV 01-060-2018 Letter, June 15, 2018, and Close-Out Letter, June 28, 2018
[12] *See*, Email Between CSU and COPUC - 3/28 Summary and Steps Forward, April 12, 2023
[13] Grade 1 leak is defined by the GPTC Guide as a leak that represents an existing or probable hazard to persons or property, and requires immediate repair or continuous action until the conditions are no longer hazardous. Grade 2 leak is defined as a leak that is recognized as being non-hazardous at the time of detection, but requires scheduled repair based on probable future hazard. *See*, GPTC Guide for Gas Transmission, Distribution, and Gathering Piping Systems, 2022 Edition, Guide Material Appendix G-192-11, Gas leakage control guidelines for natural gas systems, Section 5.5 Leak grades, Page 778
[14] *See*, 2023 Active Corrosion Analysis, 12/31/2023, Section 5 Active Corrosion Analysis, Attachment B, and Attachment D
[15] *See*, CSU DIMP Revision 4, March 28, 2022, Section 4 Definitions, Business District

from the pipeline may migrate into a home or dwelling. Such breaches are a public safety risk.

- CSU failed to evaluate its affected pipe every 3 years at intervals not exceeding 39 months as required by § 192.465(e). In Revision 1 of CSU's DIMP Plan, dated August 16, 2012, CSU noted the presence of affected pipe, but failed to document the evaluation of these pipelines for active corrosion until May 31, 2023, 10 years and 9 months later. In Revision 4 of CSU's DIMP Plan, dated March 28, 2022, CSU noted failure of its affected pipe would have a high consequence to public safety.[16] Actively corroding affected pipe is detrimental to public safety, property and the environment. Failing to evaluate the affected pipe every 3 years at intervals not exceeding 39 months means the threat of failure is unknown and has not been properly evaluated.

- CSU's natural gas distribution system serves the communities of Colorado Springs, Manitou, Security, Widefield, Falcon, Colorado Centre and Gleneagle.[17] The geographical area features a semi-arid climate with cold winters and warm summers. Temperatures range from around 15°F in winter to 85°F in summer, with an average annual rainfall of about 16". Soil types in the region vary, including sandy loam and clayey soils.

- CSU's natural gas distribution system is divided into 46 pressure districts. Distribution main lines are further divided into two pressure groups: the 150 psig maximum allowable operating pressure (MAOP) distribution system and 76 psig or less MAOP systems. The 150 psig MAOP main line system is fed from the five city gate stations (from North to South: McClintock, North, South, Drennan and Security).[18] Pressure districts are summarized in Appendix A, Section 4 of CSU's DIMP plan.[19]

- According to the U.S. Census Bureau, Colorado Spring's population density was projected to be 2,522 in 2023, based on an average growth rate of 1.66% since 2009.[20] The general boundaries of the service territories are: North Gate Road to the North, Fontaine Boulevard to the South, Curtis Road to the East, and Slightly West of the community of Manitou Springs. In addition, Colorado Springs Utilities delivers natural gas to several local military bases including, the Air Force Academy, Fort Carson Army Post, Cheyenne Air Force Station, and Peterson Air Force Base.[21] The distribution system traverses residential neighborhoods and business districts, including high-occupancy and multi-story buildings.

[16] *See*, CSU DIMP Revision 4, March 28, 2022, Appendix C, Section 1) Program Level Threat Identification Matrix
[17] *See*, CSU DIMP Revision 4, March 28, 2022, Section 1.0 Scope, Purpose, and Objectives
[18] *See*, CSU DIMP Revision 4, March 28, 2022, Section 5.3.2 Current Design
[19] *See*, CSU DIMP Revision 4, March 28, 2022, Appendix A, Table A-4 Pressure Districts Summary
[20] Population Density is computed by dividing the total population by Land Area Per Square Mile.
[21] *See*, CSU DIMP Revision 4, March 28, 2022, Section 1.0 Scope, Purpose, and Objectives

- The number of unprotected or unidentified service lines increased from 12,669 in 2022 to 14,760 in 2023, an increase of 2,091 service lines over a one-year period.[22] CSU recognizes in its current DIMP plan, Appendix C, that corrosion is its highest frequency of failure[23] and the affected pipe is an elevated threat due to its proximity to residences and structures.[24] CSU has a bare steel replacement program. However, the current program would take approximately 80 years to replace all 8001 bare steel service lines[25] at a rate of 100 service lines replaced per year.[26] CSU is not replacing its affected pipe at a sufficient rate where it will be able to mitigate the risks of failure for its remaining affected pipe. CSU must implement a more effective leak mitigation plan designed to address these risks as required by § 192.1007(d).

- In the last five years, there have been seven significant incidents that resulted in a house explosion involving steel distribution lines nationwide.[27] CSU's affected pipe is an increased safety risk to the people, property, and the environment. CSU must reduce the safety risk by monitoring these pipelines with a more effective leak mitigation plan in addition to taking prompt remedial action such as renewing or replacing pipe.

Proposed Issuance of Safety Order

Section 60117(l) of Title 49, United States Code, provides for the issuance of a safety order, after reasonable notice and the opportunity for a hearing, requiring corrective measures, which may include physical inspection, testing, repair, or other action, as appropriate. The basis for making the determination that a pipeline facility has a condition or conditions that pose a pipeline integrity risk to public safety, property, or the environment is set forth both in the above-referenced statute and 49 C.F.R. § 190.239, a copy of which is enclosed.

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 hazardous gas 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

[22] *See*, CSU 2022 and 2023 Annual Report, Part B – System Description, 1. General
[23] *See*, CSU DIMP Revision 4, March 28, 2022, Appendix C, Threats Chart
[24] *See*, CSU DIMP Revision 4, March 28, 2022, Appendix D, Utilities Threat Ranking 5
[25] *See*, CSU 2023 Annual Report, Part B – System Description, 1. General
[26] *See*, CSU DIMP Revision 4, March 28, 2022, Section 9.2.5 Bare Steel Services Renewals
[27] PHMSA Data Mart, 2019 – 2023 Advanced Incident Report, Gas Distribution

Board made under another law; (7) the likelihood that the condition will impair the serviceability of the pipeline; (8) the likelihood that the condition will worsen over time; and (9) the likelihood that the condition is present or could develop on other areas of the pipeline.

After evaluating the foregoing preliminary findings of fact and considering the characteristics of the affected pipeline system, including the age of the pipe involved, the hazardous nature of the product transported, the existing and potential impacts to property and the environment, the characteristics of the geographical areas where the pipeline facility is located, including proximity to multi-story businesses and homes[28], the previous failures to cathodically protect its affected pipe as required by § 192.457(b)(3) and to provide records of the initial and 3-year evaluations for active corrosion on these lines as required by §192.465(e), and the likelihood that the conditions could worsen or develop on other areas of the pipeline and potentially impact its serviceability, it appears that the continued operation of the affected pipeline without corrective measures would pose a pipeline integrity risk to public safety, property, or the environment.

Accordingly, PHMSA issues this Notice of Proposed Safety Order to notify Respondent of the proposed issuance of a safety order and to propose that Respondent take measures specified herein to address the potential risk.

Proposed Corrective Measures

Pursuant to 49 U.S.C. § 60117(l) and 49 C.F.R. § 190.239, PHMSA proposes to issue to CSU a safety order incorporating the following remedial requirements with respect to the affected pipeline:

1. Definitions: For the purpose of this Notice, the following terms are defined as:
    a. "Director" is the Director, Western Region, Office of Pipeline Safety (OPS), Pipeline and Hazardous Materials Safety Administration (PHMSA);
    b. "Effective Date" is the date a Safety Order is issued;
    c. "Affected Pipeline System" means CSU's natural gas distribution system composed of 2,751.70 miles of main lines and 185,677 service lines.
    d. "Affected Pipe" means the bare unprotected steel pipelines within the Affected Pipeline System including all main lines and service lines that meet that description.
    e.

2. Remedial Work Plan: Within 60 days of the Effective Date, CSU must develop and submit to the Director for approval a written Remedial Work Plan that includes corrective measures.
    a. The work plan must include:
        i. Identification of all affected pipe.

[28] *See*, CSU DIMP Revision 4, March 28, 2022, Section 4 Definitions, Business District

ii. Identification of remedial actions necessary to address non-compliance on all affected pipe.
iii. A schedule to remediate the identified affected pipe. When considering the remediation schedule, CSU must prioritize lines that pose the greatest risk to safety and the environment. When assessing the level of risk, CSU must consider the following factors: leak frequency, pressure, volume of leakage, location of piping, location of dwelling and other structures.
iv. The remediation schedule shall include proposed timelines for the following:
    1. installing additional CP,
    2. recoating the pipe,
    3. replacing the pipe[29], or
    4. repairing the pipe.
v. A schedule for the performance of additional field testing, inspections, and evaluations to determine whether and to what extent the conditions described in this Notice are present elsewhere on the affected pipeline system. Make the results of the inspections, field excavations, and evaluations available to PHMSA or its representatives.
vi. All repairs or other corrective measures proposed in the Remedial Work Plan must fully remediate the identified risk conditions.
vii. The Plan must include provisions for continuing long-term periodic testing and integrity verification measures to ensure the ongoing safe operation of the pipeline considering the results of the analyses, inspections, and corrective measures undertaken pursuant to the Safety Order.

b. CSU may revise the Remedial Work Plan as necessary to incorporate new information obtained during the evaluations and associated remedial activities. CSU must submit any such Plan revisions to the Director for prior approval. The Director may approve plan elements incrementally. The Remedial Work Plan shall become incorporated into the Safety Order.
c. CSU must implement the Plan as it is approved by the Director, including any revisions to the Plan.

3. Leak Mitigation Plan: Within 60 days of the Effective Date, CSU must determine and implement measures designed to reduce the risks of failure of its affected pipe as required by § 192.1007(d). Specifically, CSU must develop and implement an effective Leak Mitigation Plan that includes, at minimum:
    a. Leak surveys on all affected pipe and unidentified distribution lines must take place every three months.[30]

[29] Pipe replacement may include "renewal" of the pipe where plastic pipe is inserted into an existing pipeline. *See*, CSU DIMP Revision 4, March 28, 2022, Appendix A, Table A-2 Pipe Installation Method History
[30] *See*, GPTC Guide for Gas Transmission, Distribution, and Gathering Piping Systems, 2022 Edition, §192.723 Distribution systems: Leakage surveys, Section 1.3 Increased frequency, Page 403

b. Classification of all leaks as defined by the Gas Piping Technology Committee Guide 2022 Edition (GTPC Guide).
c. Repair of identified leaks in accordance with the below schedule:
    i. Grade 1 leaks must be repaired or replaced promptly as required by § 192.703(c).
    ii. Grade 2 leaks must be repaired or replaced within six months.
    iii. Grade 3 leaks must be monitored every three months as part of the leak management program.
d. CSU must implement the Leak Mitigation Plan as it is approved by the Director, including any future revisions to the Plan.

4. Quarterly Reports: Submit quarterly reports to the Director and COPUC that: (1) include available data and results of the testing and evaluations required by the safety order; and (2) describe the progress of the repairs and other remedial actions being undertaken.

5. Extensions of Time: The Director may grant an extension of time for compliance with any of the terms of the safety order upon a written request timely submitted demonstrating good cause for an extension.

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

7. Documentation of Costs: It is requested (not mandated) that CSU maintain documentation of the safety improvement costs associated with fulfilling this Safety Order and submit the total to Dustin Hubbard, Director, Western Region, Pipeline and Hazardous Materials Safety Administration. It is requested that these costs be reported in two categories: 1) total cost associated with preparation/revision of plans, procedures, studies and analyses, and 2) total cost associated with replacements, additions and other changes to pipeline infrastructure.

The actions proposed by this Notice of Proposed Safety 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. § 60101 et seq., or under any other provision of Federal or state law.

After receiving and analyzing additional data in the course of this proceeding and implementation of the work plan, PHMSA may identify other safety measures that need to be taken. In that event, Respondent will be notified of any proposed additional measures and, if necessary, amendments to the work plan or safety order.

Response to this Notice

In accordance with § 190.239, CSU has 30 days following receipt of this Notice to submit a written response to the official who issued the Notice. If CSU does not respond within 30 days, this constitutes a waiver of its right to contest this Notice and authorizes the Associate Administrator for Pipeline Safety to find facts as alleged in this Notice without further notice to CSU and to issue a Safety Order. In CSU's response, CSU may notify that official that CSU intends to comply with the terms of the Notice as proposed, or CSU may request that an informal consultation be scheduled (CSU will also have the opportunity to request an administrative hearing before a safety order is issued). Informal consultation provides CSU with the opportunity to explain the circumstances associated with the risk condition(s) alleged in the notice and, as appropriate, to present a proposal for a work plan or other remedial measures, without prejudice to CSU's position in any subsequent hearing.

If CSU and PHMSA agree within 30 days of informal consultation on a plan and schedule for you to address each identified risk condition, we may enter into a written consent agreement (PHMSA would then issue an administrative consent order incorporating the terms of the agreement). If a consent agreement is not reached, or if CSU has elected not to request informal consultation, CSU may request an administrative hearing in writing within 30 days following receipt of the Notice or within 10 days following the conclusion of an informal consultation that did not result in a consent agreement, as applicable. Following a hearing, if the Associate Administrator finds the facility to have a condition that poses a pipeline integrity risk to the public, property, or the environment in accordance with § 190.239, the Associate Administrator may issue a safety order.

Be advised that all material CSU submits in response to this enforcement action is subject to being made publicly available. If CSU believes that any portion of its 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 CSU believes qualify for confidential treatment redacted and an explanation of why CSU believes the redacted information qualifies for confidential treatment under 5 U.S.C. 552(b).

In your correspondence on this matter, please refer to **CPF 5-2024-034-NOPSO** and for each document you submit, please provide a copy in electronic format whenever possible.

_____ _____

Dustin Hubbard Date issued
Director, Western Region, Office of Pipeline Safety
Pipeline and Hazardous Materials Safety Administration

cc: PHP-60 Compliance Registry

PHP-500 J. Berry, J. Luo (#24-305110)
Casey Hensley, COPUC Program Manager - Casey.Hensley@state.co.us