

MEMORANDUM

TO: Missouri Public Service Commission Official Case File,
Case No. GE-2023-0393 The Application of Spire Missouri Inc. d/b/a
Spire for a Variance of its Tariff Rules and Regulations for Resale of
Natural Gas

FROM: Clinton L. Foster, Associate Engineer, Safety Engineering Department
Greg A. Williams, Associate Engineer, Safety Engineering Department

/s/ Kathleen A. McNelis, PE / June 28, 2024
Safety Engineering Department/ Date

SUBJECT: Staff Recommendation Regarding Spire Missouri Inc. Application for
Variance of its Tariff Rules and Regulations related to the resale of natural
gas in connection with the new airport terminal built by the City of
Kansas City, Missouri.

DATE: June 28, 2024

I. Executive Summary

On February 11, 2022, Spire Missouri Inc. d/b/a Spire (“Spire”) installed a natural gas meter to serve the new terminal that was under construction in Kansas City, Missouri (the “Terminal”). The flow of gas was turned on February 16, 2022.¹ At that time, the only appliances that Spire was aware of operating within the Terminal were six temporary heaters being used for construction heat. Spire stated that it informed the City of Kansas City, Missouri (“City”) in February 2022 that sub-metering was prohibited.² Spire stated that it discovered in March 2023 that sub meters had been installed at the commercial spaces in the Terminal.³

The City installed piping within the Terminal that distributes natural gas from the connection with Spire outside of the terminal to concessions within the Terminal.⁴ The City stated

¹ Spire’s response to Staff Data Request No. 0013

² Spire’s Application for Variance paragraph 9, and Spire’s response to Staff Data Request No. 0011.

³ Spire’s response to Staff Data Request No. 0011.

⁴ Spire’s Application for Variance, paragraph 10, and City’s response to Staff Data Request No. 0001.

that it began construction of the natural gas system prior to concession tie-in in 2020.⁵ The Terminal was opened on February 28, 2023.⁶

Spire filed its Application for Variance of its Tariff Rules and Regulations (“Application”) in this case on May 19, 2023, requesting a variance from Rule 8 of its Tariff Rules and Regulations, which prohibits the resale of gas.⁷ In its Application, Spire stated that the City understands that it will be subject to the Commission’s Rules of safety and reporting including 20 CSR 4240-40.020 and 20 CSR 4240-40.030, as well as the Pipeline and Hazardous Materials Safety Administration’s (“PHMSA”) safety and reporting rules, as may be applicable. As evidence of this understanding, Spire attached an Affidavit of Patrick Klein, Director of the Kansas City, Missouri Aviation Department, stating that the City will comply with all applicable regulations as the operator of a master meter and will sell natural gas at cost to vendors within Kansas City International Airport (“KCI”).⁸ The City has subsequently indicated that its position is that the pipeline safety rules pertaining to master meter systems are not applicable to the City’s Terminal.⁹ For reasons discussed in Section II, *Master Meter System Definition and Applicability* of this Memorandum, Staff’s position is that the City is operating a master meter system as defined in 20 CSR 4240-40.020(2). Section III of this Memorandum discusses the Commission Rules that are applicable to operators of master meter systems.

Commission Staff requested design, construction, testing, operation and maintenance information from the City in Data Requests and during a safety inspection of the facility to evaluate compliance with Commission rules applicable to operators of natural gas master meter systems. Through this discovery, Staff learned that the natural gas system installed within the airport does not meet certain Commission rule requirements for design or construction of master meter systems, and that the City does not have the required plans and procedures or trained and qualified personnel

⁵ City’s response to Staff Data Request No. 0001.

⁶ Spire’s Application for Variance, Paragraph 7.

⁷ Spire’s Application for Variance, Paragraph 12.

⁸ Spire’s Application for Variance, Paragraph 15 and attachment. In its Application for Variance, Spire refers to the Kansas City International Airport as KCI.

⁹ Paragraph 2 of City’s March 7, 2024, Motion of the City of Kansas City, Missouri to Contact Pipeline and Hazardous Materials Safety Administration Division and to Provide Information to Pipeline and Hazardous Materials Safety Administration

to operate and maintain the system or to investigate, classify, and take corrective actions in the event of gas leaks or other natural gas emergencies within its system. A summary of Staff's findings is provided in Section IV *Staff Analysis of Compliance with Applicable Commission Rules*, of this Memorandum.

Because the natural gas system installed and operated by the City in its Terminal is not in compliance with Commission rules applicable to master meter systems, Staff recommends that the Commission deny Spire's Application for Variance.

II. Master Meter System Definition and Applicability

Commission Rule 20 CSR 4240-40.020 defines master meter system as follows:

Master meter system means a pipeline system for distributing gas within, but not limited to, a definable area, such as a mobile home park, housing project, or apartment complex, where the operator purchases metered gas from an outside source for resale through a gas distribution pipeline system. The gas distribution pipeline system supplies the ultimate consumer who either purchases the gas directly through a meter or by other means, for instance, by rents;¹⁰

In its response to a Staff Data Request asking how the City would allocate natural gas costs, the City referred to and provided a copy of an executed ** [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] 11 [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

¹⁰ 20 CSR 4240-40.020(2). This is the same definition that is found in federal regulation 49 C.F.R. §191.

¹¹ City's Response to Staff Data Request No. 0026



It therefore appears to Staff that the City is acting as the operator of the master meter system

** [Redacted]

[Redacted] ** resell the gas purchased from Spire to concessionaires ** [Redacted] ** within the Terminal.

Staff's position is that the natural gas distribution system within the City's Terminal is a master meter system for the following reasons:

- It is a pipeline system for distributing gas within a definable area (within the Terminal),
- The City is purchasing gas from an outside source, Spire, that is resold to concessionaries within the Terminal, and
- The ultimate consumer of the gas is the concessionaires.

The City's position is that the PHMSA regulations regarding master metering are not applicable to the City.¹²

Due to the difference in Staff's and the City's positions, and because the Commission's definition of master meter system in 20 CSR 4240-40.020 is the same as the federal definition of

¹² Paragraph 3 of City's March 7, 2024, Motion filed in Case No. GE-2023-0393.

a master meter system in 49 C.F.R. § 191, Staff requested and was granted authorization to seek a formal interpretation of the federal rule from PHMSA.¹³

Staff received a response from PHMSA on June 10, 2024, which was filed in Case No. GE-2023-0393 on June 11, 2024. In its response, PHMSA stated that the pipeline system at the Kansas City Airport as described in Staff's request for interpretation constitutes a master meter system in which the City is the operator.

Staff additionally asked PHMSA if the applicability of the definition would be different under the following situations:

- If the cost of gas is individually metered to the sublessees?
- If the cost of gas is prorated based on some factor (e.g., square footage) as opposed to metering?
- If the cost of gas was not directly passed on to sublessees through metering or prorating, but indirectly through rent of space?
- If the City outsources management of the sublessees to another company, and that company recovers the cost of gas from the individual sublessees?

For each of these situations, PHMSA responded

No, the applicability of the definition would not be different (i.e., the system remains a master meter system)....

With respect to the final question regarding the City outsourcing management of sublessees to another company, and that company recovering the cost of gas from the individual sublessees, PHMSA added,

...if the City outsources management of sublessees to another company, and that company recovers, on behalf of the City, the cost of gas from the individual sublessees. In this scenario, PHMSA presumes that the City remains the operator of the gas distribution pipeline system. If the City outsources the operation and management of the pipeline system within the airport to another entity, then that entity could become the operator of the master meter system.

¹³ Staff Motion filed December 29, 2023, and Commission Order Granting Staff Motion on January 18, 2024.

III Commission Rules Applicable to Operators of Master Meter Systems

A. Reporting Requirements

The Commission's Incident, Annual, and Safety-Related Condition Reporting Requirements are found in 20 CSR 4240-40.020. This rule prescribes requirements for the reporting of incidents, safety-related conditions, annual pipeline summary data, National Operator Registry information, and other miscellaneous conditions by operators of gas pipeline facilities located in Missouri and under the jurisdiction of the commission.¹⁴ There are certain exceptions within the Commission rule for master meter systems, which are as follows:

- 20 CSR 4240-40.020(6) requires except as provided in subsection (6)(C), each operator of a distribution pipeline system must submit U.S. Department of Transportation Form PHMSA F 7100.1 as soon as practicable but not more than thirty (30) days after detection of an incident required to be reported under section (3) (191.5). However, 20 CSR 4240-40.020(6)(C) states the incident report required by this section need not be submitted with respect to master meter systems.
- 20 CSR 4240-40.020(7)(A) requires except as provided in paragraph (7)(A)3., each operator of a distribution pipeline system must submit an annual report for that system on U.S. Department of Transportation Form PHMSA F 7100.1-1. This report must be submitted each year, not later than March 15, for the preceding calendar year. However, 20 CSR 4240-40.020(7)(A)3. states the annual report requirement in this subsection does not apply to a master meter system.
- 20 CSR 4240-40.020(12) requires the reporting of certain safety-related conditions as defined in 20 CSR 4240-40.020(12)(A); however, 20 CSR 4240-40.020(12)(B)1. states that these reports are not required for any safety-related condition that exists on a master meter system.

All other requirements in 20 CSR 4240-40.020 that apply to operators of natural gas distribution systems apply as well to operators of natural gas master meter systems.

B. Pipeline Safety Standards

The Commission's Pipeline Safety Standards are found in 20 CSR 4240-40.030. This Commission rule prescribes the minimum safety requirements for pipeline facilities and the transportation of gas in Missouri and under the jurisdiction of the commission.¹⁵ Some of the

¹⁴ 20 CSR 4240-40.020(1)(A)

¹⁵ 20 CSR 4240-40.030(1)(A)1.

standards within this rule are applicable to all gas pipelines, and other requirements apply only to specific types of pipelines (e.g. transmission, distribution or gathering)¹⁶. Master meter system pipelines are considered to be gas distribution pipelines under the rule, therefore rules applicable specifically to other types of pipelines, such as transmission do not apply. Additionally, there are certain exceptions within the Commission rule for master meter systems, which are as follows:

- 20 CSR 4240-40.030(1)(K) requires each operator of a service line who does not maintain the customer's buried piping up to the entry of the first building downstream to notify each customer of its responsibility to maintain its piping. However, operators of master meter systems may continuously post a general notice in a prominent location frequented by customers.
- 20 CSR 4240-40.030(8)(P)7. exempts master meter system operators from reporting excess flow valve measures detailed in the annual report required by 20 CSR 4240-40.020(7)(A).¹⁷
- 20 CSR 4240-40.030(12)(I) sets forth minimum requirements for Damage Prevention Programs, and exempts¹⁸ pipelines operated by persons other than municipalities (including operators of master meters) whose primary activity does not include transportation of gas from the following:
 - The requirement of (12)(I)1. that the damage prevention be written,
 - The requirement of (12)(I)3.A. to identify on a current basis persons who normally engage in excavation activities in the area in which the pipeline is located;
 - The requirement of (12)(I)3.B. to provide semi-annual notifications of the public and persons identified in (12)(I)3.A. of certain provisions of Chapter 319, RSMo, and,
 - The requirement of (12)(I)3.C. to provide a comprehensive listing of excavators to the one call system.
- 20 CSR 4240-40.030(12)(K) provides the minimum requirements for Public Awareness. Master meter system operators are only required to comply with the requirements in (12)(K)10.

¹⁶ 20 CSR 4240-40.030(1)(B) defines distribution line as a pipeline other than a gathering or transmission line; and distribution center as the initial point where gas enters piping used primarily to deliver gas to customers who purchase it for consumption, as opposed to customers who purchase it for resale, for example— A. At a metering location; B. A pressure reduction location; or C. Where there is a reduction in the volume of gas, such as a lateral off a transmission line;

¹⁷ Master meter system operators are also exempted in 20 CSR 4240-40.020(7)(A) from filing annual reports.

¹⁸ The exemption is in 20 CSR 4240-40.030(12)(I)7.

- 20 CSR 4240-40.030(12)(P) sets forth minimum requirements for odorizing natural gas and for monitoring the odorant concentration. Operators of master meter systems may comply with the requirement of paragraph (12)(P)6. by receiving written verification from their gas source that the gas has proper concentration of odorant, and conducting periodic “sniff” test at the extremities of the system to confirm that the gas contains odorant.
- 20 CSR 4240-40.030(17) sets forth the requirements for Distribution Integrity Management Programs (DIMP), and exempts master meter systems.¹⁹

All other requirements in 20 CSR 4240-40.030 that apply to operators of natural gas distribution systems apply as well to operators of natural gas master meter systems.

The authority for Commission Rules 20 CSR 4240-40.020 and 20 CSR 4240-40.030 is set forth in Sections 386.250, 386.310 and 393.140, of the Revised Statutes of Missouri (“RSMo”). Section 386.310.3(1), RSMo, grants the Commission the authority to regulate gas pipeline safety of operators of master meter systems, as follows:

3. For the purposes of gas pipeline safety regulation, the jurisdiction, supervision, powers and duties created and established by this chapter will extend to the following:
 - (1) Operators and owners of distribution systems where natural gas, excluding petroleum gas, is measured by a single meter and distributed to other users within a single structure or to multiple structures[.]

IV Staff Analysis of Compliance with Applicable Commission Rules

Staff perform pipeline safety inspections of natural gas operators jurisdictional to the Commission for compliance with the Commission’s pipeline safety standards in 20 CSR 4240-40.030, including operators of master meter systems.

On August 28, 2023, Staff met with City personnel and a contractor used by the City²⁰ and performed an on-site inspection of the City’s master meter system. Staff has additionally sought and reviewed records and procedures required by Commission rules through data requests, and has reviewed documents the City has attached to its filings in this case. Below is a summary of

¹⁹ The exemption is in 20 CSR 4240-40.030(17)(B)2.C.

²⁰ Staff met with a contractor for the City employed by ** [REDACTED] **

deficiencies Staff noted with respect to compliance with the Commission's pipeline safety standards for design, construction, operation and maintenance of the system.

A. Written manuals, procedures, and plans required by 20 CSR 4240-40.030:

Commission rules require operators of natural gas systems to establish and follow written plans, manuals or procedures to comply with certain requirements of the Commission's Pipeline Safety Standards, 20 CSR 4240-40.030, including but not limited to a procedural manual for operations and maintenance of the natural gas system in accordance with the standards in Sections (12) and (13)²¹ of the rule, plans for responding to natural gas emergencies²², training and qualification of personnel²³, construction of pipeline facilities²⁴, and investigation, classification and repair of leaks in accordance with Section (14)²⁵ of the rule.

1. Procedures Applicable to Pipeline Construction

Welding of steel pipe to be used in gas service may only be performed in accordance with procedures that have been qualified by testing in accordance with the requirements of the rule.²⁶

Joining of plastic pipe to be used in gas service may only be performed in accordance with procedures that have been qualified by testing in accordance with the requirements of the rule²⁷.

The City has not provided its joining procedures for the following joints that are installed within its pipeline system:

- a. For all heat fusion joint types used on the below ground segment of ** [REDACTED]
- [REDACTED]
- [REDACTED] **

²¹ Requirements for the content of the manual are in 20 CSR 4240-40.030(12)(C).
²² Requirements for the Emergency Plan are in 20 CSR 4240-40.030(12)(J).
²³ Requirements for the procedure are in 20 CSR 4240-40.030(12)(D).
²⁴ Requirements for qualification of written procedures for joining of pipe are in 20 CSR 4240-40.030 Section (5) for welding, and Section (6) for joining of plastic pipe.
²⁵ Requirements for the content of the manual are in 20 CSR 4240-40.030(12)(C).
²⁶ 20 CSR 4240-40.030(5)(C) specifies the standards to be used to qualify welding procedures, 20 CSR 4240-40.030(5)(D) specifies the standards to be used for qualification of individual welders.
²⁷ 20 CSR 4240-40.030(6)(G) provides the requirements for qualification of joining procedures.

- b. For all mechanical joint types (including transition fittings) used on the below ground segment of ** [REDACTED] **
- c. For the metallic components used on the above ground portion of the City's natural gas piping system within the Terminal master meter system.

Because these procedures are not available for review, Staff cannot determine if the procedures are consistent with the requirements of applicable Commission rules, or if they were qualified by testing in accordance with one of the methods adopted by reference in the rules.

2. *Procedural Manual for Operations, Maintenance, and Emergencies*²⁸

In response to Staff Data Request 0002, the City submitted a partial operations and maintenance manual that was titled ** [REDACTED] **, Date Submitted and Received April 11, 2023. The manual included ** [REDACTED] **

The City submitted several documents that included its emergency response procedures when natural gas is detected both inside and outside of the Terminal. The documents included the following:

- ** [REDACTED]
- [REDACTED]

²⁸ Required by 20 CSR 4240-40.030(12)(C), with additional specific requirements for the Emergency Plan in 20 CSR 4240-40.030(12)(J).

- [REDACTED]
- [REDACTED]
 - [REDACTED]
 - [REDACTED]
- [REDACTED] **

The plans and procedures provided by the City do not address the following requirements of 20 CSR 4240-40.030:

A. Operating, maintaining and repairing pipeline in accordance with each requirement of Sections (12), (13) and (14) of 20 CSR 4240-40.030:

- a. Continuing surveillance (20 CSR 4240-40.030(12)(H));
- b. Emergency plan (as it applies to 20 CSR 4240-40.030(12)(J)2.);
- c. Public awareness program (20 CSR 4240-40.030(12)(K));
- d. Investigation of failures (20 CSR 4240-40.030(12)(L));
- e. MAOP establishment and preventing over-pressurization (20 CSR 4240-40.030(12)(M) & (N));
- f. Odor intensity monitoring (20 CSR 4240-40.030(12)(P));
- g. Tapping, purging and providing service to customers (20 CSR 4240-40.030(12)(Q), (R) and (S));
- h. Leakage surveys (20 CSR 4240-40.030(13)(M));
- i. Reinstatement and abandonment or deactivation of facilities (20 CSR 4240-40.030(13)(O));

- j. Telemetry or recording gauges (20 CSR 4240-40.030(13)(S));
 - k. Valve Maintenance (20 CSR 4240-40.030(13)(V));
 - l. Investigation of gas odor notifications (20 CSR 4240-40.030(14)(B)); and
 - m. Gas leak classification and repair (20 CSR 4240-40.030(14)(C)).
- B. Controlling Corrosion in accordance with Section 9 of 20 CSR 4240-40.030:
- a. Design, installation, operation and maintenance of cathodic protection systems (20 CSR 4240-40.030(9)(C));
 - b. Inspection of buried metallic pipeline when exposed (20 CSR 4240-40.030(9)(F));
 - c. Monitoring external corrosion control, and remedial action to correct deficiencies (20 CSR 4240-40.030(9)(I), (R) and (T));
 - d. Inspection of internal surface of metallic piping for evidence of corrosion when removed for any reason (20 CSR 4240-40.030(9)(N)2.); and
 - e. Monitoring, controlling and remedial measures for atmospheric corrosion (20 CSR 4240-40.030(9)(P) and (Q)).
- C. Starting up and shutting down the pipeline. (20 CSR 4240-40.030(12)(C)2.E.)
- D. Review work done by operator personnel to ensure procedures are adequate. (20 CSR 4240-40.030(12)(C)2.H.)
- E. Testing and inspecting customer owned gas piping and connected equipment. (20 CSR 4240-40.030(12)(C)2.M.)

3. *Qualification of Pipeline Personnel (Operator Qualification Plan)*²⁹

The Commission's pipeline safety standards require operators to have and follow a written qualification program for personnel performing covered tasks³⁰ on its pipelines. The program must address the requirements specified in 20 CSR 4240-40.030(12)(D) – Qualification Program.

²⁹ Required by 20 CSR 4240-40.030(12)(D)

³⁰ Covered Tasks is defined in 20 CSR 4240-40.030(12)(D)1.B as an activity identified by the operator that is 1. Performed on a pipeline facility, 2. Is an operations, maintenance or emergency-response task, 3. Is performed as a requirement of this rule (referring to 20 CSR 4240-40.030), and 4. Affects the operation or integrity of the pipeline.

The City does not have a written qualification program as required by 20 CSR 4240 40.030(12)(D).

4. *Continuing Surveillance*³¹

The Commission's pipeline safety standards require operators to have a written procedure for continuing surveillance of its facilities to determine and take appropriate actions concerning changes in class location, failures, leakage history corrosion, substantial changes in cathodic protection requirements and other unusual operating and maintenance conditions.

The City does not have a written procedure for continuing surveillance of its facilities as required by 20 CSR 4240-40.030(12)(H).

5. *Emergency Plans*³²

The Commission's pipeline safety standards require operators to establish written procedures to minimize the hazard resulting from a gas pipeline emergency. The minimum requirements for emergency plan content is in 20 CSR 4240-40.030(12)(J).

The City provided several documents in response to Staff's request for emergency procedures, including the ** [REDACTED]

[REDACTED] ** that include procedures for responding to both inside and outside gas leaks. However, this document appears to address only the scope of the ** [REDACTED]

[REDACTED] ** It does not appear to address the rule and responsibilities of the operator of the master meter system for responding to natural gas emergencies. For example, ** [REDACTED]

[REDACTED]

³¹ Required by 20 CSR 4240-40.030(12)(H)

³² Required by 20 CSR 4240-40.030(12)(J)



Operators of natural gas master meter operators assume the overall responsibility of both locating, investigating and eliminating gas leaks on their system and in making the area safe.

6. *Public Awareness*³³

Each operator of master meter system is required to develop and implement a written procedure to provide its customers public awareness messages twice annually. The content of the messages provided by operators of master meter systems must address each item listed in 20 CSR 4240-40.030(12)(K)10.

The City has not provided a written procedure to provide its customers public awareness messages.

B. Compliance with Applicable Requirements of 20 CSR 4240-40.020:

Each operator, including operators of master meter systems, must obtain an Operator Identification Number (OPID) from the Pipeline and Hazardous Materials Safety Administration (PHMSA)³⁴.

The City has not provided any documentation that an OPID number has been requested or obtained from PHMSA for the operation of its master meter system as required by 20 CSR 4240-40.020(11)(A)1., and Staff has not received any notification from PHMSA of such application by the City.

³³ 20 CSR 4240-40.030(12)(K) provides the requirements for public awareness. Master meter system operators must comply with the requirements of (12)(K)10.

³⁴ Required by 20 CSR 4240-40.020(11)(A)

C. Compliance with Applicable Requirements of 20 CSR 4240-40.030:

1. Design of Pipeline Components

Section (4) of the Commission’s pipeline safety standards prescribes the minimum requirements for the design and installation of pipeline components and facilities.

The City has not provided documentation to demonstrate that the metallic fittings installed by the City within its pipeline system comply with the requirements of 20 CSR 4240-40.030(4)(B). For example, the ** [REDACTED]

[REDACTED]³⁵, [REDACTED] **

2. Training and Qualification of Personnel – Plastic Pipe Joining

Section (6) of the Commission’s Pipeline Safety Standards prescribe minimum requirements for joining materials in pipelines, other than by welding. Subsection (6)(H) requires that no person may make a plastic joint unless that person has been qualified under the applicable procedure by training or experience in the procedure and by making a specimen joint that is visually examined and destructively tested to determine acceptable compliance with performance standards provided in the rule.

A. Training and Qualification of Personnel – Plastic Pipe Heat Fusion Joints

The City has not provided qualification records for the individuals who constructed the plastic joints made on the below ground segment of the ** [REDACTED]

[REDACTED]
[REDACTED] **

B. Training and Qualification of Personnel – Mechanical Joining

The City has not provided joiner qualification records for the individuals who installed mechanical joints on the below ground segment of ** [REDACTED] **,

³⁵ As referenced in the City’s attachment “061224 KCI Gas Service Attachment I.pdf” to the City’s Submission of The City, Missouri to Staff’s Submission of PHMSA Response filed in the GE-2023-0393 case docket.

or for the aboveground portion of gas piping ** [REDACTED]

[REDACTED] ** within the Terminal master meter system.

C. Training and Qualification of Personnel – Inspection of Pipe Joints

The City has not provided records to demonstrate that a qualified person inspected joints completed during the approximate period of January 2020 to December 22, 2021, for the below ground segment of ** [REDACTED]

[REDACTED] **

3. *Training and Qualification of Personnel – Corrosion Control*

It is Staff’s understanding that the City has at least one underground transition fitting installed on the ** [REDACTED]

[REDACTED] ** This section of underground steel is required to be protected from corrosion by a cathodic protection system.

20 CSR 4240-40.030(9)(C) requires that the design, installation, operation and maintenance of the cathodic protection system shall be carried out by, or under direction of, a person qualified by experience and training in pipeline corrosion control methods. The City has not provided documentation to demonstrate that the design, installation, operation, and maintenance of the cathodic protection system for the buried steel portion of the transition fitting was carried out by, or under the direction of, a person qualified by experience and training in pipeline corrosion control methods.

4. *Providing and Monitoring Cathodic Protection for Corrosion Control*

During Staff’s August 28, 2023, on-site inspection, the City provided no documentation to demonstrate that the City had designed or installed cathodic protection to protect the buried transition fitting (steel portion) after construction of the Terminal master meter system was completed on December 22, 2021³⁶. 20 CSR 4240-40.030(9)(D)1.B. requires that each buried pipeline must be protected from corrosion and have a cathodic protection system installed and

³⁶ In response to Staff Data Request 0001, part 2., the City stated that “...Construction of the natural gas system, prior to concession tie-in, was completed with the pressurization with gas around 12/22/2021...”

placed in operation within one year after completion of construction. In accordance with 20 CSR 4240-40.030(9)(D)1.B. a cathodic protection system was required to be installed and placed in operation no later than December 22, 2022.

20 CSR 4240-40.030(9)(I)1. requires testing of cathodic protection at least once each calendar year at intervals not exceeding 15 months to determine whether the cathodic protection meets the requirements of subsection (9)(H). The City has not provided documentation of cathodic protection monitoring records for the buried steel transition fitting as required by 20 CSR 4240-40.030(9)(I)1.

20 CSR 4240-40.030(9)(V) lists the records required to demonstrate compliance with requirements of Section (9) – Corrosion Control. One such requirement is to maintain records or maps to show the location of cathodically protected piping, facilities, galvanic anodes, and neighboring structures bonded to the cathodic protection system. The City has not provided any of the required records, and no such records were made available for Staff’s review during the August 28, 2023, on-site inspection.

5. *Testing of Pipeline Facilities*

Section (10) of the Commission’s pipeline safety standards prescribe the minimum leak-test and strength-test requirements for pipelines. No person may operate a new segment of pipeline, or return to service a segment of pipeline until the requirements of 20 CSR 4240-40.030(10)(B) are completed. Test requirements for pipelines to operate below 100 pounds per square inch gauge (psig) are provided in 20 CSR 4240-40.030(10)(E).

In response to Staff Data Request 0001, the City stated:

**

**

The City provided its test pressure records in response to Staff Data Request 0010. The City’s response to Staff Data Request 0010, part e, stated:

** [REDACTED]
[REDACTED] **

It is Staff's understanding that both the buried ** [REDACTED] ** (upstream of the Terminal) and the steel mains within the Terminal master meter system were pressure tested with ** [REDACTED] **. The City's final pressure test of ** [REDACTED] ** for the buried portion of the ** [REDACTED] ** does comply with 20 CSR 4240-40.030(10)(G)-Test Requirements for Plastic Pipelines. However, the City's final pressure test of ** [REDACTED] ** does not comply with 20 CSR 4240-40.030(10)(E)2., which requires that each steel main that is to be operated at or above 1 psig through 90 psig must be tested to at least 90 psig.

6. *Testing of Customer-Owned Fuel Lines*

During Staff's August 28, 2023, on-site inspection, Staff requested documentation for the City's leakage test records and visual inspections of the customer-owned fuel line piping and connected equipment as required by 20 CSR 4240-40.030(10)(J). No documentation was observed for the required leakage tests and visual inspections of the customer-owned fuel line piping and connected appliances to demonstrate compliance with 20 CSR 4240-40.030(10)(J). No such documentation has subsequently been provided in the City's responses to Staff data requests in this case.

7. *Damage Prevention*

Sub-section (12)(I) of 20 CSR 4240-40.030 sets forth the requirements for programs to prevent damage to buried pipelines by excavation activities. 20 CSR 4240-40.030(12)(I)2. requires that an operator's pipeline system must be covered by the qualified one-call system for Missouri. 20 CSR 4240-40.030(12)(I)3.D. requires that the operator provide a means of receiving and recording notification of planned excavation activities. 20 CSR 4240-40.030(12)(I)3.G requires operators to provide temporary markings of their facilities.

The City has not provided documentation to demonstrate compliance with the damage prevention program requirements as applicable to master meter operators in 20 CSR 4240-40.030(12)(I).

8. *Odorization of Gas*

Subsection (P) of 20 CSR 4240-40.030 set forth the requirements for odorization of natural gas and for routine monitoring of odorant concentration. 20 CSR 4240-40.030(12)(P)6. provides that operators of master meter systems may comply with the requirements of monthly odor intensity testing by receiving written verification from the gas source that the gas has the proper concentration of odorant and conducting periodic “sniff” tests at the extremities of the system to ensure that the gas contains odorant.

During Staff’s August 28, 2023, on-site inspection, Staff requested records since December 22, 2021,³⁷ from KCAD personnel to demonstrate that the natural gas within the Terminal master meter system has the proper concentration of odorant. The City did not have documentation of requested monthly verification of the odorant concentration level from its supplier (Spire Missouri West) to confirm that their gas source has the proper concentration of odorant, or documentation of performing any periodic “sniff” tests at the extremities of the system to confirm that the gas contains odorant as required by 20 CSR 4240-40.030(12)(P)6.

9. *Providing Gas to Customers*

20 CSR 4240-40.030(12)(S)2. requires that at the time an operator physically turns on the flow of gas to a customer, information on how to contact the operator in the event of a gas emergency or odor is detected and information concerning the customer’s responsibility for maintaining his/her gas piping and utilization equipment must be provided.

³⁷ The City’s response to Staff Data Request 0001, part 3., stated that **

During Staff's August 28, 2023, on-site inspection of the Terminal master meter system, Staff observed a vendor or concessionaire within the Concourse A-South wing in which natural gas had been provided and gas appliances were operating.

It is Staff's understanding that the City did not provide any information that is required by 20 CSR 4240-40.030(12)(S)2. to the vendor (new gas customer) within the Concourse A-South wing of the Terminal.

10. Inspection of Essential Valves

Each valve, the use of which may be necessary for the safe operation of a distribution system, must be checked for accessibility and serviced at intervals not exceeding 15 months as required by 20 CSR 4240-40.030(13)(V)2.

During Staff's August 28, 2023, on-site inspection, Staff requested the City's essential valve inspection records for the Terminal master meter system during calendar years 2022 and 2023. The City did not have inspection records of its essential valves.

V. Conclusions and Staff Recommendation

Based on Staff's interpretation of the definition of a master meter system, as supported by an interpretation from PHMSA, Staff concludes that the natural gas system installed and operated by the City in the Terminal is a master meter system, and is therefore subject to Commission rules applicable to master meter systems.

The City has not provided sufficient documentation for Staff to conclude that it is in compliance with the following requirements of Commission rules:

- With respect to system design, the City has not provided sufficient documentation to demonstrate that each of the pipeline components conform to applicable design requirements in 20 CSR 4240-40.030(4);
- With respect to system construction, aside from facilities installed by welding, the City has not provided documentation that joints installed by methods other than welding (e.g., heat fusion and mechanical joining) were installed in accordance with procedures that meet requirements of 20 CSR 4240-40.030(6)(G), or by individuals trained and qualified in accordance with the requirements of 20 CSR 4240-40.030(6)(H);
- Based on Staff's observations during its on-site inspection and evaluation of documents provided by the City in this case, Staff concludes that there is sufficient

evidence to assert that the City is not in compliance with the following Commission rules:

- The City has not established or followed a manual of written procedures for conducting operations and maintenance activities and for emergency response in accordance with the requirements of 20 CSR 4240-40.030(12)(C);
- The City does not have or follow a written qualification program for personnel performing covered tasks on its pipeline system as required by 20 CSR 4240-40.030(12)(D);
- The City does not have a written procedure for continuing surveillance of its facilities as required by 20 CSR 4240-40.030(12)(H);
- The City does not have an emergency plan that addresses all of the requirements of 20 CSR 4240-40.030(12)(J);
- The City has not developed or implemented a written public awareness procedure for its customers as required by 20 CSR 4240-40.030(12)(K)10., or provided the safety information required by 20 CSR 4240-140.030(12)(S)2 at the time gas was turned on;
- The City has not requested an OPID from PHMSA as required by 20 CSR 4240-40.020(11)(A);
- The City is not in compliance with applicable requirements to design, install and routinely test a cathodic protection system to prevent corrosion on its buried metallic pipe as required by Section (9) of 20 CSR 4240-40.030;
- The City did not test its pipeline system to a sufficiently high pressure to meet the requirements of Section (10) of 20 CSR 4240-40.030 prior to putting the system into operation;
- The City has not tested its customer's fuel lines, or visually inspected the safety of customer owned piping and connected appliances as required by 20 CSR 4240-40.030(10)(J) and (12)(S)1;
- The City has not monitored the odorant concentration of its gas as required by 20 CSR 4240-40.030(12)(P)6; and
- The City has not inspected or serviced each valve, the use of which may be necessary for the safe operation of its distribution system as required.

Because the City is not in compliance with the above listed Pipeline Safety Standards, Staff Recommends that the Commission deny the variance requested by Spire.

Staff notes that in other instances when its inspection findings have indicated compliance issues involving master meter systems, the operators of those systems have elected one of the following options:

1. Taken the steps necessary to comply with the applicable Commission Rules;
2. Worked with the operator of the Local Distribution Company (LDC), its gas supplier, to replace the master meter system with individual service lines installed and operated by the LDC; or
3. Replaced the gas appliances with electric appliances, eliminating the need for and abandoning the master meter system piping.

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

In the Matter of the Application of Spire)
Missouri, Inc. d/b/a Spire for a Variance of its) File No. GE-2023-0393
Tariff Rules and Regulations for Resale of)
Natural Gas)

AFFIDAVIT OF CLINTON L. FOSTER

STATE OF MISSOURI)
) ss
COUNTY OF JACKSON)

COMES NOW Clinton L. Foster, and on his oath states that he is of sound mind and lawful age; that he contributed to the foregoing *Staff Recommendation, in Memorandum form*; and that the same is true and correct according to his best knowledge and belief.

Further the Affiant sayeth not.



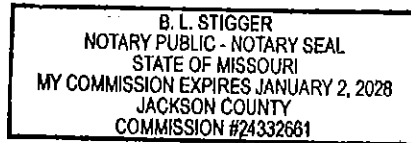
Clinton L. Foster

JURAT

Subscribed and sworn before me, a duly constituted and authorized Notary Public, in and for the County of Jackson, State of Missouri, at my office in Kansas City, on this 25th day of June 2024.



Notary Public



**BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI**

In the Matter of the Application of Spire)	
Missouri, Inc. d/b/a Spire for a Variance of its)	<u>File No. GE-2023-0393</u>
Tariff Rules and Regulations for Resale of)	
Natural Gas)	

AFFIDAVIT OF GREG A. WILLIAMS

STATE OF MISSOURI)
) ss
COUNTY OF COLE)

COMES NOW Greg A. Williams, and on his oath states that he is of sound mind and lawful age; that he contributed to the foregoing *Staff Recommendation, in Memorandum form*; and that the same is true and correct according to his best knowledge and belief.

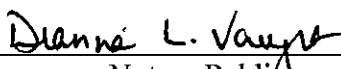
Further the Affiant sayeth not.



 Greg A. Williams

JURAT

Subscribed and sworn before me, a duly constituted and authorized Notary Public, in and for the County of Cole, State of Missouri, at my office in Jefferson City, on this 25th day of June 2024.



 Notary Public

DIANNA L. VAUGHT Notary Public - Notary Seal State of Missouri Commissioned for Cole County My Commission Expires: July 18, 2027 Commission Number: 15207377

**BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI**

In the Matter of the Application of Spire)
Missouri, Inc. d/b/a Spire for a Variance of its)
Tariff Rules and Regulations for Resale of)
Natural Gas)
File No. GE-2023-0393

AFFIDAVIT OF KATHLEEN A. McNELIS, PE

STATE OF MISSOURI)
) ss
COUNTY OF COLE)

COMES NOW Kathleen A. McNelis, PE, and on her oath states that she is of sound mind and lawful age; that she contributed to the foregoing *Staff Recommendation, in Memorandum form*; and that the same is true and correct according to her best knowledge and belief.

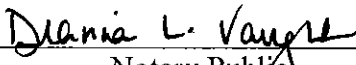
Further the Affiant sayeth not.



Kathleen A. McNelis

JURAT

Subscribed and sworn before me, a duly constituted and authorized Notary Public, in and for the County of Cole, State of Missouri, at my office in Jefferson City, on this 25th day of June 2024.



Notary Public

