

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

In the Matter of Spire Missouri Inc. d/b/a Spire)
Missouri West Concerning a Natural Gas Pipeline)
Incident Along Highway 169 in Kansas City, Missouri) **File No. GS-2021-0019**

STAFF’S GAS INCIDENT REPORT

COMES NOW the Staff of the Missouri Public Service Commission, through counsel, and for its report states:

1. The Commission’s rules set safety standards for operators of natural gas pipelines. For example, operators are required to have and carry out a written damage prevention program in order to prevent damage to buried pipelines by excavation activity.¹ This program must include an educational component,² as well as criteria to determine when a visual inspection should be performed³ and provide for temporary marking of buried pipelines before excavation begins.⁴ Operators are required to consider threats to the pipeline in their Distribution Integrity Management Plan.⁵ Natural gas operators are also required to have a manual describing procedures for operating, maintaining, and repairing the pipeline.⁶ These procedures apply to work not only performed by the operator but also to its contractors.⁷ When a federal incident has occurred, natural gas operators are required to telephone notices to the National Response Center⁸ and to

¹ 20 CSR 4240-40.030(12)(I)1.
² 20 CSR 4240-40.030(12)(I)3.B.
³ 20 CSR 4240-40.030(12)(I)4.
⁴ 20 CSR 4240-40.030(12)(I)3.G.
⁵ 20 CSR 4240-40.030(17)(D)2.
⁶ 20 CSR 4240-40.030(12)(C)1.
⁷ 20 CSR 4240-40.030(12)(B)3.
⁸ 20 CSR 4240-40.020(3)(C).

submit reports to the U.S. Department of Transportation.⁹ They are required to analyze accidents in order to determine causes and minimize possibility of recurrences.¹⁰

2. People and entities planning excavation are required to place a locate request with the Missouri One Call System (“MOCS”) at least two, but not more than ten, working days prior to the excavation.¹¹ Spire uses a contract locator to respond to requests to locate, identify, and mark Spire’s underground natural gas facilities before construction commences.

3. On May 28, 2020 an excavator notified the MOCS that it planned to excavate on June 3, 2020 in an area including the grass median and west shoulder of the northbound lanes of U.S. Route 169, south of Northwest Barry Road in Kansas City. Spire’s contract locator responded to this notice of planned excavation on June 1, 2020 with a status of “Clear/No Conflict,” indicating that Spire has no facilities in the area to be excavated.

4. The excavator did not begin its work in this area until July 1, 2020. On that day, as the excavator was using auger equipment to install a new guard rail in the area which it was told is clear of Spire facilities, the excavator damaged a 12-inch diameter gas distribution main which is part of Spire’s system. The auger equipment penetrated the edge of a protective casing and into the pipeline, resulting in an unplanned release of natural gas.

5. Spire worked on July 1, 2020 and July 2, 2020 to shut down the pipeline and repair the damaged segment. The pipeline was returned to service late in the

⁹ 20 CSR 4240-40.020(6)(A).

¹⁰ 20 CSR 4240-40.030(12)(L).

¹¹ §319.026.1., RSMo.

afternoon of July 2, 2020. No one was injured or killed as a result of this incident. Spire estimates property damage to be \$65,283, which does not include the cost of lost natural gas.

6. On July 21, 2020 Staff filed a motion requesting that the Commission open a case to investigate this incident. The Commission granted Staff's motion on July 29, 2020 and ordered Staff to file a report regarding the incident, or a status report, by January 25, 2021. Staff filed status reports on January 25, 2021 and May 27, 2021 stating that its investigation was ongoing. On May 27, 2021 the Commission ordered Staff to file its report, or a status report, by June 28, 2021.

7. Commission Rule 20 CSR 4240-40.030(12)(I)1. requires natural gas operators to have "a written program to prevent damage to that pipeline by excavation activities." ** [REDACTED]

[REDACTED] . **12 Spire's damage prevention program did not include procedures requiring locators to perform a visual scan of the work area or to confirm Spire facilities through conductive methods. Staff finds that Spire violated 20 CSR 4240-40.030(12)(I)1. because the procedures in its damage prevention program were inadequate. Since the July 1, 2020 incident, Spire updated its damage prevention program to include a reference to following Common Ground Alliance ("CGA") Best Practice Marking Standards. The current CGA Best Practice Marking Standards requires that areas be visually scanned and the use of conductive methods to locate buried facilities prior to excavation activities occurring. Staff recommends that Spire

¹² DR 14.2.

review the CGA Best Practice Marking Standards and determine which practices and procedures it intends to incorporate in its procedures and training. For further information about this finding, Staff directs the Commission to section III.C of its report.

8. Commission Rule 20 CSR 4240-40.030(12)(I)3.B. requires damage prevention programs to have an educational component, which includes natural gas operators annually sending to excavators either a copy of the relevant sections of Chapter 319, RSMo,¹³ or a Commission-approved summary of the relevant sections of Chapter 319, RSMo. Spire's damage prevention program complies with 20 CSR 4240-40.030(12)(I)3.B., because Spire's written damage prevention plan in effect at the time of the incident required Spire to provide a copy of Chapter 319, RSMo in its annual mailings to excavators. However, Staff finds that Spire violated 20 CSR 4240-40.030(12)(I)1., because it failed to send copies of applicable sections of Chapter 319, RSMo to excavators. Staff recommends that Spire include the relevant sections of Chapter 319, RSMo in annual mailings to excavators. Since the July 1, 2020 incident, Spire updated its damage prevention program, but this current program does not require sending a copy of Chapter 319, RSMo or a summary to excavators. In light of this, Staff further recommends that Spire amend its current damage prevention program to meet this requirement. For further information about this finding, Staff directs the Commission to section III.C of its report.

¹³ Sections 319.010 through 319.050 of Chapter 319, RSMo are titled the "Underground Facility Safety and Damage Prevention Act" and deal with underground safety and damage prevention pertaining to excavators.

9. Commission Rule 20 CSR 4240-40.030(12)(I)3.G. states that damage prevention programs must provide for temporary marking of buried pipelines in the excavation area before the activity begins. Spire's written damage prevention program addresses this requirement. However, Staff finds that Spire violated 20 CSR 4240-40.030(12)(I)1., because it failed to carry out the requirements of its written program to provide temporary markings identifying the locations of its buried pipelines before excavation activity. Spire's contract locator responded to the notice of planned excavation with a status of "Clear/No Conflict" indicating that it had no facilities in the area to be excavated. ** [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] ** 15

Staff recommends that Spire create or modify existing procedures to require its personnel and contractors to report mapping errors of Spire's natural gas system, to develop procedures for investigating mapping errors, and to make timely corrections of identified errors in the mapping system. For further information about this finding, Staff directs the Commission to section III.C of its report.

10. Commission Rule 20 CSR 4240-40.030(12)(I)4. states that notifications of planned excavation activities should be evaluated to determine the need for and extent of a visual inspection. Spire did not evaluate the planned excavation on U.S. Route 169 to determine the need for and extent of an inspection. The language of the rule is not mandatory, however, according to the procedures in Spire's damage prevention program,

¹⁴ DR 5.2.

¹⁵ DR 5.3.

before excavation occurs, Spire is to evaluate notifications to determine whether a visual inspection is needed. Staff finds that Spire violated 20 CSR 4240-40.030(12)(I)1, because it did not carry out the provisions of its damage prevention program. Staff recommends that Spire's damage prevention program be amended to include all criteria in 20 CSR 4240-40.030(12)(I)4., and Staff has additional criteria that it recommends Spire consider in determining the need for, and extent of, inspections. For further information about this finding, Staff directs the Commission to section III.C of its report.

11. Commission Rule 20 CSR 4240-40.030(12)(C)1. requires natural gas operators to prepare and follow a manual of written procedures for conducting operations and maintenance activities and for emergency response. Commission Rule 20 CSR 4240-40.030(12)(C)2.A. requires that the manual required by 20 CSR 4240-40.030(12)(C)1. include procedures for operating, maintaining, and repairing the pipeline in accordance with sections 12, 13, and 14 of the Commission's gas transportation safety standards. At the time of the incident, Spire had a procedures manual, however Staff found that Spire violated 20 CSR 4240-40.030(12)(C)2.A., because this manual does not include oversight procedures with respect to work performed by Spire's contract locators. Commission rule 20 CSR 4240-40.030(12)(B)3. states that natural gas operators are responsible for ensuring that all work completed on its pipelines by contractors complies with this rule. Staff recommends that Spire create or modify existing procedures to define the process of how Spire oversees and inspects the work of its contract locators as well as develop and implement procedures for conducting random field quality audits of locates. For further information about this finding, Staff directs the Commission to Section III.F of its report.

12. Commission Rule 20 CSR 4240-40.020(3)(C) requires natural gas operators to revise or confirm their initial telephonic notice to the National Response Center¹⁶ within 48 hours (or to the extent practical) after discovery of a federal incident. This incident qualified as a federal incident. Spire confirmed its initial telephonic notice approximately 99 hours after discovery of the incident. Staff did not find a violation, but it recommends that Spire review, evaluate, and update, as necessary, its reporting procedures to ensure that in the future, it confirms initial telephone notice within 48 hours as required by 20 CSR 4240-40.020(3)(C). For further information about this finding, Staff directs the Commission to section III.B of its report.

13. Commission Rule 20 CSR 4240-40.030(12)(L) requires natural gas operators to establish procedures for analyzing accidents in order to determine causes and minimize possibility of recurrences. Spire has established procedures – which Staff did not find to be in violation – but Staff recommends that Spire create or adopt a standardized, rigorous root cause analysis procedure to use when investigating failures to determine the primary reason(s) an incident occurred and to identify behavioral changes that would reasonably be expected to avoid the same outcome in the future. For further information about this finding, Staff directs the Commission to section III.G of its report.

14. Commission Rule 20 CSR 4240-40.020(6)(A) requires natural gas operators to submit a U.S. Department of Transportation Form PHMSA F7100.1 as soon as practicable (but not more than 30 days) after detection of a reportable incident on a

¹⁶ The National Response Center is a federal emergency call center that fields initial reports of gas, oil, chemical, radiological, and biological discharges into the environment and forwards information to the appropriate state and federal agencies for response.

distribution pipeline system. Commission Rule 20 CSR 4240-40.020(6)(B) requires natural gas operators to file supplemental reports, as deemed necessary. Spire submitted the report required by 20 CSR 4240-40.020(6)(A), but Staff found an error that requires Spire to file a supplemental report, pursuant to 20 CSR 4240-40.020(6)(B). Staff recommends that Spire update Part G3 of Form PHMSA F7100.1, Incident Report, stating that Spire received an initial notification through the MOCS requesting the marking of underground utilities. For further information about this finding, Staff directs the Commission to section III.G of its report.

15. Commission Rule 20 CSR 4240-40.030(17)(D)2. Requires operators of natural gas distribution systems to consider threats to the pipeline in its Distribution Integrity Management Program (“DIMP”), including the threat of excavation damage.

** [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] ^{** 17} Staff is concerned that by attributing the incident cause solely to the excavator’s actions, Spire will not address the risks associated with the contributing factors of incorrect mapping or insufficient procedures going forward. Staff recommends that Spire consider all factors contributing to incidents in its DIMP. For further information about this finding, Staff directs the Commission to section III.H of its report.

¹⁷ DR 56.

16. Staff identified violations of the Commission's pipeline safety standards, as promulgated in 20 CSR 4240-40.030, that are set out in the attached Gas Incident Report which warrant the Staff Counsel's Office filing a Complaint against Spire. Staff also set out in the Gas Incident Report recommendations related to the incident and the violations of the Commission's pipeline safety standards and drug and alcohol testing, as promulgated in 20 CSR 4240-40.030, which require improvement by Spire. The intended effect of Staff's recommendations is to prevent a recurrence of the incident and the violations. Although Staff recommends that the Commission order Spire to file an action plan by December 31, 2021, which addresses Staff's recommendations, Staff will address this item and its other recommendations in its Complaint to follow the filing of Staff's Gas Incident Report.

WHEREFORE, for the above-stated reasons, Staff requests that the Commission order Spire to respond to Staff's report, and to order Spire to file an action plan by December 31, 2021 to implement Staff's recommendations. Staff intends to follow-up this filing with filing a Complaint against Spire which will contain Staff's recommendations in addition to identifying and addressing violations of Commission pipeline safety rules.

Respectfully submitted,

/s/ Karen E. Bretz

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CERTIFICATE OF SERVICE

I certify that a copy of the foregoing was served via e-mail on counsel for the parties of record to this case on this 30th day of June, 2021.

/s/ Karen Bretz