Title 20 – DEPARTMENT OF COMMERCE AND INSURANCE
Division 4240 – Public Service Commission
Chapter 40 – Gas Utilities and Gas Safety Standards

ORDER OF RULEMAKING

By the authority vested in the Public Service Commission under sections 386.250, 386.310, 393.140, RSMo 2016, the commission amends a rule as follows:

20 CSR 4240-40.030 is amended.

A notice of proposed rulemaking containing the text of the proposed amendment was published in the *Missouri Register* on June 1, 2026 (51 MoReg 699-709). Those sections with changes are reprinted here. This proposed amendment becomes effective thirty (30) days after publication in the *Code of State Regulations*.

SUMMARY OF COMMENTS: The public comment period ended June 30, 2026, and the commission held a public hearing on the proposed amendment on July 9, 2026. The commission received two (2) written comments in support of the amendment and one (1) verbal comment at the hearing suggesting amendments due to scrivener's errors.

COMMENT #1**:** J. Scott Stacey on behalf of the staff of the commission filed written comments and commented at the hearing in support of the proposed amendment with certain changes. Staff noted that the proposed amendments were intended to update the Missouri regulations to the most current federal regulations. Staff notes that there were scrivener's errors in parts (3)(I)4.B.(III) and (3)(I)4.B.(IV), that should be corrected to be consistent with 49 CFR 192.121(d)(2). Those errors were that where part (3)(I)4.B.(III) refers to "24 inches (24")" it should have said "six inches (6")". Part (3)(I)4.B.(IV) should be corrected so that it refers to subparagraph "B" instead of subparagraph "A".
RESPONSE AND EXPLANATION OF CHANGES: The commission thanks its staff for its work updating the gas safety rules. The commission will make changes to parts (3)(I)4.B.(III) and (3)(I)4.B.(IV) as recommended in order to correct the scrivener's errors and to be consistent with 49 CFR 192.121(d)(2).

COMMENT #2**:** Jermaine Grubbs on behalf of Union Electric Company d/b/a Ameren Missouri submitted a written comment in support of the proposed changes and particularly supporting the incorporation of PA-11 and PA-12 materials for use in systems that can operate up to 250 psi into 20 CSR 4240-40.030.
RESPONSE: The commission thanks Ameren Missouri for its comment. No changes were made as a result of this comment.

20 CSR 4240-40.030 Safety Standards—Transportation of Gas by Pipeline

(3) Pipe Design.

(I) Design of Plastic Pipe. (192.121)

1. Design Pressure. The design pressure for plastic pipe is determined in accordance with either of the following formulas:

$$P = 2S\left(\frac{t}{D-t}\right) \times DF$$

$$P = \left(\frac{2S}{SDR-1}\right) \times DF$$

where—

P = Design pressure, psi (kPa) gauge;

S = For thermoplastic pipe, the hydrostatic design base (HDB) is determined in accordance with the listed specification at a temperature equal to 73 °F (23 °C), 100 °F (38 °C), 120 °F (49 °C), or 140 °F (60 °C). In the absence of an HDB established at the specified temperature, the HDB of a higher temperature may be used in determining a design pressure rating at the specified temperature by arithmetic interpolation using the procedure in Part D.2. of PPI TR–3, HDB/PDB/SDB/MRS Policies (incorporated by reference in 49 CFR 192.7 and adopted in subsection (1)(D));

t = Specified wall thickness, inches (mm);

D = Specified outside diameter, inches (mm);

SDR = Standard dimension ratio, the ratio of the average specified outside diameter to the minimum specified wall thickness, corresponding to a value from a common numbering system that was derived from the American National Standards Institute preferred number series 10; and

DF = Design Factor, a maximum of 0.32 unless otherwise specified for a particular material in this subsection.

2. General Requirements for Plastic Pipe and Components.

A. Except as provided in paragraphs (3)(I)4.-5., the design pressure may not exceed a gauge pressure of 100 psi (689 kPa) gauge for plastic pipe.

B. Plastic pipe may not be used where operating temperatures of the pipe will be—

(I) Below -20 °F (-29 °C), or -40 °F (-40 °C) if all pipe and pipeline components whose operating temperature will be below -20 °F (-29 °C) have a temperature rating by the manufacturer consistent with that operating temperature; or

(II) Above the temperature at which the HDB used in the design formula under this subsection is determined.

C. The wall thickness for thermoplastic pipe may not be less than 0.062 inches (1.57 mm).

D. All plastic pipe must have a listed HDB in accordance with PPI TR–4 (incorporated by reference in 49 CFR 192.7 and adopted in subsection (1)(D)).

3. Polyethylene (PE) Pipe Requirements.

A. The federal regulation at 49 CFR 192.121(c)(1) is not adopted in this rule. (This federal regulation is for PE pipe produced after July 14, 2004, but before January 22, 2019.)

B. For PE pipe produced on or after January 22, 2019, a DF of 0.40 may be used in the design formula, provided—

(I) The design pressure does not exceed 100 psig;

(II) The material designation code is PE2708 or PE4710;

(III) The pipe has a nominal size (IPS or CTS) of twenty-four inches (24") or less; and

(IV) The wall thickness for a given outside diameter is not less than that listed in Table 1 to this part (3)(I)3.B.(IV):

Table 1 to Part (3)(I)3.B.(IV)

PE Pipe: Minimum Wall Thickness and SDR Values		
Pipe Size (inches)	Minimum Wall Thickness (inches)	Corresponding Dimension Ratio (values)
½" CTS	0.090	7
½" IPS	0.090	9.3
¾" CTS	0.090	9.7
¾" IPS	0.095	11

1" CTS	0.099	11
1" IPS	0.119	11
1 ¼" CTS	0.121	11
1 ¼" IPS	0.151	11
1 ½" IPS	0.173	11
2"	0.216	11
3"	0.259	13.5
4"	0.265	17
6"	0.315	21
8"	0.411	21
10"	0.512	21
12"	0.607	21
16"	0.762	21
18"	0.857	21
20"	0.952	21
22"	1.048	21
24"	1.143	21

4. Polyamide (PA-11) Pipe Requirements.

A. The federal regulation at 49 CFR 192.121(d)(1) is not adopted in this rule. (This federal regulation is for PA-11 pipe produced after January 23, 2009, but before January 22, 2019.)

B. For PA-11 pipe produced on or after January 22, 2019, a DF of 0.4 may be used in the design formula, provided—

(I) The design pressure does not exceed 250 psig;

(II) The material designation code is PA32316;

(III) The pipe has nominal size (IPS or CTS) of six inches (6") or less; and

(IV) The wall thickness for a given outside diameter is not less than that listed in Table 2 to this part (3)(I)4.B.(IV):

Table 2 to Part (3)(I)4.B.(IV)

PA-11 pipe: minimum wall thickness and SDR values		
Pipe size (inches)	Minimum wall thickness (inches)	Corresponding dimension ratio (values)
1/2" CTS	0.090	7.0
1/2" IPS	0.090	9.3
3/4" CTS	0.090	9.7
3/4" IPS	0.095	11
1" CTS	0.099	11
1" IPS	0.119	11
1 1/4" CTS	0.121	11
1 1/4" IPS	0.151	11
1 1/2" IPS	0.173	11
2" IPS	0.216	11
3" IPS	0.259	13.5
4" IPS	0.333	13.5
6" IPS	0.491	13.5

5. Polyamide (PA-12) pipe requirements. For PA-12 pipe produced on or after January 22, 2019, a DF of 0.4 may be used in the design formula, provided—

A. The design pressure does not exceed 250 psig;

B. The material designation code is PA42316;

C. The pipe has a nominal size (IPS or CTS) of 6 inches (6") or less; and

D. The minimum wall thickness for a given outside diameter is not less than listed in Table 3 to this part (3)(I)5.D:

Table 3 to Part (3)(I)5.D.

PA-12 Pipe: minimum wall thickness and SDR values		
Pipe size (inches)	Minimum wall thickness (inches)	Corresponding dimension ratio (values)
1/2 " CTS	0.090	7
1/2 " IPS	0.090	9.3
3/4 " CTS	0.090	9.7
3/4 " IPS	0.095	11
1" CTS	0.099	11
1" IPS	0.119	11
1 1/4 " CTS	0.121	11
1 1/4 " IPS	0.151	11
1 1/2 " IPS	0.173	11
2" IPS	0.216	11
3" IPS	0.259	13.5
4" IPS	0.333	13.5
6" IPS	0.491	13.5

6. The federal regulation at 49 CFR 192.121(f) is not adopted in this rule. (This federal regulation addresses design requirements for reinforced thermosetting plastic pipe.)