

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

In the Matter of a Review of the Commission's)
Natural Gas Safety Rules)

File No. GW-2020-XXXX

**STAFF MOTION FOR ORDER TO OPEN DOCKET FOR REVIEW OF THE
COMMISSION'S NATURAL GAS SAFETY RULES AND TO INVITE STAKEHOLDER
RESPONSES REGARDING PROPOSED RULE AMENDMENTS**

COMES NOW the Staff of the Missouri Public Service Commission, by and through undersigned counsel, and for its *Motion For Order to Open Docket For Review of the Commission's Natural Gas Safety Rules and to Invite Stakeholder Responses Regarding Proposed Rule Amendments* ("Motion"), states as follows:

1. Staff requests the Commission open a working docket for the purpose of updating the Commission's gas safety rules to reflect the most recent U.S. Department of Transportation rule changes and to harmonize existing natural gas safety rules and federal rule updates consistent with the transition of the Missouri Public Service Commission from the Department of Economic Development ("DED") to the Department of Commerce and Insurance ("DCI").

2. The full text of proposed amendments, appended hereto as Attachment A, include portions of Commission Rules 4 CSR 240-40.020, 4 CSR 240-40.030, and 4 CSR 240-40.080.

3. The proposed changes to the current Commission rules are shown on Attachment A as follows:

- i. For changes to address Federal amendments of 49 CFR parts 40, 192, and 199: brackets, italics and yellow highlighting are used to

show text to be deleted, and bold with yellow highlighting shows text to be added.

- ii. For changes to adopt additional portions of Federal rules and to make clarifications and editorial changes: brackets, italics and green highlighting are used to show text to be deleted, and bold with green highlighting shows text to be added.
- iii. For changes to reflect the move from DED to DCI: brackets, italics and pink highlighting are used to show text to be deleted, and bold with pink highlighting shows text to be added.

4. Staff's Motion further requests the Commission invite stakeholders to respond with comments regarding the proposed gas safety rule amendments and the cost impact, if any, of the proposed gas safety rule amendments by September 16, 2019. If a cost impact is included, the comment should also indicate if there is any cost impact due to proposed amendments highlighted in green and pink since any costs due to proposed amendments highlighted in yellow were already considered during the Federal amendment rulemakings.

5. Attached is an updated service list of all stakeholders from the previous gas safety rules working docket, File No. GW-2017-0347, appended hereto as Attachment B. Staff requests the Commission direct its data center to provide notice of this working case and invitation to comment to all stakeholders listed on Attachment B.

WHEREFORE, Staff respectfully requests the Commission to issue an order that:

- 1) opens a working docket to address the attached proposed natural gas safety rule amendments with notice provided to those in the attached service list, 2) invites

stakeholders in this docket to submit comments regarding the proposed rule amendments and their cost impact, if any, and to do so by September 16, 2019; and 3) grant such other and further relief as the Commission considers just in the circumstances.

Respectfully submitted,

/s/ Robert S. Berlin

Robert S. Berlin
Deputy Staff Counsel
Missouri Bar No. 51709
Attorney for the Staff of the
Missouri Public Service Commission
P. O. Box 360
Jefferson City, MO 65102
(573) 526-7779 (Telephone)
(573) 751-9285 (Fax)
bob.berlin@psc.mo.gov (e-mail)

CERTIFICATE OF SERVICE

I hereby certify that copies of the foregoing have been mailed, hand-delivered, transmitted by facsimile or electronically mailed to all parties of record this 12th day of August, 2019.

/s/ Robert S. Berlin

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

20 CSR 4240-40.020 Incident, Annual, and Safety-Related Condition Reporting Requirements. The Commission is amending sections (2), (4), (5), (6), (7), (9), (10), (11) and (12).

PURPOSE: This amendment proposes to amend the rule to adopt additional portions of 49 CFR part 191 and makes clarification and editorial changes.

(2) Definitions. (191.3) As used in this rule and in the PHMSA Forms referenced in this rule—

(D) Federal incident means any of the following events:

1. An event that involves a release of gas from a pipeline, **gas from an underground natural gas storage facility, liquefied natural gas, liquefied petroleum gas, refrigerant gas, or gas from an LNG facility,** and that results in one (1) or more of the following consequences:

A. A death or personal injury necessitating inpatient hospitalization; or

B. Estimated property damage of fifty thousand dollars (\$50,000) or more, including loss to the operator and others, or both, but excluding the cost of gas lost; or

C. Unintentional estimated gas loss of three (3) million cubic feet or more; **[or]**

2. An event that results in an emergency shutdown of an LNG facility or an underground natural gas storage facility. Activation of an emergency shutdown system for reasons other than an actual emergency does not constitute an incident; or

[2] 3. An event that is significant, in the judgment of the operator, even though it did not meet the criteria of paragraph (2)(D)1. **or (2)(D)2;**

(N) Transportation of gas means the gathering, transmission, or distribution of gas by pipeline, or the storage of gas, **in** or affecting **intrastate,** interstate, **or** foreign commerce; and

(4) Immediate Notice of Missouri Incidents.

(A) Within two (2) hours following discovery by the operator, or as soon thereafter as practicable if emergency efforts to protect life and property would be hindered, each gas operator must notify designated commission personnel by telephone of the following events within areas served by the operator:

1. An event that involves a release of gas involving the operator's actions or pipeline system, or where there is a suspicion by the operator that the event may involve a release of gas involving the operator's actions or pipeline system, and results in one (1) or more of the following consequences—

A. A death;

B. A personal injury involving medical care administered in an emergency room or health care facility, whether inpatient or outpatient, beyond initial treatment and prompt release after evaluation by a health care professional; or

C. Estimated property damage of ten thousand dollars (\$10,000) or more, including loss to the gas operator or others, or both, and including the cost of gas lost; **[or]**

2. An event that is significant, in the judgement of the operator, even though it did not meet the criteria of paragraph (4)(A)1. **;** **or**

3. An event that is reported as a Federal incident under section (3).

(5) Report Submission Requirements. (191.7)

(B) Missouri Incident Reports.

1. This subsection applies to events that meet the criteria in subsection (4)(A) but are not a federal incident reported under subsection (5)(A). Within thirty (30) days of a telephone notification made under subsection (4)(A), each gas operator must submit **the applicable** U.S. Department of Transportation Form PHMSA F 7100.1, **[or]** PHMSA F 7100.2, **[as applicable,]** **or PHMSA F 7100.3** to designated commission personnel. Additional information required in subsections (6)(B) and (9)(B) for federal incidents is also required for these events.

2. The incident report forms for gas distribution systems (PHMSA F 7100.1, revised October 2014), **[and]** gas transmission and gathering pipeline systems (PHMSA F 7100.2, revised October 2014), **and LNG facilities (PHMSA F 7100.3, revised October 2014)** are incorporated by reference **in subsection (5)(G).** *[The forms are published by the U.S. Department of Transportation Office of Pipeline Safety, PHP-10, 1200 New Jersey Avenue SE, Washington DC 20590-0001. The forms are available at www.phmsa.dot.gov/pipeline/library/forms or upon request from the pipeline safety program manager at the address given in subsection (5)(E). The PHMSA F 7100.1 form does not include any amendments or additions to the October 2014 version. The PHMSA F 7100.2 form does not include any amendments or additions to the October 2014 version.]*

(G) Forms Incorporated by Reference.

1. The following forms are incorporated by reference and made part of this rule.

A. U.S. Department of Transportation Form PHMSA F 1000.1, revised April 2019. The PHMSA F 1000.1 form is the Operator Identification (OPID) Assignment Request form and does not include any amendments or additions to the April 2019 version.

B. U.S. Department of Transportation Form PHMSA F 1000.2, revised April 2019. The PHMSA F 1000.2 form is the Operator Registry Notification form for reporting changes including operator name change, change in entity operating, shared safety program change, change in ownership for gas facilities, construction or rehabilitation of gas facilities, change in ownership for LNG, and construction for LNG. The PHMSA F 1000.2 form does not include any amendments or additions to the April 2019 version.

C. U.S. Department of Transportation Form PHMSA F 7100.1, revised October 2014. The PHMSA F 7100.1 form is the incident report form for gas distribution systems and does not include any amendments or additions to the October 2014 version.

D. U.S. Department of Transportation Form PHMSA F 7100.1-1, revised October 2018. The PHMSA F 7100.1-1 form is the annual report form for gas distribution systems and does not include any amendments or additions to the October 2018 version.

E. U.S. Department of Transportation Form PHMSA F 7100.1-2, revised October 2014. The PHMSA F 7100.1-2 form is the report form for mechanical fitting failures and does not include any amendments or additions to the October 2014 version.

F. U.S. Department of Transportation Form PHMSA F 7100.2, revised October 2014. The PHMSA F 7100.2 form is the incident report form for gas transmission and gathering pipeline systems and does not include any amendments or additions to the October 2014 version.

G. U.S. Department of Transportation Form PHMSA F 7100.2-1, revised October 2014. The PHMSA F 7100.2-1 form is the annual report form for gas transmission and gathering pipeline systems and does not include any amendments or additions to the October 2014 version.

H. U.S. Department of Transportation Form PHMSA F 7100.3, revised October 2014. The PHMSA F 7100.3 form is the incident report form for LNG facilities and does not include any amendments or additions to the October 2014 version.

I. U.S. Department of Transportation Form PHMSA F 7100.3-1, revised August 2017. The PHMSA F 7100.3-1 form is the annual report form for LNG facilities and does not include any amendments or additions to the August 2017 version.

J. U.S. Department of Transportation Form PHMSA 7100.4-1, approved August 2017. The PHMSA F 7100.4-1 form is the annual report form for underground natural gas storage facilities and does not include any amendments or additions to the August 2017 version.

2. The forms listed in paragraph (5)(D)1. are published by the U.S. Department of Transportation Office of Pipeline Safety, PHP-10, 1200 New Jersey Avenue SE, Washington DC 20590-0001. The forms are available at www.phmsa.dot.gov/forms/pipeline-forms or upon request from the pipeline safety program manager at the address given in subsection (5)(E).

(6) Distribution System — Federal Incident Report. (191.9)

(A) 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). See the report submission requirements in subsection (5)(A). The incident report form (revised October 2014) is incorporated by reference **in subsection (5)(G).** *[and is published by U.S. Department of Transportation Office of Pipeline Safety, PHP-10, 1200 New Jersey Avenue SE, Washington DC 20590-0001. The form is available at www.phmsa.dot.gov/pipeline/library/forms or upon request from the pipeline safety program manager at the address given in subsection (5)(E). The form does not include any amendments or additions to the October 2014 version.]*

(7) Distribution System — Annual Report and Mechanical Fitting Failure Reports.

(A) Annual Report. (191.11)

1. 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. See the report submission requirements in subsection (5)(A).

2. The annual report form (revised **January 2017** **October 2018**) is incorporated by reference **in subsection (5)(G).** **[and is published by U.S. Department of Transportation Office of Pipeline Safety, PHP-10, 1200 New Jersey Avenue SE, Washington DC 20590-0001. The form is available at www.phmsa.dot.gov/pipeline/library/forms or upon request from the pipeline safety program manager at the address given in subsection (5)(E). The form does not include any amendments or additions to the January 2017 version.]**

3. The annual report requirement in this subsection does not apply to a master meter system or to a petroleum gas system which serves fewer than one hundred (100) customers from a single source.

(B) Mechanical Fitting Failure Reports. (191.12)

1. Each mechanical fitting failure, as required by (**4 CSR 240/20 CSR 4240**)-40.030(17)(E) (192.1009), must be submitted on a Mechanical Fitting Failure Report Form (U.S. Department of Transportation Form PHMSA F 7100.1–2). An operator must submit a mechanical fitting failure report for each mechanical fitting failure that occurs within a calendar year not later than March 15 of the following year **[(for example, all mechanical failure reports for calendar year 2012 must be submitted no later than March 15, 2013)].** Alternatively, an operator may elect to submit its reports throughout the year. In addition, an operator must also report this information to designated commission personnel.

2. The Mechanical Fitting Failure Report Form (October 2014) is incorporated by reference **in subsection (5)(G).** **[and is published by the U.S. Department of Transportation Office of Pipeline Safety, PHP-10, 1200 New Jersey Avenue SE, Washington DC 20590-0001. The form is available at www.phmsa.dot.gov/pipeline/library/forms or upon request from the pipeline safety program manager at the address given in subsection (5)(E). The form does not include any amendments or additions to the October 2014 version.]**

(9) Transmission **[and Gathering]** Systems; **Gathering Systems; Liquefied Natural Gas Facilities; and Underground Natural Gas Storage Facilities** — Federal Incident Report. (191.15)

(A) Transmission **[and]** **or** Gathering. Each operator of a transmission or a gathering pipeline system must submit U.S. Department of Transportation Form PHMSA F 7100.2 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). See the report submission requirements in subsection (5)(A). The incident report form (revised October 2014) is incorporated by reference **in subsection (5)(G).** **[and is published by U.S. Department of Transportation Office of Pipeline Safety, PHP-10, 1200 New Jersey Avenue SE, Washington DC 20590-0001. The form is available at www.phmsa.dot.gov/pipeline/library/forms or upon request from the pipeline safety program manager at the address given in subsection (5)(E). The form does not include any amendments or additions to the October 2014 version.]**

(B) *[Supplemental Report. When additional related information is obtained after a report is submitted under subsection (9)(A), the operator must make a supplemental report, as soon as practicable, with a clear reference by date to the original report.]* **LNG. Each operator of a liquefied natural gas plant or facility must submit U.S. Department of Transportation Form PHMSA F 7100.3 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). See the report submission requirements in subsection (5)(A). The incident report form (revised October 2014) is incorporated by reference in subsection (5)(G).**

(C) Underground natural gas storage facility. Each operator of an underground natural gas storage facility must submit U.S. Department of Transportation Form PHMSA F 7100.2 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). The incident report form (revised October 2014) is incorporated by reference in subsection (5)(G).

(D) Supplemental Report. When additional related information is obtained after a report is submitted under subsection (9)(A), (9)(B), or (9)(C), the operator must make a supplemental report as soon as practicable with a clear reference by date to the original report.

(10) Transmission *[and Gathering]* Systems; **Gathering Systems; Liquefied Natural Gas Facilities; and Underground Natural Gas Storage Facilities** — Annual Report. (191.17)

(A) Transmission *[and]* **or** Gathering. Each operator of a transmission or a gathering pipeline system must submit an annual report for that system on U.S. Department of Transportation Form PHMSA F 7100.2-1. This report must be submitted each year, not later than March 15, for the preceding calendar year. See the report submission requirements in subsection (5)(A). The annual report form (revised October 2014) is incorporated by reference **is incorporated by reference in subsection (5)(G)** *[and is published by U.S. Department of Transportation Office of Pipeline Safety, PHP-10, 1200 New Jersey Avenue SE, Washington DC 20590-0001. The form is available at www.phmsa.dot.gov/pipeline/library/forms or upon request from the pipeline safety program manager at the address given in subsection (5)(E). The form does not include any amendments or additions to the October 2014 version.]*

(B) *[(Reserved)]* **LNG. Each operator of a liquefied natural gas facility must submit an annual report for that system on U.S. Department of Transportation Form PHMSA F 7100.3-1 This report must be submitted each year, not later than March 15, for the preceding calendar year. See the report submission requirements in subsection (5)(A). The annual report form (revised August 2017) is incorporated by reference in subsection (5)(G).**

(C) Underground natural gas storage facility. Each operator of an underground natural gas storage facility must submit an annual report on U.S. Department of Transportation Form PHMSA 7100.4-1 by March 15, for the preceding calendar year. See the report submission requirements in subsection (5)(A). The annual report form (August 2017) is incorporated by reference in subsection (5)(G).

(11) National Registry of Pipeline and LNG Operators (191.22)

(A) OPID Request.

1. Effective January 1, 2012, each operator of a gas pipeline, gas pipeline facility, underground natural gas storage facility, LNG plant or LNG facility must obtain from PHMSA an Operator Identification Number (OPID). An OPID is assigned to an operator for the pipeline or pipeline system for which the operator has primary responsibility. To obtain an OPID, an operator must complete an OPID Assignment Request (U.S. Department of Transportation Form PHMSA F 1000.1) through the National Registry of Pipeline and LNG Operators at <http://portal.phmsa.dot.gov/pipeline> unless an alternative reporting method is authorized in accordance with subsection (5)(D). A copy of each submission to PHMSA must also be submitted concurrently to designated commission personnel—see addresses in subsection (5)(E).

2. The OPID Assignment Request form (~~May 2015~~**April 2019**) is incorporated by reference **in subsection (5)(G).** ~~[and is published by U.S. Department of Transportation Office of Pipeline Safety, PHP-10, 1200 New Jersey Avenue SE, Washington DC 20590-0001. The form is available at www.phmsa.dot.gov/pipeline/library/forms or upon request from the pipeline safety program manager at the address given in subsection (5)(E). The form does not include any amendments or additions to the May 2015 version.]~~

(D) Reporting. An operator must use the OPID issued by PHMSA for all reporting requirements covered under (~~4 CSR 240~~**20 CSR 4240**)-40.020, ~~[and]~~ 40.030, **40.033, and 40.080**, and for submissions to the National Pipeline Mapping System.

(12) Reporting Safety-Related Conditions. (191.23)

(A) Except as provided in subsection (12)(B), each operator must report in accordance with section (13) (191.25) the existence of any of the following safety-related conditions involving facilities in service:

1. In the case of the pipeline (other than an LNG facility) that operates at a hoop stress of twenty percent (20%) or more of its specified minimum yield strength, general corrosion that has reduced the wall thickness to less than that required for the maximum allowable operating pressure and localized corrosion pitting to a degree where leakage might result;

2. In the case of an underground natural gas storage facility, including injection, withdrawal, monitoring, or observation well, general corrosion that has reduced the wall thickness to less than that required for the maximum well operating pressure, and localized corrosion pitting to a degree where leakage might result.

[2] 3. Unintended movement or abnormal loading by environmental causes, ~~[for instance,]~~ **such as** an earthquake, landslide or flood, that impairs the serviceability of a pipeline **or the structural integrity or reliability of an underground natural gas storage facility, including injection, withdrawal, monitoring, or observation well for an underground natural gas storage facility, or LNG facility that contains, controls, or processes gas or LNG;**

4. Any crack or other material defect that impairs the structural integrity or reliability of an underground natural gas storage facility or LNG facility that contains, controls, or processes gas or LNG;

[3] 5. Any material defect or physical damage that impairs the serviceability of a pipeline that operates at a hoop stress of twenty percent (20%) or more of its specified minimum yield strength **or underground natural gas storage facility, including injection, withdrawal, monitoring, or observations well for an underground natural gas storage facility;**

[4] 6. 4. Any malfunction or operating error that causes the pressure of [a] :

A. A pipeline to rise above its maximum allowable operating pressure plus the buildup allowed for operation of pressure limiting or control devices;

B. An underground natural gas storage facility to rise above its maximum well operating pressure plus the margin (build-up) allowed for operation of pressure limiting or control devices;

C. An LNG facility that contains or processes gas or LNG to rise above its working pressure plus the margin (build-up) allowed for operation of pressure limiting or control devices;

[5] 7. A leak in a pipeline **or an underground natural gas storage facility, including injection, withdrawal, monitoring, or observation well for an underground natural gas storage facility, or LNG facility that contains or processes gas or LNG** that constitutes an emergency; [and]

8. Inner tank leakage, ineffective insulation, or frost heave that impairs the structural integrity of an LNG storage tank; and

[6] 9. Any safety-related condition that could lead to an imminent hazard and causes (either directly or indirectly by remedial action of the operator), for purposes other than abandonment, a twenty percent (20%) or more reduction in operating pressure or shutdown of operation of a pipeline **or an underground natural gas storage facility, including injection, withdrawal, monitoring, or observation well for an underground natural gas storage facility, or an LNG facility that contains or processes gas or LNG.**

AUTHORITY: sections 386.250, 386.310, and 393.140, RSMo 2016. Original rule filed Feb. 5, 1970, effective Feb. 26, 1970. Amended: Filed Dec. 19, 1975, effective Dec. 29, 1975. Amended: Filed Feb. 8, 1985, effective Aug. 11, 1985. Rescinded and readopted: Filed May 17, 1989, effective Dec. 15, 1989. Amended: Filed Oct. 7, 1994, effective May 28, 1995. Amended: Filed April 9, 1998, effective Nov. 30, 1998. Amended: Filed Dec. 14, 2000, effective May 30, 2001. Amended: Filed Oct. 15, 2007, effective April 30, 2008. Amended: Filed Nov. 29, 2012, effective May 30, 2013. Amended: Filed Nov. 14, 2016, effective June 30, 2017. Amended: Filed June 4, 2018, effective Jan. 30, 2019. Amended: Filed Date.*

**Original authority: 386.250, RSMo 1939, amended 1963, 1967, 1977, 1980, 1987, 1988, 1991, 1993, 1995, 1996; 386.310, RSMo 1939, amended 1979, 1989, 1996; and 393.140, RSMo 1939, amended 1949, 1967.*

Title 20—DEPARTMENT OF COMMERCE AND INSURANCE

Division 4240—Public Service Commission

Chapter 40—Gas Utilities and

Gas Safety Standards

PROPOSED AMENDMENT

20 CSR 4240-40.030 Safety Standards—Transportation of Gas by Pipeline The Commission is amending sections (1), (2), (3), (4), (6), (7), (8), (9), (10), (12) and (13) and amending Appendix B and Appendix E.

PURPOSE: This amendment modifies the rule to address amendments of 49 CFR part 192 promulgated between October 2017 and December 2018, and makes clarification and editorial changes.

(1) General.

(B) Definitions. (192.3) as used in this rule—

1. Abandoned means permanently removed from service;
2. Active corrosion means continuing corrosion that, unless controlled, could result in a condition that is detrimental to public safety;
3. Administrator means the Administrator of the Pipeline and Hazardous Materials Safety Administration of the United States Department of Transportation to whom authority in the matters of pipeline safety have been delegated by the Secretary of the United States Department of Transportation, or his or her delegate;
4. Alarm means an audible or visible means of indicating to the controller that equipment or processes are outside operator-defined, safety-related parameters;
5. Building means any structure that is regularly or periodically occupied by people;
6. Commission means the Missouri Public Service Commission;
7. Control room means an operations center staffed by personnel charged with the responsibility for remotely monitoring and controlling a pipeline facility;
8. Controller means a qualified individual who remotely monitors and controls the safety-related operations of a pipeline facility via a supervisory control and data acquisition (SCADA) system from a control room, and who has operational authority and accountability for the remote operational functions of the pipeline facility;
9. Customer meter means the meter that measures the transfer of gas from an operator to a consumer;
10. Designated commission personnel means the pipeline safety program manager at the address contained in (~~4 CSR 240~~**20 CSR 4240**)-40.020(5)(E) for correspondence;
11. Distribution line means a pipeline other than a gathering or transmission line;
12. Electrical survey means a series of closely spaced pipe-to-soil readings over pipelines which are subsequently analyzed to identify locations where a corrosive current is leaving the pipeline, except that other indirect examination tools/methods can be used for an electrical survey included in the federal regulations in 49 CFR part 192, subpart O and appendix E (incorporated by reference in section (16));

13. Feeder line means a distribution line that has a maximum allowable operating pressure (MAOP) greater than 100 psi (689 kPa) gauge that produces hoop stresses less than twenty percent (20%) of specified minimum yield strength (SMYS);

14. Follow-up inspection means an inspection performed after a repair procedure has been completed in order to determine the effectiveness of the repair and to ensure that all hazardous leaks in the area are corrected;

15. Fuel line means the customer-owned gas piping downstream from the outlet of the customer meter or operator-owned pipeline, whichever is farther downstream;

16. Gas means natural gas, flammable gas, manufactured gas, or gas which is toxic or corrosive;

17. Gathering line means a pipeline that transports gas from a current production facility to a transmission line or main;

18. High-pressure distribution system means a distribution system in which the gas pressure in the main is higher than an equivalent to fourteen inches (14") water column;

19. Hoop stress means the stress in a pipe wall acting circumferentially in a plane perpendicular to the longitudinal axis of the pipe produced by the pressure in the pipe;

20. Listed specification means a specification listed in subsection I. of Appendix B, which is included herein (at the end of this rule);

21. Low-pressure distribution system means a distribution system in which the gas pressure in the main is less than or equal to an equivalent of fourteen inches (14") water column;

22. Main means a distribution line that serves as a common source of supply for more than one (1) service line;

23. Maximum actual operating pressure means the maximum pressure that occurs during normal operations over a period of one (1) year;

24. Maximum allowable operating pressure (MAOP) means the maximum pressure at which a pipeline or segment of a pipeline may be operated under this rule;

25. Municipality means a city, village, or town;

26. Operator means a person who engages in the transportation of gas;

27. Person means any individual, firm, joint venture, partnership, corporation, association, county, state, municipality, political subdivision, cooperative association, or joint stock association, and including any trustee, receiver, assignee, or personal representative of them;

28. Petroleum gas means propane, propylene, butane (normal butane or isobutanes), and butylene (including isomers), or mixtures composed predominantly of these gases, having a vapor pressure not exceeding 208 psi (1434 kPa) gauge at 100°F (38°C);

29. PHMSA means the Pipeline and Hazardous Materials Safety Administration of the United States Department of Transportation;

30. Pipe means any pipe or tubing used in the transportation of gas, including pipe-type holders;

31. Pipeline means all parts of those physical facilities through which gas moves in transportation, including pipe, valves, and other appurtenances attached to pipe, compressor units, metering stations, regulator stations, delivery stations, holders, and fabricated assemblies;

32. Pipeline environment includes soil resistivity (high or low), soil moisture (wet or dry), soil contaminants that may promote corrosive activity, and other known conditions that could affect the probability of active corrosion;

33. Pipeline facility means new and existing pipelines, rights-of-way, and any equipment, facility, or building used in the transportation of gas or in the treatment of gas during the course of transportation;

34. Reading means the highest sustained reading when testing in a bar hole or opening without induced ventilation;

35. Service line means a distribution line that transports gas from a common source of supply to an individual customer, to two (2) adjacent or adjoining residential or small commercial customers, or to multiple residential or small commercial customers served through a meter header or manifold. A service line ends at the outlet of the customer meter or at the connection to a customer's piping, whichever is further downstream, or at the connection to customer piping if there is no meter;

36. Service regulator means the device on a service line that controls the pressure of gas delivered from a higher pressure to the pressure provided to the customer. A service regulator may serve one (1) customer or multiple customers through a meter header or manifold;

37. SMYS means specified minimum yield strength is—

A. For steel pipe manufactured in accordance with a listed specification, the yield strength specified as a minimum in that specification; or

B. For steel pipe manufactured in accordance with an unknown or unlisted specification, the yield strength determined in accordance with paragraph (3)(D)2. (192.107[b]);

38. Supervisory control and data acquisition (SCADA) system means a computer-based system or systems used by a controller in a control room that collects and displays information about a pipeline facility and may have the ability to send commands back to the pipeline facility;

39. Sustained reading means the reading taken on a combustible gas indicator unit after adequately venting the test hole or opening;

40. Transmission line means a pipeline, other than a gathering line, that—

A. Transports gas from a gathering line or storage facility to a distribution center, storage facility, or large volume customer that is not downstream from a distribution center (A large volume customer may receive similar volumes of gas as a distribution center, and includes factories, power plants, and institutional users of gas.);

B. Operates at a hoop stress of twenty percent (20%) or more of SMYS; or

C. Transports gas within a storage field;

41. Transportation of gas means the gathering, transmission, or distribution of gas by pipeline or the storage of gas, **in or affecting intrastate, interstate, or foreign commerce[in Missouri];**

42. Tunnel means a subsurface passageway large enough for a man to enter;

43. Vault or manhole means a subsurface structure that a man can enter;

44. Weak link means a device or method used when pulling polyethylene pipe, typically through methods such as horizontal directional drilling, to ensure that damage will not occur to the pipeline by exceeding the maximum tensile stresses allowed;

[44] 45. Welder means a person who performs manual or semi-automatic welding;

[45] 46. Welding operator means a person who operates machine or automatic welding equipment; and

[46] 47. Yard line means an underground fuel line that transports gas from the service line to the customer's building. If multiple buildings are being served, building means the building nearest to the connection to the service line. For purposes of this definition, if aboveground fuel line piping at the meter location is located within five feet (5') of a building being served by that meter, it will be considered to the customer's building and no yard line exists. At meter locations where aboveground fuel line piping is located greater than five feet (5') from the building(s) being served, the underground fuel line from the meter to the entrance into the nearest building served by that meter will be considered the yard line and any other lines are not considered yard lines.

(D) Incorporation By Reference of the Federal Regulation at 49 CFR 192.7. (192.7)

1. As set forth in the *Code of Federal Regulations* (CFR) dated October 1, 201**[7/8, and the subsequent amendment 192-124 (published in Federal Register on November 20, 2018, page 83 FR 58694)]**, the federal regulation at 49 CFR 192.7 is incorporated by reference and made a part of this rule. This rule does not incorporate any subsequent amendments to 49 CFR 192.7.

2. The *Code of Federal Regulations* and the *Federal Register* are published by the Office of the Federal Register, National Archives and Records Administration, 8601 Adelphi Road, College Park, MD 20740-6001. The October 1, 201**[7/8]** version of 49 CFR part 192 is available at [\[www.gpo.gov/fdsys/search/showcitation.action\]](https://www.gpo.gov/fdsys/search/showcitation.action) **https://www.govinfo.gov/#citation. The Federal Register publication on page 83 FR 58694 is available at https://www.govinfo.gov/content/pkg/FR-2018-11-20/pdf/2018-24925.pdf.**

3. The regulation at 49 CFR 192.7 provides a listing of the documents that are incorporated by reference partly or wholly in 49 CFR part 192, which is the federal counterpart and foundation for this rule. All incorporated materials are available for inspection from several sources, including the following sources:

A. The Office of Pipeline Safety, Pipeline and Hazardous Materials Safety Administration, 1200 New Jersey Avenue SE, Washington, DC 20590. For more information, contact 202-366-4046 or go to the PHMSA website at www.phmsa.dot.gov/pipeline/regs;

B. The National Archives and Records Administration (NARA). For information on the availability of this material at NARA, go to the NARA website at www.archives.gov/federal-register/cfr/ibr-locations.html or call 202-741-6030 or 866-272-6272; and

C. Copies of standards incorporated by reference can also be purchased or are otherwise made available from the respective standards-developing organizations listed in 49 CFR 192.7.

4. Federal amendment 192-94 (published in Federal Register on June 14, 2004, page 69 FR 32886) moved the listing of incorporated documents to 49 CFR 192.7 from 49 CFR part 192-Appendix A, which is now "Reserved." This listing of documents was in Appendix A to this rule prior to the 2008 amendment of this rule. As of the 2008 amendment, Appendix A to this rule is also "Reserved" and included herein.

(E) Gathering Lines. (192.8 and 192.9)

1. As set forth in the *Code of Federal Regulations* (CFR) dated October 1, 201**[7/8, and the subsequent amendment 192-124 (published in Federal Register on November 20, 2018, page 83 FR 58694)]**, the federal regulations at 49 CFR 192.8 and 192.9 are incorporated by reference and made a part of this rule. This rule does not incorporate any subsequent amendments to 49 CFR 192.8 and 192.9.

2. The *Code of Federal Regulations* is published by the Office of the Federal Register, National Archives and Records Administration, 8601 Adelphi Road, College Park, MD 20740-6001. The October 1, 201[7]8 version of 49 CFR part 192 is available at [\[www.gpo.gov/fdsys/search/showcitation.action\]](http://www.gpo.gov/fdsys/search/showcitation.action) <https://www.govinfo.gov/#citation>. **The Federal Register publication on page 83 FR 58694 is available at <https://www.govinfo.gov/content/pkg/FR-2018-11-20/pdf/2018-24925.pdf>.**

3. The regulations at 49 CFR 192.8 and 192.9 provide the requirements for gathering lines. The requirements for offshore lines are not applicable to Missouri.

(2) Materials.

(D) Plastic Pipe. (192.59)

1. New polyethylene pipe is qualified for use under this rule if—

A. It is manufactured in accordance with a listed specification; *[and]*

B. It is resistant to chemicals with which contact may be anticipated*[.]; and*

C. It is free of visual defects.

2. Used plastic pipe is qualified for use under this rule if—

A. It was manufactured in accordance with a listed specification;

B. It is resistant to chemicals with which contact may be anticipated;

C. It has been used only in *[natural]* gas service;

D. Its dimensions are still within the tolerances of the specification to which it was manufactured;

and

E. It is free of visible defects.

(E) Marking of Materials. (192.63)

1. Except as provided in paragraphs (2)(E)4. **and (2)(E)5.**, each valve, fitting, length of pipe, and other component must be marked*[—*

A. As] as prescribed in the specification or standard to which it was manufactured*[, except that thermoplastic pipe and fittings made of plastic materials other than polyethylene must be marked in accordance with ASTM D 2513-87 (incorporated by reference in 49 CFR 192.7 and adopted in subsection (1)(D)); or*

B. To indicate size, material, manufacturer, pressure rating, temperature rating and, as appropriate, type, grade, and model.]

2. Surfaces of pipe and components that are subject to stress from internal pressure may not be field die stamped.

3. If any item is marked by die stamping, the die must have blunt or rounded edges that will minimize stress concentrations.

4. Paragraph (2)(E)1. does not apply to items manufactured before November 12, 1970, that meet all of the following:

A. The item is identifiable as to type, manufacturer, and model; and

B. Specifications or standards giving pressure, temperature, and other appropriate criteria for the use of items are readily available.

5. All plastic pipe and components must also meet the following requirements:

A. All markings on plastic pipe prescribed in the listed specification and the requirements of subparagraph (2)(E)5.B. must be repeated at intervals not exceeding two feet.

B. Plastic pipe and components manufactured after December 31, 2019 must be marked in accordance with the listed specification.

C. All physical markings on plastic pipelines prescribed in the listed specification and subparagraph (2)(E)5.B. must be legible until the time of installation.

(G) Storage and Handling of Plastic Pipe and Associated Components. (192.67)

Each operator must have and follow written procedures for the storage and handling of plastic pipe and associated components that meet the applicable listed specifications.

(3) Pipe Design.

(I) Design of Plastic Pipe. (192.121)

1. Design Formula. Design formulas for plastic pipe are *[Subject to the limitations of subsection (3)(J), the design pressure for plastic pipe is]* determined in accordance with either of the following formulas:

$$P = 2 S \frac{t}{(D-t)} \times [0.32/DF]$$
$$P = \frac{2 S}{(SDR-1)} \times [0.32/DF]$$

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-3/2008, *HDB/PDB/SDB/MRS Policies* (incorporated by reference in 49 CFR 192.7 and adopted in subsection (1)(D));

t = Specified wall thickness, inches (millimeters);

D = Specified outside diameter, inches (millimeters); and

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.

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

2. General Requirements for Plastic Pipe and Components.

A. 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 millimeters).

D. All plastic pipe must have a listed HDB in accordance with PPI TR-4/2012 (incorporated by reference in 49 CFR 192.7 and adopted in subsection (1)(D)).

3. The federal regulations at 49 CFR 192.121(c) through (f) are not adopted in this rule. (Those federal regulations permit higher design pressures for certain types of thermoplastic pipe.)

(J) *[Design Limitations for Plastic Pipe.]* **Reserved** (192.123)

[1. The design pressure may not exceed a gauge pressure of 100 psi (689 kPa) gauge for plastic pipe used in—

A. Distribution systems; or

B. Classes 3 and 4 locations.

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

A. 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

B. Above the temperature at which the HDB used in the design formula under subsection (3)(I) is determined.

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

4. The federal regulations at 49 CFR 192.123(e) and (f) are not adopted in this rule. (Those federal regulations permit higher design pressures for certain types of thermoplastic pipe.)]

(4) Design of Pipeline Components.

(B) General Requirements. (192.143)

1. Each component of a pipeline must be able to withstand operating pressures and other anticipated loadings without impairment of its serviceability with unit stresses equivalent to those allowed for comparable material in pipe in the same location and kind of service. However, if design based upon unit stresses is impractical for a particular component, design may be based upon a pressure rating established by the manufacturer by pressure testing that component or a prototype of the component.

2. The design and installation of pipeline components and facilities must meet applicable requirements for corrosion control found in section (9).

3. Except for excess flow valves, each plastic pipeline component installed after April 22, 2019 must be able to withstand operating pressures and other anticipated loads in accordance with a listed specification.

(D) Valves. (192.145)

1. Except for cast iron and plastic valves, each valve must meet the minimum requirements of ANSI/API Specification 6D (incorporated by reference in 49 CFR 192.7 and adopted in subsection (1)(D)),

or to a national or international standard that provides an equivalent performance level. A valve may not be used under operating conditions that exceed the applicable pressure-temperature ratings contained in those requirements.

2. Each cast iron and plastic valve must comply with the following:

A. The valve must have a maximum service pressure rating for temperatures that equal or exceed the maximum service temperature; and

B. The valve must be tested as part of the manufacturing, as follows:

(I) With the valve in the fully open position, the shell must be tested with no leakage to a pressure at least one and one-half (1.5) times the maximum service rating;

(II) After the shell test, the seat must be tested to a pressure not less than one and one-half (1.5) times the maximum service pressure rating. Except for swing check valves, test pressure during the seat test must be applied successively on each side of the closed valve with the opposite side open. No visible leakage is permitted; and

(III) After the last pressure test is completed, the valve must be operated through its full travel to demonstrate freedom from interference.

3. Each valve must be able to meet the anticipated operating conditions.

4. No valve having shell (body, bonnet, cover, and/or end flange) components made of ductile iron may be used at pressures exceeding eighty percent (80%) of the pressure ratings for comparable steel valves at their listed temperature. However, a valve having shell components made of ductile iron may be used at pressures up to eighty percent (80%) of the pressure ratings for comparable steel valves at their listed temperature, if —

A. The temperature-adjusted service pressure does not exceed 1,000 psi (7 MPa) gauge; and

B. Welding is not used on any ductile iron component in the fabrication of the valve shells or their assembly.

5. No valve having shell (body, bonnet, cover, and/or end flange) components made of cast iron, malleable iron, or ductile iron may be used in the gas pipe components of compressor stations.

6. Except for excess flow valves, plastic valves installed after April 22, 2019, must meet the minimum requirements of a listed specification. A valve may not be used under operating conditions that exceed the applicable pressure and temperature ratings contained in the listed specification.

(F) Standard Fittings. (192.149)

1. The minimum metal thickness of threaded fittings may not be less than specified for the pressures and temperatures in the applicable standards referenced in this rule or their equivalent.

2. Each steel butt-welding fitting must have pressure and temperature ratings based on stresses for pipe of the same or equivalent material. The actual bursting strength of the fitting must at least equal the computed bursting strength of pipe of the designated material and wall thickness, as determined by a prototype that was tested to at least the pressure required for the pipeline to which it is being added.

3. Plastic fittings installed after April 22, 2019, must meet a listed specification.

(AA) *[Design Pressure of Plastic Fittings. (192.191) Thermoplastic fittings for plastic pipe must conform to ASTM D2513-99 (incorporated by reference in 49 CFR 192.7 and adopted in subsection (1)(D)) for plastic materials other than polyethylene or ASTM D2513-09A (incorporated by reference in 49 CFR 192.7*

and adopted in subsection (1)(D)) for polyethylene plastic materials.] Risers Installed After January 22, 2019. (192.204)

1. Riser designs must be tested to ensure safe performance under anticipated external and internal loads acting on the assembly.

2. Factory assembled anodeless risers must be designed and tested in accordance with ASTM F1973–13 (incorporated by reference in 49 CFR 192.7 and adopted in subsection (1)(D)).

3. All risers used to connect regulator stations to plastic mains must be rigid and designed to provide adequate support and resist lateral movement. Anodeless risers used in accordance with this paragraph must have a rigid riser casing.

(6) Joining of Materials Other Than by Welding.

(F) Plastic Pipe (192.281)

1. General. A plastic pipe joint that is joined by solvent cement, adhesive, or heat fusion may not be disturbed until it has properly set. Plastic pipe may not be joined by a threaded joint or miter joint.

2. Solvent cement joints. Each solvent cement joint on plastic pipe must comply with the following:

A. The mating surfaces of the joint must be clean, dry, and free of material which might be detrimental to the joint;

B. The solvent cement must conform to ASTM D[2513-99/2564-12 for PVC (incorporated by reference in 49 CFR 192.7 and adopted in subsection (1)(D)); and

C. The joint may not be heated **or cooled** to accelerate the setting of the cement.

3. Heat-fusion joints. Each heat-fusion joint on *[plastic]* a **PE** pipe **or component, except for electrofusion joints,** must comply with **ASTM F2620-12 (incorporated by reference in 49 CFR 192.7 and adopted in subsection (1)(D)) and** the following:

A. A butt heat-fusion joint must be joined by a device that holds the heater element square to the ends of the *[piping]***pipe or component,** compresses the heated ends together, and holds the pipe in proper alignment *[while the plastic hardens]***in accordance with the appropriate procedure qualified under subsection (6)(G);**

B. A socket heat-fusion joint must be joined by a device that heats the mating surfaces of the *[joint]***pipe or component** uniformly and simultaneously to *[essentially]* **establish** the same temperature. **The device used must be the same device specified in the operator's joining procedure for socket fusion;**

C. An electrofusion joint must be *[joined utilizing]***made using** the equipment and techniques *[of]***prescribed by** the fitting*[s]* manufacturer or **using** equipment and techniques shown, by testing joints to the requirements of part (6)(G)1.A.(III), to be *[at least]* equivalent **or better than the requirements** *[to those]* of the fitting*[s]* manufacturer; and

D. Heat may not be applied with a torch or other open flame.

4. Mechanical joints. Each compression type mechanical joint on plastic pipe must comply with the following:

A. The gasket material in the coupling must be compatible with the plastic; *[and]*

B. A rigid internal tubular stiffener, other than a split tubular stiffener, must be used in conjunction with the coupling*[.]*;

C. All mechanical fittings must meet a listed specification based upon the applicable material; and

D. All mechanical joints or fittings installed after April 22, 2019, must be Category 1 as defined by a listed specification for the applicable material, providing a seal plus resistance to a force on the pipe joint equal to or greater than that which will cause no less than 25% elongation of pipe, or the pipe fails outside the joint area if tested in accordance with the applicable standard.

(G) Plastic Pipe—Qualifying Joining Procedures. (192.283)

1. Heat fusion, solvent cement, and adhesive joints. Before any written procedure established under paragraph (6)(B)2. is used for making plastic pipe joints by a heat fusion, solvent cement, or adhesive method, the procedure must be qualified by subjecting specimen joints made according to the procedure to the following tests, **as applicable**:

A. The **[burst]** test requirements of—

(I) In the case of thermoplastic pipe, **based on the pipe material, the [paragraph 6.6 (]Sustained Pressure Test[)]** or **the [paragraph 6.7 (]Minimum Hydrostatic Burst Test per the listed specification requirements [Pressure] of ASTM D2513-99 (incorporated by reference in 49 CFR 192.7 and adopted in subsection (1)(D)) for plastic materials other than polyethylene or ASTM D2513-09A (incorporated by reference in 49 CFR 192.7 and adopted in subsection (1)(D)) for polyethylene plastic materials;].** **Additionally, for electrofusion joints, based on the pipe material, the Tensile Strength Test or the Joint Integrity Test per the listed specification.**

(II) **(Reserved)[; or].**

(III) In the case of electrofusion fittings for polyethylene pipe and tubing, paragraph 9.1 (Minimum Hydraulic Burst Pressure Test), paragraph 9.2 (Sustained Pressure Test), paragraph 9.3 (Tensile Strength Test), or paragraph 9.4 (Joint Integrity Tests) of ASTM F1055-**98(2006)** (incorporated by reference in 49 CFR 192.7 and adopted in subsection (1)(D)).**[;]**

B. For procedures intended for lateral pipe connections, subject a specimen joint made from pipe sections joined at right angles according to the procedure to a force on the lateral pipe until failure occurs in the specimen. If failure initiates outside the joint area, the procedure qualifies for use.**[; and]**

C. For procedures intended for nonlateral pipe connections, **perform testing in accordance with a listed specification.** **[follow the tensile test requirements of ASTM D638 (incorporated by reference in 49 CFR 192.7 and adopted in subsection (1)(D)), except that the test may be conducted at ambient temperature and humidity.]** If the **test** specimen elongates no less than twenty-five percent (25%) or failure initiates outside the joint area, the procedure qualifies for use.

2. Mechanical joints. Before any written procedure established under paragraph (6)(B)2. is used for making mechanical plastic pipe joints **[that are designed to withstand tensile forces]**, the procedure must be qualified **in accordance with a listed specification based upon the pipe material.** **[by subjecting five (5) specimen joints made according to the procedure to the following tensile test:**

A. **Use an apparatus for the test as specified in ASTM D638 (except for conditioning), (incorporated by reference in 49 CFR 192.7 and adopted in subsection (1)(D));**

B. **The specimen must be of such length that the distance between the grips of the apparatus and the end of the stiffener does not affect the joint strength;**

C. **The speed of testing is 0.20 inches (5.0 mm) per minute, plus or minus twenty-five percent (25%);**

D. **Pipe specimens less than four inches (4") (102 mm) in diameter are qualified if the pipe yields to an elongation of no less than twenty-five percent (25%) or failure initiates outside the joint area;**

E. Pipe specimens four inches (4") (102 mm) and larger in diameter shall be pulled until the pipe is subjected to a tensile stress equal to or greater than the maximum thermal stress that would be produced by a temperature change of 100°F (38°C) or until the pipe is pulled from the fitting. If the pipe pulls from the fitting, the lowest value of the five (5) test results or the manufacturer's rating, whichever is lower, must be used in the design calculations for stress;

F. Each specimen that fails at the grips must be retested using new pipe; and

G. Results obtained pertain only to the specific outside diameter and material of the pipe tested, except that testing of a heavier wall pipe may be used to qualify pipe of the same material but with a lesser wall thickness.]

3. A copy of each written procedure being used for joining plastic pipe must be available to the persons making and inspecting joints.

[4. Pipe or fittings manufactured before July 1, 1980 may be used in accordance with procedures that the manufacturer certifies will produce a joint as strong as the pipe.]

(H) Plastic Pipe—Qualifying Persons to Make Joints. (192.285)

1. No person may make a plastic pipe joint unless that person has been qualified under the applicable joining procedure by—

A. Appropriate training or experience in the use of the procedure; and

B. Making a specimen joint from pipe sections joined according to the procedure that passes the inspection and test set forth in paragraph (6)(H)2.

2. The specimen joint must be—

A. Visually examined during and after assembly or joining and found to have the same appearance as a joint or photographs of a joint that is acceptable under the procedure; and

B. In the case of a heat fusion, solvent cement, or adhesive joint—

(I) Tested under any one (1) of the test methods listed under paragraph (6)(G)1. (192.283[a]), **or for polyethylene heat fusion joints (except for electrofusion joints) visually inspected and tested in accordance with ASTM F2620-12 (incorporated by reference in 49 CFR 192.7 and adopted in subsection (1)(D)) applicable to the type of joint and material being tested;**

(II) Examined by ultrasonic inspection and found not to contain flaws that would cause failure; or

(III) Cut into at least three (3) longitudinal straps, each of which is—

(a) Visually examined and found not to contain voids or discontinuities on the cut surfaces of the joint area; and

(b) Deformed by bending, torque, or impact and, if failure occurs, it must not initiate in the joint area.

3. A person must be requalified under an applicable procedure once each calendar year at intervals not exceeding fifteen (15) months, or after any production joint is found unacceptable by testing under subsection (10)(G). (192.513)

4. Each operator shall establish a method to determine that each person making joints in plastic pipelines in the operator's system is qualified in accordance with this subsection.

(7) General Construction Requirements for Transmission Lines and Mains.

(G) Bends and Elbows. (192.313)

1. Each field bend in steel pipe, other than a wrinkle bend made in accordance with subsection (7)(H) (192.315), must comply with the following:

- A. A bend must not impair the serviceability of the pipe;
- B. Each bend must have a smooth contour and be free from buckling, cracks, or any other mechanical damage; and
- C. On pipe containing a longitudinal weld, the longitudinal weld must be as near as practicable to the neutral axis of the bend unless—
 - (I) The bend is made with an internal bending mandrel; or
 - (II) The pipe is twelve inches (12") (305 millimeters) or less in outside diameter or has a diameter-to-wall thickness ratio less than seventy (70).

2. Each circumferential weld of steel pipe which is located where the stress during bending causes a permanent deformation in the pipe must be nondestructively tested either before or after the bending process.

3. Wrought-steel welding elbows and transverse segments of these elbows may not be used for changes in direction on steel pipe that is two inches (2") (51 millimeters) or more in diameter unless the arc length, as measured along the crotch, is at least one inch (1") (25 millimeters).

4. An operator may not install plastic pipe with a bend radius that is less than the minimum bend radius specified by the manufacturer for the diameter of the pipe being installed.

(K) Installation of Plastic Pipe. (192.321)

1. Plastic pipe must be installed below ground level except as provided by paragraphs (7)(K)7., [and] (7)(K)8., **and (7)(K)9.**

2. Plastic pipe that is installed in a vault or any other below grade enclosure must be completely encased in gastight metal pipe and fittings that are adequately protected from corrosion.

3. Plastic pipe must be installed so as to minimize shear or tensile stresses.

4. **[Thermoplastic] Plastic** pipe **[that is not encased]** must have a minimum wall thickness **[of 0.090 inches (0.090") (2.29 millimeters), except that pipe with an outside diameter of 0.875 inches (0.875") (22.3 millimeters) or less may have a minimum wall thickness of 0.062 inches (0.062") (1.58 millimeters)] in accordance with (3)(I).**

5. Plastic pipe that is not encased must have an electrically conductive wire or other means of locating the pipe while it is underground. Tracer wire may not be wrapped around the pipe and contact with the pipe must be minimized but is not prohibited. Tracer wire or other metallic elements installed for pipe locating purposes must be resistant to corrosion damage, either by use of coated copper wire or by other means.

6. Plastic pipe that is being encased must be inserted into the casing pipe in a manner that will protect the plastic. **Plastic pipe that is being encased must be protected from damage at all entrance and all exit points of the casing.** The leading end of the plastic must be closed before insertion.

7. Uncased plastic pipe may be temporarily installed above-ground level under the following conditions:

A. The operator must be able to demonstrate that the cumulative aboveground exposure of the pipe does not exceed the manufacturer's recommended maximum period of exposure or two (2) years, whichever is less;

B. The pipe either is located where damage by external forces is unlikely or is otherwise protected against such damage; and

C. The pipe adequately resists exposure to ultraviolet light and high and low temperatures.

8. Plastic pipe may be installed on bridges provided that it is—

A. Installed with protection from mechanical damage, such as installation in a metallic casing;

B. Protected from ultraviolet radiation; and

C. Not allowed to exceed the pipe temperature limits specified in subsection (3)~~[(J)](I)~~.

9. Plastic mains may terminate above ground level provided they comply with the following:

A. The above-ground level part of the plastic main is protected against deterioration and external damage.

B. The plastic main is not used to support external loads.

C. Installations of risers at regulator stations must meet the design requirements of (4)(AA).

(P) Installation of Plastic Pipelines by Trenchless Excavation. (192.329)

Plastic pipelines installed by trenchless excavation must comply with the following:

(1) Each operator must take practicable steps to provide sufficient clearance for installation and maintenance activities from other underground utilities and/or structures at the time of installation.

(2) For each pipeline section, plastic pipe and components that are pulled through the ground must use a weak link, as defined in subsection (1)(B), to ensure the pipeline will not be damaged by any excessive forces during the pulling process.

(8) Customer Meters, Service Regulators and Service Lines.

(J) Service Lines—General Requirements for Connections to Main Piping. (192.367)

1. Location. Each service line connection to a main must be located at the top of the main or, if that is not practical, at the side of the main, unless a suitable protective device is installed to minimize the possibility of dust and moisture being carried from the main into the service line.

2. Compression-type connection to main. Each compression-type service line to main connection must—

A. Be designed and installed to effectively sustain the longitudinal pullout or thrust forces caused by contraction or expansion of the piping, or by anticipated external or internal loading; ~~and~~

B. If gaskets are used in connecting the service line to the main connection fitting, have gaskets that are compatible with the kind of gas in the system~~[/]; and~~

C. If used on pipelines comprised of plastic, be a Category 1 connection as defined by a listed specification for the applicable material, providing a seal plus resistance to a force on the pipe joint equal to or greater than that which will cause no less than 25% elongation of pipe, or the pipe fails outside the joint area if tested in accordance with the applicable standard.

(M) Service Lines—Plastic. (192.375)

1. Each plastic service line outside a building must be installed below ground level, except that—

A. It may be installed in accordance with paragraph (7)(K)7.; and

B. It may terminate aboveground level and outside the building, if—

(I) The aboveground level part of the plastic service line is protected against deterioration and external damage; *[and]*

(II) The plastic service line is not used to support external loads/.;and

(III) The riser portion of the service line meets the design requirements of (4)(AA).

2. Plastic service lines shall not be installed inside a building.

3. Plastic pipe that is installed in a below grade vault or pit must be completely encased in gastight metal pipe and fittings that are adequately protected from corrosion.

4. Plastic pipe must be installed so as to minimize shear or tensile stresses.

5. Thermoplastic pipe that is not encased must have a minimum wall thickness of 0.090 inches (0.090"), except that pipe with an outside diameter of 0.875 inches (0.875") or less may have a minimum wall thickness of 0.062 inches (0.062").

6. Plastic pipe that is being encased must be inserted into the casing pipe in a manner that will protect the plastic. The leading end of the plastic must be closed before insertion.

7. For requirements pertaining to installation of plastic service lines by trenchless excavation, see subsection (8)(R). (192.376)

(R) Installation of Plastic Service Lines by Trenchless Excavation (192.376)

Plastic service lines installed by trenchless excavation must comply with the following:

1. Each operator shall take practicable steps to provide sufficient clearance for installation and maintenance activities from other underground utilities and structures at the time of installation.

2. For each pipeline section, plastic pipe and components that are pulled through the ground must use a weak link, as defined in subsection (1)(B), to ensure the pipeline will not be damaged by any excessive forces during the pulling process.

(9) Requirements for Corrosion Control.

(D) External Corrosion Control—Buried or Submerged Pipelines Installed After July 31, 1971. (192.455)

1. Except as provided in paragraphs (9)(D)2., *[and]* 5., and 6., each buried or submerged pipeline installed after July 31, 1971, must be protected against external corrosion, including the following:

A. It must have an external protective coating meeting the requirements of subsection (9)(G) (192.461); and

B. It must have a cathodic protection system designed to protect the pipeline in accordance with this section, installed and placed in operation within one (1) year after completion of construction.

2. An operator need not comply with paragraph (9)(D)1., if the operator can demonstrate by tests, investigation, or experience that—

A. For a copper pipeline, a corrosive environment does not exist; or

B. For a temporary pipeline with an operating period of service not to exceed five (5) years beyond installation, corrosion during the five- (5-) year period of service of the pipeline will not be detrimental to public safety.

3. Notwithstanding the provisions of paragraph (9)(D)2., if a pipeline is externally coated, it must be cathodically protected in accordance with subparagraph (9)(D)1.B.

4. Aluminum may not be installed in a buried or submerged pipeline if that aluminum is exposed to an environment with a natural pH in excess of eight (8), unless tests or experience indicate its suitability in the particular environment involved.

5. This subsection does not apply to electrically isolated, metal alloy fittings in plastic pipelines, if—

A. For the size fitting to be used, an operator can show by test, investigation, or experience in the area of application that adequate corrosion control is provided by the alloy composition; and

B. The fitting is designed to prevent leaking caused by localized corrosion pitting.

6. Electrically isolated metal alloy fittings installed after April 22, 2019, that do not meet the requirements of paragraph (9)(D)5. must be cathodically protected, and must be maintained in accordance with the operator's integrity management plan.

(10) Test Requirements.

(G) Test Requirements for Plastic Pipelines. (192.513)

1. Each segment of a plastic pipeline must be tested in accordance with this subsection.

2. The test procedure must ensure discovery of all potentially hazardous leaks in the segment being tested.

3. The test pressure must be at least one hundred fifty percent (150%) of the maximum allowable operating pressure or fifty (50) psi (345 kPa) gauge, whichever is greater. However, the maximum test pressure may not be more than **[three (3)] two and one half (2.5)** times the pressure determined under subsection (3)(I), at a temperature not less than the pipe temperature during the test.

4. During the test, the temperature of thermoplastic material may not be more than 100 °F (38 °C), or the temperature at which the material's long-term hydrostatic strength has been determined under the listed specification, whichever is greater.

(12) Operations.

(G) Change in Class Location— Confirmation or Revision of Maximum Allowable Operating Pressure. (192.611) If the hoop stress corresponding to the established maximum allowable operating pressure of a segment of pipeline is not commensurate with the present class location, and the segment is in satisfactory physical condition, the maximum allowable operating pressure of that segment of pipeline must be confirmed or revised according to one (1) of the following three (3) paragraphs:

1. If the segment involved has been previously tested in place for a period of not less than eight (8) hours, the maximum allowable operating pressure is 0.8 times the test pressure in Class 2 locations, 0.667 times the test pressure in Class 3 locations, or 0.555 times the test pressure in Class 4 locations. The corresponding hoop stress may not exceed seventy-two percent (72%) of SMYS of the pipe in Class 1 and 2 locations, sixty percent (60%) of SMYS in Class 3 locations or fifty percent (50%) of SMYS in Class 4 locations;

2. The maximum allowable operating pressure of the segment involved must be reduced so that the corresponding hoop stress is not more than that allowed by this rule for new segments of pipelines in the existing class location; or

3. The segment of pipeline involved must be tested in accordance with the applicable requirements of section (10), and its maximum allowable operating pressure must then be established according to the following criteria:

A. The maximum allowable operating pressure after the requalification test is 0.8 times the test pressure for Class 2 locations, 0.667 times the test pressure for Class 3 locations and 0.555 times the test pressure for Class 4 locations; and

B. The corresponding hoop stress may not exceed seventy-two percent (72%) of the SMYS of the pipe in Class **1 and** 2 locations, sixty percent (60%) of SMYS in Class 3 locations or fifty percent (50%) of the SMYS in Class 4 locations.

4. The maximum allowable operating pressure confirmed or revised in accordance with this subsection may not exceed the maximum allowable operating pressure established before the confirmation or revision.

5. Confirmation or revision of the maximum allowable operating pressure of a segment of pipeline in accordance with this subsection does not preclude the application of subsections (11)(B) and (C). (192.553 and 192.555)

6. Confirmation or revision of the maximum allowable operating pressure that is required as a result of a study under subsection (12)(F) must be completed within twenty-four (24) months of the change in class location. Pressure reduction under paragraph (12)(G)1. or 2. within the twenty-four- (24-) month period does not preclude establishing a maximum allowable operating pressure under paragraph (12)(G)3., at a later date.

(M) Maximum Allowable Operating Pressure—Steel or Plastic Pipelines. (192.619 and 192.620)

1. Except as provided in paragraph (12)(M)3., no person may operate a segment of steel or plastic pipeline at a pressure that exceeds the lowest of the following:

A. The design pressure of the weakest element in the segment, determined in accordance with sections (3) and (4). However, for steel pipe in pipelines being converted under subsection (1)(H) or uprated under section (11), if any variable necessary to determine the design pressure under the design formula in subsection (3)(C) is unknown, one (1) of the following pressures is to be used as design pressure:

(I) Eighty percent (80%) of the first test pressure that produces yield under section N5 of Appendix N of ASME B31.8 (incorporated by reference in 49 CFR 192.7 and adopted in subsection (1)(D)), reduced by the appropriate factor in part (12)(M)1.B.(II); or

(II) If the pipe is twelve and three-quarter inches (12 3/4") (three hundred twenty-four (324) mm) or less in outside diameter and is not tested to yield under this paragraph, two hundred (200) psi (one thousand three hundred seventy-nine (1379) kPa) gauge;

B. The pressure obtained by dividing the highest pressure to which the segment was tested after construction or uprated as follows:

(I) For plastic pipe in all locations, the test pressure is divided by a factor of 1.5; and

(II) For steel pipe operated at one hundred (100) psi (six hundred eighty-nine (689) kPa) gauge or more, the test pressure is divided by a factor determined in accordance with the following table:

| Class Location | Factors ¹ , segment - | | |
|-------------------|-------------------------------------|------------------------------------|--|
| | Installed before (Nov. 12, 1970) | Installed after (Nov. 11, 1970) | Converted under subsection (1)(H) (192.14) |
| 1 | 1.1 | 1.1 | 1.25 |
| 2 | 1.25 | 1.25 | 1.25 |
| 3 | 1.4 | 1.5 | 1.5 |
| 4 | 1.4 | 1.5 | 1.5 |

¹For segments installed, uprated, or converted after July 31, 1977 that are located on a platform in inland navigable waters, including a pipe riser, the factor is 1.5.

C. The highest actual operating pressure to which the segment was subjected during the five (5) years preceding the applicable date in the second column. This pressure restriction applies unless the segment was tested in accordance with subparagraph (12)(M)1.B. after the applicable date in the third column or the segment was uprated in accordance with section (11);

| Pipeline Segment | Pressure Date | Test date |
|--|--|--|
| Onshore gathering line that first became subject to 49 CFR 192.8 and 192.9 after April 13, 2006 (see subsection (1)(E)). | March 15, 2006, or date line becomes subject to this rule, whichever is later. | Five (5) years preceding applicable date in second column. |
| Onshore transmission line that was a gathering line not subject to 49 CFR 192.8 and 192.9 before March 15, 2006 (see subsection (1)(E)). | March 15, 2006 | March 15, 2001 |
| All other pipelines. | July 1, 1970 | July 1, 1965 |

D. The pressure determined by the operator to be the maximum safe pressure after considering the history of the segment, particularly known corrosion and the actual operating pressure.

2. No person may operate a segment of pipeline to which this subsection applies unless overpressure protective devices are installed for the segment in a manner that will prevent the maximum allowable operating pressure from being exceeded, in accordance with subsection (4)(CC). (192.195)

3. The requirements on pressure restrictions in this subsection do not apply in the following instance. An operator may operate a segment of pipeline found to be in satisfactory condition, considering its operating and maintenance history, at the highest actual operating pressure to which the segment was subjected during the five (5) years preceding the applicable date in the second column of the table in subparagraph (12)(M)1.C. An operator must still comply with subsection (12)(G).

4. No person may operate a pipeline at a pressure that results in a hoop stress greater than seventy-two percent (72%) of SMYS.

[4]5. Alternative maximum allowable operating pressure for certain steel pipelines. (192.620) The federal regulations at 49 CFR 192.620 are not adopted in this rule.

(13) Maintenance.

(AA) Repair of Plastic Pipe. **(192.720)** Each leak, imperfection or damage that impairs the serviceability of a plastic pipe must be removed, except that heat fusion patching saddles may be used to repair holes that have been tapped into the main for service installations, and full-encirclement heat fusion couplings may be used to repair and reinforce butt fusion joints. These patching saddles and couplings shall not be used for the repair of any imperfections or third-party damage sustained by the plastic pipe.

(CC) Joining Plastic Pipe by Heat Fusion; Equipment Maintenance and Calibration. (192.756)

Each operator must maintain equipment used in joining plastic pipe in accordance with the manufacturer's recommended practices or with written procedures that have been proven by test and experience to produce acceptable joints.

Appendix B to (~~4 CSR 240/20 CSR 4240~~) 40.030

Appendix B—Qualification of Pipe **and Components**

I. List ~~[ed Pipe]~~ of Specifications.

A. Listed Pipe Specifications.

ANSI/API Specification 5L—Steel pipe, “API Specification for Line Pipe” (incorporated by reference in 49 CFR 192.7 and adopted in subsection (1)(D)).

ASTM A53/A53M—Steel pipe, “Standard Specification for Pipe, Steel Black and Hot-Dipped, Zinc-Coated, Welded and Seamless” (incorporated by reference in 49 CFR 192.7 and adopted in subsection (1)(D)).

ASTM A106/A106M—Steel pipe, “Standard Specification for Seamless Carbon Steel Pipe for High Temperature Service” (incorporated by reference in 49 CFR 192.7 and adopted in subsection (1)(D)).

ASTM A333/A333M—Steel pipe, “Standard Specification for Seamless and Welded Steel Pipe for Low Temperature Service” (incorporated by reference in 49 CFR 192.7 and adopted in subsection (1)(D)).

ASTM A381—Steel pipe, “Standard Specification for Metal-Arc-Welded Steel Pipe for Use with High-Pressure Transmission Systems” (incorporated by reference in 49 CFR 192.7 and adopted in subsection (1)(D)).

ASTM A671/A671M—Steel pipe, “Standard Specification for Electric-Fusion-Welded Pipe for Atmospheric and Lower Temperatures” (incorporated by reference in 49 CFR 192.7 and adopted in subsection (1)(D)).

ASTM A672/A672M—Steel pipe, “Standard Specification for Electric-Fusion-Welded Steel Pipe for High-Pressure Service at Moderate Temperatures” (incorporated by reference in 49 CFR 192.7 and adopted in subsection (1)(D)).

ASTM A691/A691M—Steel pipe, “Standard Specification for Carbon and Alloy Steel Pipe, Electric-Fusion-Welded for High-Pressure Service at High Temperatures” (incorporated by reference in 49 CFR 192.7 and adopted in subsection (1)(D)).

[ASTM D2513-99, “Standard Specification for Thermoplastic Gas Pressure Pipe, Tubing, and Fittings” (incorporated by reference in 49 CFR 192.7 and adopted in subsection (1)(D)).]

ASTM D2513-~~109a—Polyethylene thermoplastic pipe and tubing~~**12ae1**, “Standard Specification for Polyethylene (PE) Gas Pressure Pipe, Tubing, and Fittings” (incorporated by reference in 49 CFR 192.7 and adopted in subsection (1)(D)).

ASTM F2817–10 “Standard Specification for Poly (Vinyl Chloride) (PVC) Gas Pressure Pipe and Fittings for Maintenance or Repair” (incorporated by reference in 49 CFR 192.7 and adopted in subsection (1)(D)).

B. Other Listed Specifications for Components.

ASME B16.40–2008 “Manually Operated Thermoplastic Gas Shutoffs and Valves in Gas Distribution Systems” (incorporated by reference in 49 CFR 192.7 and adopted in subsection (1)(D)).

ASTM D2513–12ae1 “Standard Specification for Polyethylene (PE) Gas Pressure Pipe, Tubing, and Fittings” (incorporated by reference in 49 CFR 192.7 and adopted in subsection (1)(D)).

ASTM F1055–98 (2006) “Standard Specification for Electrofusion Type Polyethylene Fittings for Outside Diameter Controlled Polyethylene Pipe and Tubing” (incorporated by reference in 49 CFR 192.7 and adopted in subsection (1)(D)).

ASTM F1924–12 “Standard Specification for Plastic Mechanical Fittings for Use on Outside Diameter Controlled Polyethylene Gas Distribution Pipe and Tubing” (incorporated by reference in 49 CFR 192.7 and adopted in subsection (1)(D)).

ASTM F1948–12 “Standard Specification for Metallic Mechanical Fittings for Use on Outside Diameter Controlled Thermoplastic Gas Distribution Pipe and Tubing” (incorporated by reference, in 49 CFR 192.7 and adopted in subsection (1)(D)).

ASTM F1973–13 “Standard Specification for Factory Assembled Anodeless Risers and Transition Fittings in Polyethylene (PE) and Polyamide 11 (PA 11) and Polyamide 12 (PA 12) Fuel Gas Distribution Systems” (incorporated by reference in 49 CFR 192.7 and adopted in subsection (1)(D)).

ASTM F2817–10 “Standard Specification for Poly (Vinyl Chloride) (PVC) Gas Pressure Pipe and Fittings for Maintenance or Repair” (incorporated by reference in 49 CFR 192.7 and adopted in subsection (1)(D)).

Appendix E to (~~4 CSR 240/20 CSR 4240~~)-40.030

Appendix E—Table of Contents—Safety Standards—Transportation of Gas by Pipeline.

(~~4 CSR 240/20 CSR 4240~~)-40.030(1) General

- (A) What Is the Scope of this Rule? (192.1)
- (B) Definitions. (192.3)
- (C) Class Locations. (192.5)
- (D) Incorporation By Reference of the Federal Regulation at 49 CFR 192.7. (192.7)
- (E) Gathering Lines. (192.8 and 192.9)
- (F) Petroleum Gas Systems. (192.11)
- (G) What General Requirements Apply to Pipelines Regulated under this Rule? (192.13)
- (H) Conversion to Service Subject to this Rule. (192.14)
- (I) Rules of Regulatory Construction. (192.15)
- (J) Filing of Required Plans, Procedures, and Programs.
- (K) Customer Notification Required by Section 192.16 of 49 CFR 192. (192.16)
- (L) Customer Notification, Paragraph (12)(S)2.

(4 CSR 240/20 CSR 4240)-40.030(2) Materials

- (A) Scope. (192.51)
- (B) General. (192.53)
- (C) Steel Pipe. (192.55)
- (D) Plastic Pipe. (192.59)
- (E) Marking of Materials. (192.63)
- (F) Transportation of Pipe. (192.65)
- (G) Storage and Handling of Plastic Pipe and Associated Components. (192.67)**

(4 CSR 240/20 CSR 4240)-40.030(3) Pipe Design

- (A) Scope. (192.101)
- (B) General. (192.103)
- (C) Design Formula for Steel Pipe. (192.105)
- (D) Yield Strength (S) for Steel Pipe. (192.107)
- (E) Nominal Wall Thickness (t) for Steel Pipe. (192.109)
- (F) Design Factor (F) for Steel Pipe. (192.111)
- (G) Longitudinal Joint Factor (E) for Steel Pipe. (192.113)
- (H) Temperature Derating Factor (T) for Steel Pipe. (192.115)
- (I) Design of Plastic Pipe. (192.121)
- (J) ***Design Limitations for Plastic Pipe* Reserved.** (192.123)
- (K) Design of Copper Pipe for Repairs. (192.125)
- (L) Additional Design Requirements for Steel Pipe Using Alternative Maximum Allowable Operating Pressure. (192.112)

(4 CSR 240/20 CSR 4240)-40.030(4) Design of Pipeline Components

- (A) Scope. (192.141)
- (B) General Requirements. (192.143)
- (C) Qualifying Metallic Components. (192.144)
- (D) Valves. (192.145)
- (E) Flanges and Flange Accessories. (192.147)
- (F) Standard Fittings. (192.149)
- (G) Tapping. (192.151)
- (H) Components Fabricated by Welding. (192.153)
- (I) Welded Branch Connections. (192.155)
- (J) Extruded Outlets. (192.157)
- (K) Flexibility. (192.159)
- (L) Supports and Anchors. (192.161)
- (M) Compressor Stations—Design and Construction. (192.163)
- (N) Compressor Stations—Liquid Removal. (192.165)
- (O) Compressor Stations—Emergency Shutdown. (192.167)
- (P) Compressor Stations—Pressure Limiting Devices. (192.169)
- (Q) Compressor Stations—Additional Safety Equipment. (192.171)
- (R) Compressor Stations—Ventilation. (192.173)
- (S) Pipe-Type and Bottle-Type Holders. (192.175)
- (T) Additional Provisions for Bottle-Type Holders. (192.177)
- (U) Transmission Line Valves. (192.179)

- (V) Distribution Line Valves. (192.181)
- (W) Vaults—Structural Design Requirements. (192.183)
- (X) Vaults—Accessibility. (192.185)
- (Y) Vaults—Sealing, Venting, and Ventilation. (192.187)
- (Z) Vaults—Drainage and Waterproofing. (192.189)
- (AA) *[Design Pressure of Plastic Fittings. (192.191)] Risers Installed After January 22, 2019 (192.204)*
- (BB) Valve Installation in Plastic Pipe. (192.193)
- (CC) Protection Against Accidental Overpressuring. (192.195)
- (DD) Control of the Pressure of Gas Delivered From Transmission Lines and High-Pressure Distribution Systems to Service Equipment. (192.197)
- (EE) Requirements for Design of Pressure Relief and Limiting Devices. (192.199)
- (FF) Required Capacity of Pressure Relieving and Limiting Stations. (192.201)
- (GG) Instrument, Control, and Sampling Pipe and Components. (192.203)
- (HH) Passage of Internal Inspection Devices. (192.150)

(4 CSR 240/20 CSR 4240)-40.030(5) Welding of Steel in Pipelines

- (A) Scope. (192.221)
- (B) General.
- (C) Welding Procedures. (192.225)
- (D) Qualification of Welders and Welding Operators. (192.227)
- (E) Limitations on Welders and Welding Operators. (192.229)
- (F) Protection From Weather. (192.231)
- (G) Miter Joints. (192.233)
- (H) Preparation for Welding. (192.235)
- (I) Inspection and Test of Welds. (192.241)
- (J) Nondestructive Testing. (192.243)
- (K) Repair or Removal of Defects. (192.245)

(4 CSR 240/20 CSR 4240)-40.030(6) Joining of Materials Other Than by Welding

- (A) Scope. (192.271)
- (B) General. (192.273)
- (C) Cast Iron Pipe. (192.275)
- (D) Ductile Iron Pipe. (192.277)
- (E) Copper Pipe. (192.279)
- (F) Plastic Pipe. (192.281)
- (G) Plastic Pipe—Qualifying Joining Procedures. (192.283)
- (H) Plastic Pipe—Qualifying Persons to Make Joints. (192.285)
- (I) Plastic Pipe—Inspection of Joints. (192.287)

(4 CSR 240/20 CSR 4240)-40.030(7) General Construction Requirements for Transmission Lines and Mains

- (A) Scope. (192.301)
- (B) Compliance With Specifications or Standards. (192.303)
- (C) Inspection—General. (192.305)
- (D) Inspection of Materials. (192.307)
- (E) Repair of Steel Pipe. (192.309)
- (F) Repair of Plastic Pipe During Construction. (192.311)
- (G) Bends and Elbows. (192.313)
- (H) Wrinkle Bends in Steel Pipe. (192.315)
- (I) Protection From Hazards. (192.317)

- (J) Installation of Pipe in a Ditch. (192.319)
- (K) Installation of Plastic Pipe. (192.321)
- (L) Casing. (192.323)
- (M) Underground Clearance. (192.325)
- (N) Cover. (192.327)
- (O) Additional Construction Requirements for Steel Pipe Using Alternative Maximum Allowable Operating Pressure. (192.328)

(P) Installation of Plastic Pipelines by Trenchless Excavation (192.329)

(4 CSR 240/20 CSR 4240)-40.030(8) Customer Meters, Service Regulators, and Service Lines

- (A) Scope, Compliance with Specifications or Standards, and Inspections. (192.351)
- (B) Service Lines and Yard Lines.
- (C) Customer Meters and Regulators—Location. (192.353)
- (D) Customer Meters and Regulators—Protection From Damage. (192.355)
- (E) Customer Meters and Regulators—Installation. (192.357)
- (F) Customer Meter Installations—Operating Pressure. (192.359)
- (G) Service Lines—Installation. (192.361)
- (H) Service Lines—Valve Requirements. (192.363)
- (I) Service Lines—Location of Valves. (192.365)
- (J) Service Lines—General Requirements for Connections to Main Piping. (192.367)
- (K) Service Lines—Connections to Cast Iron or Ductile Iron Mains. (192.369)
- (L) Service Lines—Steel. (192.371)
- (M) Service Lines—Plastic. (192.375)
- (N) New Service Lines Not in Use. (192.379)
- (O) Service Lines—Excess Flow Valve Performance Standards. (192.381)
- (P) Excess Flow Valve Installation. (192.383)
- (Q) Manual Service Line Shut-Off Valve Installation (192.385)

(R) Installation of Plastic Service Lines by Trenchless Excavation (192.376)

(4 CSR 240/20 CSR 4240)-40.030(9) Requirements for Corrosion Control

- (A) Scope. (192.451)
- (B) How Does this Section Apply to Converted Pipelines and Regulated Onshore Gathering Lines? (192.452)
- (C) General. (192.453)
- (D) External Corrosion Control—Buried or Submerged Pipelines Installed After July 31, 1971. (192.455)
- (E) External Corrosion Control—Buried or Submerged Pipelines Installed Before August 1, 1971. (192.457)
- (F) External Corrosion Control—Inspection of Buried Pipeline When Exposed. (192.459)
- (G) External Corrosion Control—Protective Coating. (192.461)
- (H) External Corrosion Control—Cathodic Protection. (192.463)
- (I) External Corrosion Control—Monitoring. (192.465)
- (J) External Corrosion Control—Electrical Isolation. (192.467)
- (K) External Corrosion Control—Test Stations. (192.469)
- (L) External Corrosion Control—Test Leads. (192.471)
- (M) External Corrosion Control—Interference Currents. (192.473)
- (N) Internal Corrosion Control—General and Monitoring. (192.475 and 192.477)
- (O) Internal Corrosion Control—Design and Construction of Transmission Line. (192.476)
- (P) Atmospheric Corrosion Control—General. (192.479)
- (Q) Atmospheric Corrosion Control—Monitoring. (192.481)
- (R) Remedial Measures—General. (192.483)

- (S) Remedial Measures—Transmission Lines. (192.485)
- (T) Remedial Measures—Distribution Lines Other Than Cast Iron or Ductile Iron Lines. (192.487)
- (U) Remedial Measures—Cast Iron and Ductile Iron Pipelines. (192.489)
- (V) Corrosion Control Records. (192.491)
- (W) Direct Assessment. (192.490)

(192.485) 40.030(10) Test Requirements

- (A) Scope. (192.501)
- (B) General Requirements. (192.503)
- (C) Strength Test Requirements for Steel Pipelines to Operate at a Hoop Stress of Thirty Percent (30%) or More of SMYS. (192.505)
- (D) Test Requirements for Pipelines to Operate at a Hoop Stress Less Than Thirty Percent (30%) of SMYS and at or Above One Hundred (100) psi (689 kPa) gauge. (192.507)
- (E) Test Requirements for Pipelines to Operate Below One Hundred (100) psi (689 kPa) gauge. (192.509)
- (F) Test Requirements for Service Lines. (192.511)
- (G) Test Requirements for Plastic Pipelines. (192.513)
- (H) Environmental Protection and Safety Requirements. (192.515)
- (I) Records. (192.517)
- (J) Test Requirements for Customer-Owned Fuel Lines.

(192.505) 40.030(11) Upgrading

- (A) Scope. (192.551)
- (B) General Requirements. (192.553)
- (C) Upgrading to a Pressure That Will Produce a Hoop Stress of Thirty Percent (30%) or More of SMYS in Steel Pipelines. (192.555)
- (D) Upgrading—Steel Pipelines to a Pressure That Will Produce a Hoop Stress Less Than Thirty Percent (30%) of SMYS—Plastic, Cast Iron, and Ductile Iron Pipelines. (192.557)

(192.555) 40.030(12) Operations

- (A) Scope. (192.601)
- (B) General Provisions. (192.603)
- (C) Procedural Manual for Operations, Maintenance, and Emergencies. (192.605)
- (D) Qualification of Pipeline Personnel (Subpart N).
- (E) *Reserved* (192.607)
- (F) Change in Class Location—Required Study. (192.609)
- (G) Change in Class Location—Confirmation or Revision of Maximum Allowable Operating Pressure. (192.611)
- (H) Continuing Surveillance. (192.613)
- (I) Damage Prevention Program. (192.614)
- (J) Emergency Plans. (192.615)
- (K) Public Awareness. (192.616)
- (L) Investigation of Failures. (192.617)
- (M) Maximum Allowable Operating Pressure—Steel or Plastic Pipelines. (192.619 and 192.620)
- (N) Maximum Allowable Operating Pressure—High-Pressure Distribution Systems. (192.621)
- (O) Maximum and Minimum Allowable Operating Pressure—Low-Pressure Distribution Systems. (192.623)
- (P) Odorization of Gas. (192.625)
- (Q) Tapping Pipelines Under Pressure. (192.627)
- (R) Purging of Pipelines. (192.629)
- (S) Providing Service to Customers.
- (T) Control Room Management. (192.631)

~~(4 CSR 240)20 CSR 4240~~-40.030(13) Maintenance

- (A) Scope. (192.701)
- (B) General. (192.703)
- (C) Transmission Lines—Patrolling. (192.705)
- (D) Transmission Lines—Leakage Surveys. (192.706)
- (E) Line Markers for Mains and Transmission Lines. (192.707)
- (F) Record Keeping.
- (G) Transmission Lines—General Requirements for Repair Procedures. (192.711)
- (H) Transmission Lines—Permanent Field Repair of Imperfections and Damages. (192.713)
- (I) Transmission Lines—Permanent Field Repair of Welds. (192.715)
- (J) Transmission Lines—Permanent Field Repair of Leaks. (192.717)
- (K) Transmission Lines—Testing of Repairs. (192.719)
- (L) Distribution Systems—Patrolling. (192.721)
- (M) Distribution Systems—Leakage Surveys. (192.723)
- (N) Test Requirements for Reinstating Service Lines and Fuel Lines. (192.725)
- (O) Abandonment or Deactivation of Facilities. (192.727)
- (P) Compressor Stations—Inspection and Testing of Relief Devices. (192.731)
- (Q) Compressor Stations—Storage of Combustible Materials and Gas Detection. (192.735 and 192.736)
- (R) Pressure Limiting and Regulating Stations—Inspection and Testing. (192.739)
- (S) Pressure Limiting and Regulating Stations—Telemetry or Recording Gauges. (192.741)
- (T) Pressure Limiting and Regulating Stations—Capacity of Relief Devices. (192.743)
- (U) Valve Maintenance—Transmission Lines. (192.745)
- (V) Valve Maintenance—Distribution Systems. (192.747)
- (W) Vault Maintenance. (192.749)
- (X) Prevention of Accidental Ignition. (192.751)
- (Y) Caulked Bell and Spigot Joints. (192.753)
- (Z) Protecting or Replacing Disturbed Cast Iron Pipelines. (192.755)
- (AA) Repair of Plastic Pipe. **(192.720)**
- (BB) Pressure Regulating, Limiting, and Overpressure Protection—Individual Service Lines Directly Connected to Production, Gathering, or Transmission Pipelines. (192.740)
- (CC) Joining Plastic Pipe by Heat Fusion; Equipment Maintenance and Calibration. (192.756)**

~~(4 CSR 240)20 CSR 4240~~-40.030(14) Gas Leaks

- (A) Scope.
- (B) Investigation and Classification Procedures.
- (C) Leak Classifications.

~~(4 CSR 240)20 CSR 4240~~-40.030(15) Replacement Programs

- (A) Scope.
- (B) Replacement Programs—General Requirements.
- (C) Replacement Program—Unprotected Steel Service Lines and Yard Lines.
- (D) Replacement Program—Cast Iron.
- (E) Replacement/Cathodic Protection Program—Unprotected Steel Transmission Lines, Feeder Lines, and Mains.

~~(4 CSR 240)20 CSR 4240~~-40.030(16) Pipeline Integrity Management for Transmission Lines.

~~(4 CSR 240)20 CSR 4240~~-40.030(17) Gas Distribution Pipeline Integrity Management (IM)

- (A) What Definitions Apply to this Section? (192.1001)
- (B) What Do the Regulations in this Section Cover? (192.1003)

(C) What Must a Gas Distribution Operator (Other than a Master Meter Operator) Do to Implement this Section? (192.1005)

(D) What Are the Required Elements of an Integrity Management Plan? (192.1007)

(E) What Must an Operator Report When a Mechanical Fitting Fails? (192.1009)

(F) What Records Must an Operator Keep? (192.1011)

(G) When May an Operator Deviate from Required Periodic Inspections Under this Rule? (192.1013)

(H) What Must a Master Meter Operator Do to Implement this Section? (192.1015)

(/4 CSR 240/20 CSR 4240)-40.030(18) Waivers of Compliance.

AUTHORITY: sections 386.250, 386.310, and 393.140, RSMo 2016. Original rule filed Feb. 23, 1968, effective March 14, 1968. Amended: Filed Dec. 28, 1970, effective Jan. 6, 1971. Amended: Filed Dec. 29, 1971, effective Jan. 7, 1972. Amended: Filed Feb. 16, 1973, effective Feb. 26, 1973. Amended: Filed Feb. 1, 1974, effective Feb. 11, 1974. Amended: Filed Dec. 19, 1975, effective Dec. 29, 1975. Emergency amendment filed Jan. 17, 1977, effective Jan. 27, 1977, expired May 27, 1977. Amended: Filed Jan. 17, 1977, effective June 1, 1977. Emergency amendment filed March 15, 1978, effective March 25, 1978, expired July 23, 1978. Amended: Filed March 15, 1978, effective July 13, 1978. Amended: Filed July 5, 1978, effective Oct. 12, 1978. Amended: Filed July 13, 1978, effective Oct. 12, 1978. Amended: Filed Jan. 12, 1979, effective April 12, 1979. Amended: Filed May 27, 1981, effective Nov. 15, 1981. Amended: Filed Dec. 28, 1981, effective July 15, 1982. Amended: Filed Jan. 25, 1983, effective June 16, 1983. Amended: Filed Jan. 17, 1984, effective June 15, 1984. Amended: Filed Nov. 16, 1984, effective April 15, 1985. Amended: Filed Jan. 22, 1986, effective July 18, 1986. Amended: Filed May 4, 1987, effective July 24, 1987. Amended: Filed Feb. 2, 1988, effective April 28, 1988. Rescinded and readopted: Filed May 17, 1989, effective Dec. 15, 1989. Amended: Filed Oct. 7, 1994, effective May 28, 1995. Amended: Filed April 9, 1998, effective Nov. 30, 1998. Amended: Filed Dec. 14, 2000, effective May 30, 2001. Amended: Filed Oct. 15, 2007, effective April 30, 2008. Amended: Filed Nov. 29, 2012, effective May 30, 2013. Amended: Filed Nov. 14, 2016, effective June 30, 2017. Amended: Filed June 4, 2018, effective Jan. 30, 2019. **Amended: Filed Date.***

*Original authority: 386.250, RSMo 1939, amended 1963, 1967, 1977, 1980, 1987, 1988, 1991, 1993, 1995, 1996; 386.310, RSMo 1939, amended 1979, 1989, 1996; and 393.140, RSMo 1939, amended 1949, 1967.

***Fields v. Missouri Power & Light Company*, 374 SW2d 17 (Mo. 1963).** Violations of general law, municipal ordinances, rules of the Public Service Commission and the like are considered and held to be negligence per se. Here, violation of a rule of a private gas company filed with the P.S.C. cannot result in the creation of a cause of action in favor of another person separate and apart from an action based on common law negligence.

Title 20 – RULES OF DEPARTMENT OF COMMERCE AND INUSRANCE

Division 4240–Public Service Commission

Chapter 40–Gas Utilities and Gas Safety Standards

PROPOSED AMENDMENT

4 CSR 240-40.080 Drug and Alcohol Testing. The Commission is amending sections (1) and (4) of this rule.

PURPOSE: This amendment modifies the rule to address amendments of 49 CFR parts 40 and 199 promulgated between October 2017 and May 2019, and makes clarification and editorial changes.

(1) As set forth in the Code of Federal Regulations (CFR) dated October 1, 201~~7~~⁸, **and the subsequent amendment published on April 23, 2019 (published in *Federal Register* on April 23, 2019, page 84 FR 16770)**, 49 CFR parts 40 and 199 are incorporated by reference and made a part of this rule. This rule does not incorporate any subsequent amendments to 49 CFR parts 40 and 199. The Code of Federal Regulations is published by the Office of the Federal Register, National Archives and Records Administration, 8601 Adelphi Road, College Park, MD 20740-6001. The October 1, 201~~7~~⁸, version of 49 CFR parts 40 and 199 ***[is available at www.gpo.gov/fdsys/search/showcitation.action] and the *Federal Register* publication on page 84 FR 16770 are available at <https://www.govinfo.gov/#citation>.***

(4) For purposes of this rule, the following substitutions should be made for certain references in the federal pipeline safety regulations adopted by reference in section (2) of this rule:

(A) The references to “state agency” in sections 199.3, 199.101, 199.107, 199.115, 199.117, 199.231, and 199.245 of 49 CFR part 199 should refer to “the commission” instead;

(B) The references to “accident” in sections 199.3, 199.100, 199.105, 199.200, 199.221, 199.225, 199.227, and 199.231 of 49 CFR part 199 should refer to a “federal incident reportable under ***[4 CSR 240/20 CSR 4240]***-40.020” instead;

(C) The references to “part 192, 193, or 195 of this chapter” or “part 192, 193, or 195” in sections 199.1, 199.3, 199.100, and 199.200 of 49 CFR part 199 should refer to “***[4 CSR 240/20 CSR 4240]***-40.030 **or 40.033**” instead (the commission regulations contained in ***[4 CSR 240/20 CSR 4240]***-40.030 parallel 49 CFR part 192, **and *[4 CSR 240/20 CSR 4240]***-40.033 **adopts 49 CFR part 193**, but the commission does not have any rules pertaining to 49 CFR part ***[193 or]195]***; and

(D) The references to the applicability exemptions for operators of master meter systems as defined in section “191.3 of this chapter” in 49 CFR 199.2 should refer to “***[4 CSR 240/20 CSR 4240]***-40.020(2)(G)” instead.

AUTHORITY: sections 386.250, 386.310, and 393.140, RSMo 2016. Original rule filed Nov. 29, 1989, effective April 2, 1990. Rescinded and readopted: Filed Jan. 9, 1996, effective Aug. 30, 1996. Rescinded and readopted: ~~File~~^{Filed} April 9, 1998, effective Nov. 30, 1998. Amended: Filed Oct. 15, 2007, effective April 30, 2008. Amended: Filed Nov. 29, 2012, effective May 30, 2013. Amended: Filed Nov. 14, 2016, effective June 30, 2017. Amended: Filed June 4, 2018, effective Jan. 30, 2019. Amended: Filed Date.*

**Original authority: 386.250, RSMo 1939, amended 1963, 1967, 1977, 1980, 1987, 1988, 1991, 1993, 1995, 1996; 386.310, RSMo 1939, amended 1979, 1989, 1996; and 393.140, RSMo 1939, amended 1949, 1967.*

MISSOURI PUBLIC SERVICE COMMISSION

August 2019

File/Case No. GW-2020-xxxx

Missouri Public Service Commission
Staff Counsel Department
200 Madison Street, Suite 800
P.O. Box 360
Jefferson City, MO 65102
staffcounsel@psc.mo.gov

Office of the Public Counsel
Marc Poston
200 Madison Street, Suite 650
P.O. Box 2230
Jefferson City, MO 65102
opc@psc.mo.gov

Empire District Gas Company, The
Legal Department
P.O. Box 127
602 S. Joplin Avenue
Joplin, MO 64802

Liberty Utilities (MNG)
Legal Department 2751
North High Street
Jackson, MO 63755

Spire Missouri, Inc.
Legal Department
700 Market Street
St. Louis, MO
63101

Summit Natural Gas of Missouri, Inc.
Legal Department
7810 Shaffer Parkway #120
Littleton, CO 80127

Missouri Public Service Commission
Bob Berlin
200 Madison Street, Suite 800
P.O. Box 360
Jefferson City, MO 65102
bob.berlin@psc.mo.gov

Union Electric Company
Legal Department
1901 Chouteau Avenue
P.O. Box 66149, Mail
Code 1310 St. Louis, MO
63166
AmerenMOS@ameren.com

Albany Municipal Gas System
Attn: City Administrator
106 E. Clay Street Albany,
MO 64402

Altenburg-Frohna Municipal Gas System
Attn: Mayor of Frohna
Joint Utilities Gas Department
P.O. Box 75
Frohna, MO 63748

Altenburg-Frohna Municipal Gas System
Attn: Utility Safety & Design, Inc.
#9 Executive Woods Court,
Ste. 1
Belleville, IL 62226

Altenburg-Frohna Municipal Gas System
Attn: Mayor of Altenburg
9144 Main Street
P.O. Box 22
Altenburg, MO 63732

Amber Glenn Apartments
Attn: Mr. Jesse Da Villa Mr. Allan Sheehy
2977 Highway K, Ste. 239
O'Fallon, MO 63368

Ameresco
Attn: Manager of Operations
111 Speen St, Suite
410
Framingham, MA 01701

Bernie Municipal Gas System
Attn: Mayor of Bernie
P.O. Box 605
101 W. Main Street
Bernie, MO 63822

Bethany Municipal Gas System
Attn: City Administrator
P.O. Box 344 206 N. 16th
Street
Bethany, MO 64424

Bismarck Municipal Gas System
Attn: Mayor of Bismarck
P.O. Box 27
924 Center Street
Bethany, MO 63624

Clarence Municipal Gas System
Attn: Mayor of Clarence
P.O. Box 9
Clarence, MO 63437

City Utilities of Springfield
Attn: Manager of Natural Gas
Distribution
P. O. Box 551 Springfield,
MO 65801

Cuba Municipal Gas System
Attn: Mayor of Cuba
City Hall
P.O. Box K
202 N. Smith Street
Cuba, MO 65453

Dogwood Energy, LLC
Attn: EH&S Coordinator
P.O. Box 110
Pleasant Hill, MO 64080-0110

Dogwood Energy, LLC
Attn: Utility Safety &
Design, Inc.
P.O. Box 206
28847 Hwy 136
Unionville, MO 63565

**Fulton Municipal Gas
System**
Attn: Director of
Administration
P.O. Box 130
4th & Market Streets
Fulton, MO 65251

**Granby Municipal Gas
System**
Attn: Mayor of Granby
P.O. Box 500
302 N. Main Street
Granby, MO 64844

**Grant City Municipal Gas
System**
Attn: Mayor of Grant City
101 W. 3rd Street
P.O. Box 398
Grant City, MO 64456

**Green City Municipal Gas
System**
Attn: Mayor of Green City
P.O. Box 235
#4 Green Street
Green City, MO 63545

**Green City Municipal Gas
System**
Attn: Utility Safety & Design, Inc.
P.O. Box 206
28847 Hwy. 136
Unionville, MO 63565

**Hermann Municipal Gas
System**
Attn: Public Works Director
1902 Jefferson Street
Hermann, MO 65041

John Knox Village
Attn: Manager of Facilities
400 NW Murray Rd.
Lee's Summit, MO 64081

**Kennett Municipal Gas
System**
Attn: Superintendent of
Utilities
P.O. Box 40
303 S. Anthony
Kennett, MO 63857

**Laddonia Ethanol
Plant** **Attn:** CFO and
VP of Admin. Services
Missouri Public Utility
Alliance 1808 I-70 Dr.,
S.W.
Columbia, MO 65203

**Liberal Municipal Gas
System** **Attn:** Mayor of Liberal
P.O. Box 67
209 S. Main Street
Liberal, MO 64762

Linden Mobile Home Park
Attn: Mr. Jim Janeczek
400 NE 76th Terrace
Kansas City, MO 64118

**Macon Municipal Gas
System** **Attn:** Mayor of Macon
P.O. Box 569
106 W. Bourke
Street Macon, MO
63552

Madison Municipal Gas System
Attn: Mayor of Madison
P.O. Box 141
209 S. Main Street
Madison, MO 65263

Marshall Municipal Utilities
Attn: Underground Facilities
Director
75 East Morgan Street
Marshall, MO 65340

Mercer Municipal Gas System

Attn: Mayor of Mercer
City Hall
14402 State Street
Mercer, MO 64661

Middletown Municipal Gas System

Attn: Mayor of Middletown
City Hall
P.O. Box 127
203 Johnson Street
Middletown, MO 63359

Mid-Missouri Energy

Attn: Ryland Utlaut, President
15311 N. Saline 65 Hwy.
Malta Bend, MO 65339

Milan Municipal Gas System

Attn: Mayor of Milan
City Hall
P.O. Box 247
212 East Second Street
Milan, MO 63556

Monroe City Municipal Gas System

Attn: Mayor of Monroe City
City Hall
109 2nd Street
Monroe City, MO 63456

Montgomery City Municipal Gas System

Attn: Mayor of Montgomery City
723 North Sturgeon Street
Montgomery City, MO 63361

New Florence Municipal Gas System

Attn: Mayor of New Florence
P.O. Box 70
217 South Main Street
New Florence, MO 63363

New Haven and Berger Municipal Gas System

Attn: Mayor of Berger
404 Rosalie
Berger, MO 63014

New Haven and Berger Municipal Gas System

Attn: Mayor of New Haven
City Hall
101 Front Street
New Haven, MO 63068

Perryville Municipal Gas System

Attn: City Administrator
215 North West Street
Perryville, MO 63775

Oakridge Apartments

Attn: Ms. Deana Breznik
Director of Asset Management
Gardner Capitol
8000 Maryland Avenue,
Suite 300
St. Louis, MO 63105

Omega Pipeline Company

Attn: DPW
Bldg. 2222
1334 First Street
Ft. Leonard Wood, MO 65473

Oronogo Municipal Gas System

Attn: Mayor of Oronogo
P.O. Box 201
653 E. Central Street
Oronogo, MO 64855

Perry Municipal Gas System

Attn: Mayor
P.O. Box 280
127 E. Main Street
Perry, MO 63462

Paris Municipal Gas System

Attn: City Superintendent
112 S. Main
Paris, MO 65275

Plattsburg Municipal Gas System

Attn: City Administrator 114
Maple Street
Plattsburg, MO 64477

Potosi Municipal Gas System

Attn: Mayor
121 E. High Street
Potosi, MO 63664

Princeton Municipal Gas System

Attn: Mayor of Princeton
City Hall
507 West Main Street
Princeton, MO 64673

Richland Municipal Gas System

Attn: Mayor of Richland
P.O. Box 798
Richland, MO 65556

Scottsdale Apartments

Attn: Ms. K.C. Cowan
The Wooten Company, LLC
1675 East Seminole, Ste. B
Springfield, MO 65804

Shelbina Municipal Gas System

Attn: Mayor of Shelbina
P.O. Box 646
116 East Walnut
Shelbina, MO 63468

Show-Me Ethanol, LLC

Attn: General Manager
26530 Hwy. 24 E.
Carrollton, MO 64633

Roeslein & Associates, Inc.

Attn: President & COO
9200 Watson Rd, Suite 200
St. Louis, MO 63126

St. James Municipal Gas System

Attn: Mayor of St. James
P.O. Box 426
200 N. Bourbeuse St.
St. James, MO 65559

St. Robert Municipal Gas System

Attn: Mayor of St. Robert
194 Eastlawn Ave., Ste. A
St. Robert, MO 65584

Stanberry Municipal Gas System

Attn: City Administrator
130 W. First Street
Stanberry, MO 64489

The Talisman Condominiums

Attn: Mr. Chris Gripe
Centennial Management & KC
Properties Construction
P.O. Box 15142
Shawnee Mission, KS 66285

Ashley Energy, LLC

Attn: Operations Manager
One Ashley Place
St. Louis, MO 63102

Unionville Municipal Gas System

Attn: Mayor of Unionville
P.O. Box 255
1611 Grant Street
Unionville, MO 63565

Unionville Municipal Gas System

Attn: Utility Safety & Design
Vice President of Engineering
P.O. Box 206
28847 Hwy. 136
Unionville, MO 63565

Waynesville Municipal Gas System

Attn: City Administrator
100 Tremont Drive
Waynesville, MO 65583

Wheaton Municipal Gas System

Attn: Mayor of Wheaton
P.O. Box 70
219 E. Main Street Wheaton, MO
64874

Mahanaim Bible Training Center

Attn: Owner
3000 North Grant Avenue
Springfield, MO 65803