Jason Kander
Secretary of State
Administrative Rules Division

RULE TRANSMITTAL

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ADMINISTRATIVE RULES

Rule Number 4 CSR 240-40.030

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Use a "SEPARATE" rule transmittal sheet for EACH individual rulemaking.

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TYPE OF RULEMAKING ACTION TO BE TAKEN
☐ Emergency rulemaking, include effective date
☒ Proposed Rulemaking
☐ Withdrawal ☐ Rule Action Notice ☐ In Addition ☐ Rule Under Consideration
☐ Request for Non-Substantive Change
☐ Statement of Actual Cost
☐ Order of Rulemaking
Effective Date for the Order _____
☐ Statutory 30 days OR Specific date _____
Does the Order of Rulemaking contain changes to the rule text? ☐ NO
☐ YES—LIST THE SECTIONS WITH CHANGES, including any deleted rule text:

Small Business Regulatory Fairness Board (DED) Stamp

SMALL BUSINESS
REGULATORY FAIRNESS BOARD
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JOINT COMMITTEE ON
NOV 1 4 2016
ADMINISTRATIVE RULES

Missouri Public Service Commission

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November 14, 2016

Jason Kander
Secretary of State
Administrative Rules Division
600 West Main Street
Jefferson City, Missouri 65101

Re: 4 CSR 240-40.030 Safety Standards – Transportation of Gas by Pipeline

Dear Secretary Kander,

CERTIFICATION OF ADMINISTRATIVE RULE

I do hereby certify that the attached is an accurate and complete copy of the proposed amendment lawfully submitted by the Missouri Public Service Commission.

The Public Service Commission has determined and hereby certifies that this proposed amendment will not have an economic impact on small businesses. The Public Service Commission further certifies that it has conducted an analysis of whether there has been a taking of real property pursuant to section 536.017, RSMo 2000, that the proposed amendment does not constitute a taking of real property under relevant state and federal law, and that the proposed amendment conforms to the requirements of 1.310, RSMo, regarding user fees.

The Public Service Commission has determined and hereby also certifies that this proposed amendment complies with the small business requirements of 1.310, RSMo, in that it does not have an adverse impact on small businesses consisting of fewer than fifty full or part-time employees or it is necessary to protect the life, health, or safety of the public, or that this rulemaking complies with 1.310, RSMo, by exempting any small business consisting of fewer than fifty full or part-time employees from its coverage, by implementing a federal mandate, or by implementing a federal program administered by the state or an act of the general assembly.

Statutory Authority: section 386.250, 386.310 and 393.140, RSMo 2000.

If there are any questions regarding the content of this proposed amendment, please contact:

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Morris L. Woodruff
Chief Regulatory Law Judge

Enclosures

AFFIDAVIT

PUBLIC COST

STATE OF MISSOURI)
)
COUNTY OF COLE)

I, Mike Downing, Director of the Department of Economic Development, first being duly sworn, on my oath, state that it is my opinion that the cost of proposed rule, 4 CSR 240-40.030, is less than five hundred dollars in the aggregate to this agency, any other agency of state government or any political subdivision thereof.

Mike Downing
Director
Department of Economic Development

Subscribed and sworn to before me this 13th day of May, 2016, I am commissioned as a notary public within the County of Moniteau, State of Missouri, and my commission expires on December 13, 2019

NOTARY PUBLIC NOTARY SEAL STATE OF MISSOURI

DAWN ELLEN OVERBEY
My Commission Expires
December 13, 2019
Moniteau County
Commission #15456865

Notary Public

Title 4 – Department of Economic Development
Division 240 – Public Service Commission
Chapter 40 – Gas Utilities and Gas Safety Standards

PROPOSED AMENDMENT

4 CSR 240-40.030 Safety Standards – Transportation of Gas by Pipeline. The Commission is amending sections (1), (2), (4), (5), (6), (9), (10), (13), (16) and amending Appendices B and E.

PURPOSE: This amendment modifies the rule to address amendments of 49 CFR part 192 promulgated between September 2013 and January 2016, 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;

*[4]***5.** Building means any structure that is regularly or periodically occupied by people;

*[5]***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;

*[6]***9.** Customer meter means the meter that measures the transfer of gas from an operator to a consumer;

*[7]***10.** Designated commission personnel means the pipeline safety program manager at the address contained in 4 CSR 240-40.020(5)(E) for required correspondence;

*[8]***11.** Distribution line means a pipeline other than a gathering or transmission line;

*[9]***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));

*[10]***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);

*[11]***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;

*[12]***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;

*[13]***16.** Gas means natural gas, flammable gas, manufactured gas, or gas which is toxic or corrosive;

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

*[15]***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;

*[16]***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;

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

*[18]***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;

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

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

*[21]***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;

*[22]***25.** Municipality means a city, village or town;

*[23]***26.** Operator means a person who engages in the transportation of gas;

*[24]***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;

*[25]***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);

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

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

*[28]***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;

*[29]***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;

*[30]***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;

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

*[32]***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;

*[33]***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;

*[34]***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;

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

*[36]***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;

*[37]***41.** Transportation of gas means the gathering, transmission, or distribution of gas by pipeline or the storage of gas in Missouri;

*[38]***42.** Tunnel means a subsurface passageway large enough for a man to enter;

*[39]***43.** Vault or manhole means a subsurface structure that a man can enter; *[and]*

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

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

*[40]***46.** 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 shall mean 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 shall 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 shall 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, *[2011]* **2015**, 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, *[2011]* **2015** version of 49 CFR part 192 is available at www.gpo.gov/fdsys/search/showcitation.action.

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 *[in the]* **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 *[20590-0001, or at the]* **20590. For more information, contact 202-366-4046 or go to the PHMSA Web site 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 Web site at www.archives.gov/federal-register/cfr/ibr-locations.html or** call 202–741–6030 or 866-272-6272.

C. Copies of standards incorporated by reference can also be purchased or are otherwise made *[In addition, the incorporated materials are]* 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, *[2006]* **2015**, 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, *[2006]* **2015** version of 49 CFR part 192 is available at *[www.access.gpo.gov/nara/cfr/cfr-table-search.html]* **www.gpo.gov/fdsys/search/showcitation.action**.

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.

(F) Petroleum Gas Systems. (192.11)

1. Each plant that supplies petroleum gas by pipeline to a natural gas distribution system must meet the requirements of this rule and of *[ANSI/NFPA]* **NFPA** 58 and 59 **(incorporated by reference in 49 CFR 192.7 and adopted in (1)(D)).**

2. Each pipeline system subject to this rule that transports only petroleum gas or petroleum gas/air mixtures must meet the *requirements* of this rule and of *[ANSI/NFPA]* **NFPA** 58 and 59 **(incorporated by reference in 49 CFR 192.7 and adopted in (1)(D)).**

3. In the event of a conflict between this rule and *[ANSI/NFPA]* **NFPA** 58 and 59 **(incorporated by reference in 49 CFR 192.7 and adopted in (1)(D))**, *[ANSI/NFPA]* **NFPA** 58 and 59 prevail.

(2) Materials.

(C) Steel Pipe. (192.55)

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

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

B. It meets the requirements of—

(I) Subsection II of Appendix B to this rule; or

(II) If it was manufactured before November 12, 1970, either subsection II or III of Appendix B to this rule; or

C. It is used in accordance with paragraph (2)(C)3. or 4.

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

A. It was manufactured in accordance with a listed specification and it meets the requirements of paragraph II-C of Appendix B to this rule;

B. It meets the requirements of—

(I) Subsection II of Appendix B to this rule; or

(II) If it was manufactured before November 12, 1970, either subsection II or III of Appendix B to this rule;

C. It has been used in an existing line of the same or higher pressure and meets the requirements of paragraph II-C of Appendix B to this rule; or

D. It is used in accordance with paragraph (2)(C)3.

3. New or used steel pipe may be used at a pressure resulting in a hoop stress of less than six thousand (6000) pounds per square inch (psi) (41 MPa) where no close coiling or close bending is to be done, if visual examination indicates that the pipe is in good condition and that it is free of split seams and other defects that would cause leakage. If it is to be welded, steel pipe that has not been manufactured to a listed specification must also pass the weldability tests prescribed in paragraph II-B of Appendix B to this rule.

4. Steel pipe that has not been previously used may be used as replacement pipe in a segment of pipeline if it has been manufactured prior to November 12, 1970, in accordance with the same specification as the pipe used in constructing that segment of pipeline.

5. New steel pipe that has been cold expanded must comply with the mandatory provisions of API Specification 5L **(incorporated by reference in 49 CFR 192.7 and adopted in (1)(D))**.

(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.

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.

3. For the purpose of subparagraphs (2)(D)1.A. and 2.A., where pipe of a diameter included in a listed specification is impractical to use, pipe of a diameter between the sizes included in a listed specification may be used if it—

A. Meets the strength and design criteria required of pipe included in that listed specification; and

B. Is manufactured from plastic compounds which meet the criteria for material required of pipe included in that listed specification.

4. Rework and/or regrind material is not allowed in plastic pipe produced after March 6, 2015 used under this rule.

(E) Marking of Materials. (192.63)

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

A. As prescribed in the specification or standard to which it was manufactured*[; however]*, **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 (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.

(F) Transportation of Pipe. (192.65)

1. Railroad. In a pipeline to be operated at a hoop stress of twenty percent (20%) or more of SMYS, an operator may not use pipe having an outer diameter to wall thickness ratio of seventy to one (70:1) or more that is transported by railroad unless *[—*

A. The] **the** transportation is performed in accordance with API *[Recommended Practice]* **RP** 5L1 (incorporated by reference in 49 CFR 192.7 and adopted in (1)(D)) *[; and*

B. In the case of pipe transported before November 12, 1970, the pipe is tested in accordance with section (10) to at least one and one-fourth (1.25) times the maximum allowable operating pressure if it is to be installed in a Class 1 location and to at least one and one-half (1.5) times the maximum allowable operating pressure if it is to be installed in a Class 2, 3, or 4 location. Notwithstanding any shorter time period permitted under section (10), the test pressure must be maintained for at least eight (8) hours].

2. Ship or barge. In a pipeline to be operated at a hoop stress of twenty percent (20%) or more of SMYS, an operator may not use pipe having an outer diameter to wall thickness ratio of seventy to one (70:1) or more that is transported by ship or barge on both inland and marine waterways unless the transportation is performed in accordance with API *[Recommended Practice]* **RP** 5LW (incorporated by reference in 49 CFR 192.7 and adopted in (1)(D)).

3. Truck. In a pipeline to be operated at a hoop stress of twenty percent (20%) or more of SMYS, an operator may not use pipe having an outer diameter to wall thickness ratio of seventy to one (70:1) or more that is transported by truck unless the transportation is performed in accordance with API RP 5LT (incorporated by reference in 49 CFR 192.7 and adopted in (1)(D)).

(4) Design of Pipeline Components

(D) Valves. (192.145)

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

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.

(E) Flanges and Flange Accessories. (192.147)

1. Each flange or flange accessory (other than cast iron) must meet the minimum requirements of *[ASME/ANSI 6.5, MSS SP-44]* **ASME/ANSI B16.5 and MSS SP–44 (incorporated by reference in 49 CFR 192.7 and adopted in (1)(D)),** or the equivalent.

2. Each flange assembly must be able to withstand the maximum pressure at which the pipeline is to be operated and to maintain its physical and chemical properties at any temperature to which it is anticipated that it might be subjected in service.

3. Each flange on a flanged joint in cast iron pipe must conform in dimensions, drilling, face and gasket design to ASME/ANSI B16.1 **(incorporated by reference in 49 CFR 192.7 and adopted in (1)(D))** and be cast integrally with the pipe, valve, or fitting.

(H) Components Fabricated by Welding. (192.153)

1. Except for branch connections and assemblies of standard pipe and fittings joined by circumferential welds, the design pressure of each component fabricated by welding, whose strength cannot be determined, must be established in accordance with paragraph UG-101 *[of section VIII-Division 1,]* of the *ASME Boiler and Pressure Vessel Code* **(Section VIII, Division 1) (incorporated by reference in 49 CFR 192.7 and adopted in (1)(D)).**

2. Each prefabricated unit that uses plate and longitudinal seams must be designated, constructed, and tested in accordance with *[section I, section VIII-Division 1, or section VIII-Division 2]* **section 1** of the *ASME Boiler and Pressure Vessel Code* **(Section VIII, Division 1 or 2) (incorporated by reference in 49 CFR 192.7 and adopted in (1)(D))**, except for the following:

A. Regularly manufactured butt-welding fittings;

B. Pipe that has been produced and tested under a specification listed in Appendix B to this rule;

C. Partial assemblies such as split rings or collars; and

D. Prefabricated units that the manufacturer certifies have been tested to at least twice the maximum pressure to which they will be subjected under the anticipated operating conditions.

3. Orange-peel bull plugs and orange-peel swages may not be used on pipelines that are to operate at a hoop stress of twenty percent (20%) or more of the SMYS of the pipe.

4. Except for flat closures designed in accordance with *[section VIII of]* the *ASME Boiler and Pressure Vessel Code* **(Section VIII, Division 1 or 2) (incorporated by reference in 49 CFR 192.7 and adopted in (1)(D))**, flat closures and fish tails may not be used on pipe that either operates at 100 psi (689 kPa) gauge or more, or is more than three inches (3") (76 millimeters) nominal diameter.

5. A component having a design pressure established in accordance with paragraph (4)(H)1. or 2. and subject to the strength testing requirements of paragraph (10)(C)2. must be tested to at least one and one-half (1.5) times the MAOP.

(M) Compressor Stations—Design and Construction. (192.163)

1. Location of compressor building. Except for a compressor building on a platform located in inland navigable waters, each main compressor building of a compressor station must be located on property under the control of the operator. It must be far enough away from adjacent property not under control of the operator to minimize the possibility of fire being communicated to the compressor building from structures on adjacent property. There must be enough open space around the main compressor building to allow the free movement of firefighting equipment.

2. Building construction. Each building on a compressor station site must be made of noncombustible materials if it contains either—

A. Pipe more than two inches (2") (51 millimeters) in diameter that is carrying gas under pressure; or

B. Gas handling equipment other than gas utilization equipment used for domestic purposes.

3. Exits. Each operating floor of a main compressor building must have at least two (2) separated and unobstructed exits located so as to provide a convenient possibility of escape and an unobstructed passage to a place of safety. Each door latch on an exit must be of a type which can be readily opened from the inside without a key. Each swinging door located in an exterior wall must be mounted to swing outward.

4. Fenced areas. Each fence around a compressor station must have at least two (2) gates located so as to provide a convenient opportunity for escape to a place of safety or have other facilities affording a similarly convenient exit from the area. Each gate located within two hundred feet (200') (61 meters) of any compressor plant building must open outward and, when occupied, must be openable from the inside without a key.

5. Electrical facilities. Electrical equipment and wiring installed in compressor stations must conform to *[the National Electrical Code, ANSI/NFPA 70]* **NFPA-70 (incorporated by reference in 49 CFR 192.7 and adopted in (1)(D))**, so far as that code is applicable.

(N) Compressor Stations—Liquid Removal. (192.165)

1. Where entrained vapors in gas may liquefy under the anticipated pressure and temperature conditions, the compressor must be protected against the introduction of liquids in quantities that could cause damage.

2. Each liquid separator used to remove entrained liquids at a compressor station must—

A. Have a manually operable means of removing these liquids;

B. Where slugs of liquid could be carried into the compressors, have either automatic liquid removal facilities, an automatic compressor shutdown device or a high liquid level alarm; and

C. Be manufactured in accordance with section VIII of the *ASME Boiler and Pressure Vessel Code* **(incorporated by reference in 49 CFR 192.7 and adopted in (1)(D)) and the additional requirements of paragraph (4)(H)5.**, except that liquid separators constructed of pipe and fittings without internal welding must be fabricated with a design factor of 0.4 or less.

(T) Additional Provisions for Bottle-Type Holders. (192.177)

1. Each bottle-type holder must be—

A. Located on a site entirely surrounded by fencing that prevents access by unauthorized persons and with minimum clearance from the fence as follows:

Maximum Allowable Operating Pressure	Minimum Clearance feet (meters)
Less than 1000 psi (7 MPa) gauge	25 (7.6)
1000 psi (7 MPa) gauge or more	100 (31)

B. Designed using the design factors set forth in subsection (3)(F) (192.111); and

C. Buried with a minimum cover in accordance with subsection (7)(N). (192.327)

2. Each bottle-type holder manufactured from steel that is not weldable under field conditions must comply with the following:

A. A bottle-type holder made from alloy steel must meet the chemical and tensile requirements for the various grades of steel in ASTM *[A 372/A 372M]* **A372/A372M (incorporated by reference in 49 CFR 192.7 and adopted in (1)(D))**;

B. The actual yield-tensile ratio of the steel may not exceed 0.85;

C. Welding may not be performed on the holder after it has been heat-treated or stress-relieved, except that copper wires may be attached to the small diameter portion of the bottle end closure for cathodic protection if a localized Thermit welding process is used;

D. The holder must be given a mill hydrostatic test at a pressure that produces a hoop stress at least equal to eighty-five percent (85%) of the SMYS; and

E. The holder, connection pipe and components must be leak tested after installation as required by section (10).

(Z) Vaults—Drainage and Waterproofing. (192.189)

1. Each vault must be designed so as to minimize the entrance of water.

2. A vault containing gas piping may not be connected by means of a drain connection to any other underground structure.

3. All electrical equipment in vaults must conform to the applicable requirements of Class 1, Group D, of the *National Electrical Code, [ANSI/NFPA 70]* **NFPA-70 (incorporated by reference in 49 CFR 192.7 and adopted in (1)(D)).**

(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 (1)(D)) **for plastic materials other than polyethylene or ASTM D2513-09A (incorporated by reference in 49 CFR 192.7 and adopted in (1)(D)) for polyethylene plastic materials.**

(5) Welding of Steel in Pipelines.

(C) Welding Procedures. (192.225)

1. Welding must be performed by a qualified welder in accordance with welding procedures qualified under section 5, **section 12, or Appendix A** of API Standard 1104 (incorporated by reference in 49 CFR 192.7 and adopted in (1)(D)) or section IX of the *ASME Boiler and Pressure Vessel Code ["Welding and Brazing Qualifications"]* (incorporated by reference in 49 CFR 192.7 and adopted in (1)(D)) to produce welds meeting the requirements of section (5) of this rule. *[A welding procedure qualified under an earlier edition of a standard listed in 49 CFR 192.7 (see (1)(D)) may continue to be used, but may not be requalified under the earlier edition.]* The quality of the test welds used to qualify welding procedures *[shall]* **must** be determined by destructive testing in accordance with the *[applicable welding standard]* **referenced welding standard(s).**

2. Each welding procedure must be recorded in detail, including the results of the qualifying tests. This record must be retained and followed whenever the procedure is used.

(D) Qualification of Welders **and Welding Operators.** (192.227)

1. Except as provided in paragraph (5)(D)2., each welder **or welding operator** must be qualified in accordance with section 6, **section 12, or Appendix A** of API Standard 1104 (incorporated by reference in 49 CFR 192.7 and adopted in (1)(D)) or section IX of the *ASME Boiler and Pressure Vessel Code* (incorporated by reference in 49 CFR 192.7 and adopted in (1)(D)). However, a welder qualified under an earlier edition of a standard than listed in 49 CFR 192.7 (see (1)(D)) may weld but may not requalify under that earlier edition.

2. A welder may qualify to perform welding on pipe to be operated at a pressure that produces a hoop stress of less than twenty percent (20%) of SMYS by performing an acceptable test weld, for the process to be used, *[meeting at a minimum]* **under** the test set forth in subsection I. of Appendix C, which is included herein (at the end of this rule). Each welder who is to make a welded service line connection to a main must first perform an acceptable test weld under subsection II. of Appendix C as a requirement of the qualifying test.

(E) Limitations on Welders **and Welding Operators.** (192.229)

1. No welder **or welding operator** whose qualification is based on nondestructive testing may weld compressor station pipe and components.

2. *[No welder may]* **A welder or welding operator may not** weld with a particular welding process unless, within the preceding six (6) calendar months, *[s/he has welded]* **the welder or welding operator was engaged in welding** with that process.

3. A welder **or welding operator** qualified under paragraph (5)(D)1. (192.227[a])—

A. May not weld on pipe to be operated at a pressure that produces a hoop stress of twenty percent (20%) or more of SMYS unless within the preceding six (6) calendar months the welder **or welding operator** has had one (1) weld tested and found acceptable under *[the sections 6 or 9]* **section 6, section 9, section 12 or Appendix A** of API Standard 1104 (incorporated by reference in 49 CFR 192.7 and adopted in (1)(D)). Alternatively, welders **or welding operators** may maintain an ongoing qualification status by performing welds tested and found acceptable under the above acceptance criteria at least twice each calendar year, but at intervals not exceeding seven and one-half (7 1/2) months. A welder **or welding operator** qualified under an earlier edition of a standard listed in 49 CFR 192.7 (see (1)(D)) may weld, but may not requalify under that earlier edition; and

B. May not weld on pipe to be operated at a pressure that produces a hoop stress of less than twenty percent (20%) of SMYS unless the welder **or welding operator** is tested in accordance with subparagraph (5)(E)3.A. or requalifies under subparagraph (5)(E)4.A. or B.

4. A welder **or welding operator** qualified under paragraph (5)(D)2. may not weld unless—

A. Within the preceding fifteen (15) calendar months, but at least once each calendar year, the welder **or welding operator** has requalified under paragraph (5)(D)2.; or

B. Within the preceding seven and one-half (7 1/2) calendar months, but at least twice each calendar year, the welder **or welding operator** has had—

(I) A production weld cut out, tested, and found acceptable in accordance with the qualifying test; or

(II) For *[welders who work]* **a welder who works** only on service lines two inches (2") (51 millimeters) or smaller in diameter, two (2) sample welds tested and found acceptable in accordance with the test in subsection III. of Appendix C to this rule.

(I) Inspection and Test of Welds. (192.241)

1. Visual inspection of welding must be conducted by an individual qualified by appropriate training and experience to ensure that—

A. The welding is performed in accordance with the welding procedure; and

B. The weld is acceptable under paragraph (5)(I)3.

2. The welds on a pipeline to be operated at a pressure that produces a hoop stress of twenty percent (20%) or more of SMYS must be nondestructively tested in accordance with subsection (5)(J), except that welds that are visually inspected and approved by a qualified welding inspector need not be nondestructively tested if—

A. The pipe has a nominal diameter of less than six inches (6") (152 millimeters); or

B. The pipeline is to be operated at a pressure that produces a hoop stress of less than forty percent (40%) of SMYS and the welds are so limited in number that nondestructive testing is impractical.

3. The acceptability of a weld that is nondestructively tested or visually inspected is determined according to the standards in section 9 **or Appendix A** of API Standard 1104 (incorporated by reference in 49 CFR 192.7 and adopted in (1)(D)). *[However, if a girth weld is unacceptable under those standards for a reason other than a crack, and if Appendix A to API Standard 1104 applies to the weld, the acceptability of the weld may be further determined under that Appendix]* **Appendix A of API Standard 1104 may not be used to accept cracks.**

(J) Nondestructive Testing. (192.243)

1. Nondestructive testing of welds must be performed by any process, other than trepanning, that will clearly indicate the defects that may affect the integrity of the weld.

2. Nondestructive testing of welds must be performed—

A. In accordance with written procedures; and

B. By persons who have been trained and qualified in the established procedures and with the equipment employed in testing.

3. Procedures must be established for the proper interpretation of each nondestructive test of a weld to ensure the acceptability of the weld under paragraph (5)(I)3. (192.241[c]).

4. When nondestructive testing is required under paragraph (5)(I)2. (192.241[b]), the following percentages of each day's field butt welds, selected at random by the operator, must be nondestructively tested over their entire circumference:

A. In Class 1 locations, at least ten percent (10%);

B. In Class 2 locations, at least fifteen percent (15%);

C. In Class 3 and Class 4 locations, at crossings of major or navigable rivers and within railroad or public highway rights-of-way, including tunnels, bridges and overhead road crossings, one hundred percent (100%) unless impracticable, in which case at least ninety percent (90%). Nondestructive testing must be impracticable for each girth weld not tested; and

D. At pipeline tie-ins, including tie-ins of replacement sections, one hundred percent (100%).

5. Except for a welder **or welding operator** whose work is isolated from the principal welding activity, a sample of each *[welder's]* **welder or welding operator's** work for each day must be nondestructively tested, when that testing is required under paragraph (5)(I)2. (192.241[b]).

6. When nondestructive testing is required under paragraph (5)(I)2. (192.241[b]), each operator must retain, for the life of the pipeline, a record showing, by milepost, engineering station or by geographic feature, the number of girth welds made, the number nondestructively tested, the number rejected and the disposition of the rejects.

(6) Joining of Materials Other Than by Welding.

(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:

A. The burst test requirements of—

(I) In the case of thermoplastic pipe, paragraph 6.6 (Sustained Pressure Test) or paragraph 6.7 (Minimum Hydrostatic Burst Pressure) or paragraph 8.9 (Sustained Static Pressure Test) of ASTM D2513-99 (incorporated by reference in 49 CFR 192.7 and adopted in (1)(D)) **for plastic materials other than polyethylene or ASTM D2513-09A (incorporated by reference in 49 CFR 192.7 and adopted in (1)(D)) for polyethylene plastic materials**;

(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 *[Designation]* F1055 (incorporated by reference in 49 CFR 192.7 and adopted in (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, follow the tensile test requirements of ASTM D638 (incorporated by reference in 49 CFR 192.7 and adopted in (1)(D)), except that the test may be conducted at ambient temperature and humidity. If the 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 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 (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]) 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 *[if during any twelve- (12-) month period that person—*

A. Does not make any joints under that procedure; or

B. Has three (3) joints or three percent (3%) of the joints made, whichever is greater, under that procedure that are] **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.

(9) Requirements for Corrosion Control.

(S) Remedial Measures—Transmission Lines. (192.485)

1. General corrosion. Each segment of transmission line with general corrosion and with a remaining wall thickness less than that required for the maximum allowable operating pressure of the pipeline must be replaced or the operating pressure reduced commensurate with the strength of the pipe based on actual remaining wall thickness. However, corroded pipe may be repaired by a method that reliable engineering test and analysis show can permanently restore the serviceability of the pipe. Corrosion pitting so closely grouped as to affect the overall strength of the pipe is considered general corrosion for the purpose of this paragraph.

2. Localized corrosion pitting. Each segment of transmission line pipe with localized corrosion pitting to a degree where leakage might result must be replaced or repaired, or the operating pressure must be reduced commensurate with the strength of the pipe, based on the actual remaining wall thickness in the pits.

3. Under paragraphs (9)(S)1. and (9)(S)2., the strength of pipe based on actual remaining wall thickness may be determined by the procedure in ASME/ANSI B31G **(incorporated by reference in 49 CFR 192.7 and adopted in (1)(D))** or the procedure in *[AGA Pipeline Research Committee Project PR 3-805 (with RSTRENG disk)]* **PRCI PR-3-805 (R-STRENG) (incorporated by reference in 49 CFR 192.7 and adopted in (1)(D))**. Both procedures apply to corroded regions that do not penetrate the pipe wall, subject to the limitations prescribed in the procedures.

(10) Test Requirements.

(B) General Requirements. (192.503)

1. No person may operate a new segment of pipeline, or return to service a segment of pipeline that has been relocated or replaced, until—

A. It has been tested in accordance with this section and subsection (12)(M) (192.619) to substantiate the maximum allowable operating pressure; and

B. Each potentially hazardous leak has been located and eliminated.

2. The test medium must be liquid, air, natural gas, or inert gas that is—

A. Compatible with the material of which the pipeline is constructed;

B. Relatively free of sedimentary materials; and

C. Except for natural gas, nonflammable.

3. Except as provided in paragraph (10)(C)1. (192.505[a]), if air, natural gas, or inert gas is used as the test medium, the following maximum hoop stress limitations apply:

Class Location	Maximum Hoop Stress Allowed as Percentage of SMYS	
	Natural Gas	Air or Inert Gas
1	80	80
2	30	75
3	30	50
4	30	40

4. Each connection used to tie-in a test segment of pipeline is excepted from the specific test requirements of this section, but it must be leak tested at not less than its operating pressure.

5. If a component other than pipe is the only item being replaced or added to a pipeline, a strength test after installation is not required, if the manufacturer of the component certifies that –

A. The component was tested to at least the pressure required for the pipeline to which it is being added;

B. The component was manufactured under a quality control system that ensures that each item manufactured is at least equal in strength to a prototype and that the prototype was tested to at least the pressure required for the pipeline to which it is being added; or

C. The component carries a pressure rating established through applicable ASME/ANSI specifications, Manufacturers Standardization Society of the Valve and Fittings Industry, Inc. (MSS) specifications, or by unit strength calculations as described in subsection (4)(B).

(C) Strength Test Requirements for Steel Pipeline to Operate at a Hoop Stress of Thirty Percent (30%) or More of SMYS. (192.505)

1. Except for service lines, each segment of a steel pipeline that is to operate at a hoop stress of thirty percent (30%) or more of SMYS must be strength tested in accordance with this subsection to substantiate the proposed maximum allowable operating pressure. In addition, in a Class 1 or Class 2 location, if there is a building intended for human occupancy within three hundred feet (300') (91 meters) of a pipeline, a hydrostatic test must be conducted to a test pressure of at least one hundred twenty-five percent (125%) of maximum operating pressure on that segment of the pipeline within three hundred feet (300') (91 meters) of such a building, but in no event may the test section be less than six hundred feet (600') (183 meters) unless the length of the newly installed or relocated pipe is less than six hundred feet (600') (183 meters). However, if the buildings are evacuated while the hoop stress exceeds fifty percent (50%) of SMYS, air or inert gas may be used as the test medium.

2. In a Class 1 or Class 2 location, each compressor station, regulator station and measuring station must be tested to at least Class 3 location test requirements.

3. Except as provided in paragraph *[(10)(C)5.]* **(10)(C)4.**, the strength test must be conducted by maintaining the pressure at or above the test pressure for at least eight (8) hours.

[4. If a component other than pipe is the only item being replaced or added to a pipeline, a strength test after installation is not required, if the manufacturer of the component certifies that—

A. The component was tested to at least the pressure required for the pipeline to which it is being added;

B. The component was manufactured under a quality control system that ensures that each item manufactured is at least equal in strength to a prototype and that the prototype was tested to at least the pressure required for the pipeline to which it is being added; or

C. The component carries a pressure rating established through applicable ASME/ANSI, MSS specifications, or by unit strength calculations as described in subsection (4)(B).]

*[5]***4.** For fabricated units and short sections of pipe, for which a post-installation test is impractical, a pre-installation strength test must be conducted by maintaining the pressure at or above the test pressure for at least four (4) hours.

(13) Maintenance.

(M) Distribution Systems—Leakage Surveys. (192.723)

1. Each operator of a distribution line or system shall conduct periodic instrument leakage surveys in accordance with this subsection.

2. The type and scope of the leakage control program must be determined by the nature of the operations and the local conditions but it must meet the following minimum requirements:

A. An instrument leak detection survey must be conducted in business districts, including tests of the atmosphere in gas, electric, telephone, sewer, and water system manholes, at cracks in pavement and sidewalks and at other locations providing an opportunity for finding gas leaks, at intervals not exceeding fifteen (15) months but at least once each calendar year;

B. Except as provided for in subparagraph (13)(M)2.C., instrument leak detection surveys must be conducted outside of business districts as frequently as necessary, but at intervals not exceeding—

(I) Fifteen (15) months, but at least once each calendar year, for unprotected steel pipelines and unprotected steel yard lines;

(II) Thirty-nine (39) months, but at least once each third calendar year, for all other pipelines and yard lines; and

(III) Thirty-nine (39) months, but at least once each third calendar year, for buried fuel lines operating above low pressure*[at residential, small commercial, and public buildings, and for all buried fuel lines at institutional buildings, such as hospitals and schools]*, **except for buried fuel lines to large commercial/industrial customers that are notified in accordance with paragraph (13)(M)3.** Instrument leak detection surveys of buried fuel lines may be conducted around a portion of the perimeter of the building. This perimeter-type survey shall be conducted along the side of the building nearest the meter location (or the fuel line entrances in the case of multiple buildings) and along the closest adjacent side; and

C. For yard lines and buried fuel lines that are required to be leak surveyed under subparagraph (13)(M)2.B., but are located within high security areas such as prisons, notifications to the customer as described in paragraph (13)(M)3. may be conducted instead of a leak survey.

3. The operator must notify large commercial/industrial customers with buried fuel lines operating above low pressure at one or more buildings, that are not leak surveyed in accordance with part (13)(M)2.B.(III), that maintenance is the customer's responsibility and leak surveys should be conducted. Notification must be provided once each third calendar year, at intervals not exceeding thirty-nine (39) months.

(Q) Compressor Stations—Storage of Combustible Materials and Gas Detection. (192.735 and 192.736)

1. Flammable or combustible materials in quantities beyond those required for everyday use, or other than those normally used in compressor buildings, must be stored a safe distance from the compressor building.

2. Aboveground oil or gasoline storage tanks must be protected in accordance with *[the Flammable and Combustible Liquids Code, ANSI/NFPA 30]* **NFPA-30 (incorporated by reference in 49 CFR 192.7 and adopted in (1)(D)).**

3. Not later than September 16, 1996, each compressor building in a compressor station must have a fixed gas detection and alarm system, unless the building is—

A. Constructed so that at least fifty percent (50%) of its upright side area is permanently open; or

B. Located in an unattended field compressor station of one thousand (1,000) horsepower (746 kW) or less.

4. Except when shutdown of the system is necessary for maintenance under paragraph (13)(Q)5., each gas detection and alarm system required by this subsection must—

A. Continuously monitor the compressor building for a concentration of gas in air of not more than twenty-five percent (25%) of the lower explosive limit; and

B. If gas at that concentration is detected, warn persons about to enter the building and persons inside the building of the danger.

5. Each gas detection and alarm system required by this subsection must be maintained to function properly. The maintenance must include performance tests.

(16) Pipeline Integrity Management for Transmission Lines.

(A) As set forth in the *Code of Federal Regulations* (CFR) dated October 1, *[2011]* **2015**, the federal regulations in 49 CFR part 192, subpart O and in 49 CFR part 192, appendix E are incorporated by reference and made a part of this rule. This rule does not incorporate any subsequent amendments to subpart O and appendix E to 49 CFR part 192.

(B) 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, *[2011]* **2015** version of 49 CFR part 192 is available at www.gpo.gov/fdsys/search/showcitation.action.

(C) Subpart O and appendix E to 49 CFR part 192 contain the federal regulations regarding pipeline integrity management for transmission lines. Subpart O includes sections 192.901 through 192.951. Information regarding subpart O is available at http://primis.phmsa.dot.gov/gasimp.

(D) When sending a notification or filing a report with PHMSA in accordance with this section, a copy must also be submitted concurrently to designated commission personnel. This is consistent with the requirement in 4 CSR 240-40.020(5)(A) for reports to PHMSA.

(E) In 49 CFR 192.911(m) and (n), the references to "A State or local pipeline safety authority when the covered segment is located in a State where OPS has an interstate agent agreement" do not apply to Missouri and are replaced with "designated commission personnel". As a result, the communication plan required by 49 CFR 192.911(m) must include procedures for addressing safety concerns raised by designated commission personnel and the procedures required by 49 CFR 192.911(n) must address providing a copy of the operator's risk analysis or integrity management program to designated commission personnel.

(F) For the purposes of this section, the following substitutions should be made for certain references in the federal pipeline safety regulations that are incorporated by reference in subsection (16)(A).

1. In 49 CFR 192.909(b), 192.921(a)(4) and 192.937(c)(4), the references to "a State or local pipeline safety authority when either a covered segment is located in a State where OPS has an interstate agent

agreement, or an intrastate covered segment is regulated by that State" should refer to "designated commission personnel" instead.

2. In 49 CFR 192.917(e)(5), the reference to "part 192" should refer to "4 CSR 240-40.030" instead.

3. In 49 CFR 192.921(a)(2) and 192.937(c)(2), the references to "subpart J of this part" should refer to "4 CSR 240-40.030(10)" instead.

4. In 49 CFR 192.933(a)(1) and (2), the references to "a State pipeline safety authority when either a covered segment is located in a State where PHMSA has an interstate agent agreement, or an intrastate covered segment is regulated by that State" should refer to "designated Commission personnel" instead.

5. In 49 CFR 192.935(b)(1)(ii), the reference to "an incident under part 191" should refer to "a federal incident under 4 CSR 240-40.020" instead.

6. In 49 CFR 192.935(d)(2), the reference to "section 192.705" should refer to "4 CSR 240-40.030(13)(C)" instead.

7. In 49 CFR 192.941(b)(2)(i), the reference to "section 192.706" should refer to "4 CSR 240-40.030(13)(D)" instead.

8. In 49 CFR 192.945(a), the reference to "section 191.17 of this subchapter" should refer to "4 CSR 240-40.020(10)" instead.

9. In 49 CFR 192.947(i), the reference to "a State authority with which OPS has an interstate agent agreement, and a State or local pipeline safety authority that regulates a covered pipeline segment within that State" should refer to "designated commission personnel" instead.

10. In 49 CFR 192.951, the reference to "section 191.7 of this subchapter" should refer to "4 CSR 240-40.020(5)(A)" instead.

Appendix B to 4 CSR 240-40.030
Appendix B – Qualification of Pipe

I. Listed Pipe Specifications.

[API 5L] **ANSI/API Specification 5L**—Steel pipe, "API Specification for Line Pipe" (incorporated by reference in 49 CFR 192.7 and adopted in (1)(D)).

ASTM *[A 53/A53M]* **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 (1)(D)).

ASTM *[A 106]* **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 (1)(D)).

ASTM *[A 333/A333M]* **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 (1)(D)).

ASTM *[A 381]* **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 (1)(D)).

ASTM *[A 671]* **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 (1)(D)).

ASTM *[A 672]* **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 (1)(D)).

ASTM *[A 691]* **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 (1)(D)).

ASTM *[D 2513-99—Thermoplastic pipe and tubing]* **D2513-99**, "Standard Specification for Thermoplastic Gas Pressure Pipe, Tubing, and Fittings" (incorporated by reference in 49 CFR 192.7 and adopted in (1)(D)). **ASTM D2513-09a—Polyethylene thermoplastic pipe and tubing, "Standard Specification for Polyethylene (PE) Gas Pressure Pipe, Tubing, and Fittings" (incorporated by reference in 49 CFR 192.7 and adopted in (1)(D)).**

II. Steel pipe of unknown or unlisted specification.

A. Bending properties. For pipe two inches (2") (51 millimeters) or less in diameter, a length of pipe must be cold bent through at least ninety degrees (90°) around a cylindrical mandrel that has a diameter twelve (12) times the diameter of the pipe, without developing cracks at any portion and without opening the longitudinal weld. For pipe more than two inches (2") (51 millimeters) in diameter, the pipe must meet the requirements of the flattening tests set forth in ASTM [A53] **A53/A53M** (incorporated by reference in 49 CFR 192.7 and adopted in (1)(D)), except that the number of tests must be at least equal to the minimum required in paragraph II.D. of this appendix to determine yield strength.

B. Weldability. A girth weld must be made in the pipe by a welder who is qualified under section (5) of 4 CSR 240-40.030. The weld must be made under the most severe conditions under which welding will be allowed in the field and by means of the same procedure that will be used in the field. On pipe more than four inches (4") (102 millimeters) in diameter, at least one test weld must be made for each one hundred (100) lengths of pipe. On pipe four inches (4") (102 millimeters) or less in diameter, at least one test weld must be made for each four hundred (400) lengths of pipe. The weld must be tested in accordance with API Standard 1104 (incorporated by reference in 49 CFR 192.7 and adopted in (1)(D)). If the requirements of API Standard 1104 cannot be met, weldability may be established by making chemical tests for carbon and manganese, and proceeding in accordance with section IX of the ASME Boiler and Pressure Vessel Code (incorporated by reference in 49 CFR 192.7 and adopted in (1)(D)). The same number of chemical tests must be made as are required for testing a girth weld.

C. Inspection. The pipe must be clean enough to permit adequate inspection. It must be visually inspected to ensure that it is reasonably round and straight and there are no defects which might impair the strength or tightness of the pipe.

D. Tensile properties. If the tensile properties of the pipe are not known, the minimum yield strength may be taken as twenty-four thousand (24,000) psi (165 MPa) or less, or the tensile properties may be established by performing tensile tests as set forth in API Specification 5L (incorporated by reference in 49 CFR 192.7 and adopted in (1)(D)). All test specimens shall be selected at random and the following number of tests must be performed:

Number of Tensile Tests—All Sizes	
10 lengths or less	1 set of tests for each length.
11 to 100 lengths	1 set of tests for each 5 lengths, but not less than 10 tests.
Over 100 lengths	1 set of tests for each 10 lengths, but not less than 20 tests.

If the yield-tensile ratio, based on the properties determined by those tests, exceeds 0.85, the pipe may be used only as provided in paragraph (2)(C)3. of 4 CSR 240-40.030. (192.55[c])

Appendix E to 4 CSR 240-40.030
Appendix E. Table of Contents - Safety Standards - Transportation of Gas by Pipeline.

4 CSR 240-40.030(5) Welding of Steel in Pipelines
(D) Qualification of Welders **and Welding Operators**. (192.227)
(E) Limitations on Welders **and Welding Operators**. (192.229)

AUTHORITY: sections 386.250, 386.310, and 393.140, RSMo 2000. 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 December 14, 2000, effective May 30, 2001. Amended: Filed Oct. 15, 2007, effective April 30, 2008. ***Amended: Filed November 14, 2016.***

PUBLIC ENTITY COST: This proposed amendment will not cost state agencies or political subdivisions more than $500 in the aggregate.

PRIVATE ENTITY COST: This proposed amendment will not cost private entities more than $500 in the aggregate.

NOTICE TO SUBMIT COMMENTS AND NOTICE OF PUBLIC HEARING: Anyone may file comments in support of or in opposition to this proposed rule with the Missouri Public Service Commission, Morris L. Woodruff, Secretary of the Commission, PO Box 360, Jefferson City, MO 65102. To be considered, comments must be received at the commission's offices on or before January 17, 2017, and should include reference to Commission Case No. GX-2016-0263. Comments may also be submitted via a filing using the commission's electronic filing and information system at http://www.psc.mo.gov/efis.asp. A public hearing regarding this proposed amendment is scheduled for January 20, 2017, at 10:00 a.m., in Room 310 of the Governor Office Building, 200 Madison St., Jefferson City, Missouri. Interested persons may appear at this hearing to submit additional comments and/or testimony in support of or in opposition to this proposed rule, and may be asked to respond to commission questions. Any persons with special needs as addressed by the Americans with Disabilities Act should contact the Missouri Public Service Commission at least ten (10) days prior to the hearing at one (1) of the following numbers: Consumer Services Hotline 1-800-392-4211 or TDD Hotline 1-800-829-7541.

Small Business Regulator Fairness Board
Small Business Impact Statement

Date: March 30, 2016

Rule Number: 4 CSR 240-40.030

Name of Agency Preparing Statement: Missouri Public Service Commission

Name of Person Preparing Statement: Natelle Dietrich

Phone Number: 573-751-7427 **Email: natelle.dietrich@psc.mo.gov**

Name of Person Approving Statement: Natelle Dietrich

Please describe the methods your agency considered or used to reduce the impact on small businesses *(examples: consolidation, simplification, differing compliance, differing reporting requirements, less stringent deadlines, performance rather than design standards, exemption, or any other mitigating technique).*

Since the proposed rule adopts already-effective federal rules there is no impact imposed on small businesses from promulgation of the state rule.

Please explain how your agency has involved small businesses in the development of the proposed rule.

N/A.

Please list the probable monetary costs and benefits to your agency and any other agencies affected. Please include the estimated total amount your agency expects to collect from additionally imposed fees and how the moneys will be used.

None.

Please describe small businesses that will be required to comply with the proposed rule and how they may be adversely affected.

None that do not have to comply with the already-effective federal rules.

Please list direct and indirect costs (in dollars amounts) associated with compliance.

N/A.

Please list types of business that will be directly affected by, bear the cost of, or directly benefit from the proposed rule.

None that do not comply with the already-effective federal rules.

Does the proposed rule include provisions that are more stringent than those mandated by comparable or related federal, state, or county standards?
Yes___ No_X__

If yes, please explain the reason for imposing a more stringent standard.

For further guidance in the completion of this statement, please see §536.300, RSMo.