

**82-11-4. Transportation of natural and other gas by pipeline; minimum safety**

**standards.** The federal rules and regulations titled “transportation of natural and other gas by pipeline: minimum federal safety standards,” 49 C.F.R. Part 192, including appendices ~~A~~, B, C, ~~and D~~, and E, as in effect on October 1, ~~2006~~ 2010, with the exception of portions that include jurisdiction beyond the state of Kansas, including off-shore pipelines, the outer continental shelf, and states other than Kansas, are adopted by reference with the following exceptions, deletions, additions, and modifications:

(a) 49 C.F.R. 192.7(b) shall be deleted and replaced by the following: “(b) Any incorporated document shall be available for inspection at the gas pipeline safety section's Topeka, Kansas office. All incorporated materials are also available for inspection in the Office of Pipeline Safety, Pipeline and Hazardous Materials Safety Administration, ~~400 Seventh Street, S.W.~~ 1200 New Jersey Avenue, S.E., Washington, D.C., 20590-0001 or at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030 or access the following website: [http://www.archives.gov/federal\\_register/code\\_of\\_federal\\_regulations/ibr\\_locations.html](http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html). These materials have been approved for incorporation by reference by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. In addition, the incorporated materials are available from the respective organizations listed in paragraph (c)(1) of this section.”

(b) 49 C.F.R. 192.181(a) shall be deleted and replaced by the following: “(a) Each high-pressure distribution system shall have valves spaced to reduce the time to shut down a section of main in an emergency. Each operator shall specify in its operation and maintenance manual the criteria as to how valve locations are determined using, as a minimum, the

considerations of operating pressure, the size of the mains, and the local physical conditions. The emergency manual shall include instructions on where operating personnel can find maps and other means of locating emergency valves during an emergency. Each area of residential development constructed after May 1, 1989 shall be provided with at least one valve to isolate it from other areas.”

(c) 49 C.F.R. 192.199(e) shall be deleted and replaced by the following: “(e) Have discharge stacks, vents, or outlet ports designed to prevent accumulation of water, ice, or snow, located where gas can be discharged into the atmosphere without undue hazard. At town border stations and district regulator settings, the gas shall be discharged upward at a minimum height of six feet from the ground or past the overhang of any adjacent building, whichever is greater.”

(d) 49 C.F.R. 192.199(h) shall be deleted and replaced by the following: “(h) Except for a valve that will isolate the system under protection from its source of pressure, shall be designed to prevent unauthorized access to or operation of any stop valve that will make the pressure relief valve or pressure limiting device inoperative including:

“(1) valves that would bypass the pressure regulator or relief devices; and

“(2) shut-off valves in regulator control lines that, if operated, would cause the regulator to be inoperative.”

(e) The following shall be added to 49 C.F.R. 192.199: “(i) At town border stations and district regulator settings, this section shall require pressure relief or pressure limiting devices regardless of installation date.”

(f) 49 C.F.R. 192.307 shall be deleted and replaced by the following: “Inspection of materials. Each length of pipe and each other component shall be visually inspected at the site of installation to ensure that it has not sustained any visually determinable damage that could impair

its serviceability. Except for short sections of pipe with external coating applied after installation, each coated length of pipe shall be checked for defects in the coating using an instrument that is calibrated according to manufacturer's specifications prior to lowering the pipe into the ditch.”

(g) The following subsection shall be added to 49 C.F.R. 192.317: “(d) Each aboveground pipeline shall be placed underground, with the following exceptions:

“(1) Regulator station piping;

“(2) bridge crossings;

“(3) aerial crossings or spans;

“(4) short segments of piping for valves intentionally brought above the ground, including risers, piping at compressor, processing or treating facilities, block gate settings, sectionalizing valves and district regulator sites;

“(5) distribution mains specifically designed to be above the ground and have the approval of the landowner to provide service to commercial customers from the aboveground main and associated service line or lines; or

“(6) pipelines in class 1 locations that were in natural gas service before May 1, 1989.”

(h) The following shall be added to 49 C.F.R. 192.317: “(e) Each pipeline constructed after May 1, 1989, shall be placed under ground, with the following exceptions:

“(1) Regulator station piping;

“(2) bridge crossings;

“(3) aerial crossings or spans;

“(4) short segments of piping for valves intentionally brought above ground, including risers, piping at compressor, processing or treating facilities, block gate settings, sectionalizing valves and district regulator sites; or

“(5) distribution mains specifically designed to be above ground and have the approval of the landowner to provide service to commercial customers from the aboveground main and associated service line or lines.”

(i) 49 C.F.R. 192.453 shall be deleted and replaced by the following: “(a) The corrosion control procedures required by 49 C.F.R. 192.605(b)(2), including those for the design, installation, operation, and maintenance of cathodic protection systems, must be carried out by, or under the direction of, a person qualified in pipeline corrosion control methods.

“(b) Any unprotected steel service or yard line found to have active corrosion shall be either provided with cathodic protection and monitored annually as required by K.A.R. 82-11-4 (m) or replaced. In areas where there is no active corrosion, each operator shall, at intervals not exceeding three years, reevaluate these pipelines.

“(c) In lieu of conducting electrical surveys on unprotected steel service lines and yard lines, each operator may implement one of the following options:

“(1) Conduct annual leakage surveys at intervals not exceeding 15 months, but at least once each calendar year, on all unprotected steel service lines and yard lines and initiate a program to apply cathodic protection for all unprotected steel service lines and yard lines; or

“(2) conduct annual leakage surveys at intervals not exceeding 15 months, but at least once each calendar year, on all unprotected steel service lines and yard lines and initiate a preventative maintenance program for replacement of service and yard lines. The preventative maintenance program to be used in conjunction with the annual leak survey of unprotected steel service and yard lines shall include the following:

“(A) After the annual leakage survey of all unprotected steel service and yard lines is completed, the operator shall prepare a summary listing of the leak survey results.

“(B) The summary listing shall include the number of leaks found and the number of lines replaced in a defined area.

“(C) An operator's replacement program for all service or yard lines in the defined area shall be initiated no later than when the sum of the number of unprotected steel service or yard lines with existing or repaired corrosion leaks and the number of unprotected steel service or yard lines already replaced due to corrosion equals 25% or more of the unprotected steel service or yard lines installed within that defined area.

“(D) The replacement program, once initiated for a defined area, shall be completed by an operator within 18 months.

“(E) Operators, at their option, may have separate preventative maintenance programs for service lines and yard lines but must consistently follow their selection.

“(d) For a city of the third class, or a city having a population of 2,000 or less, which is an operator of a natural gas distribution system, a replacement program for unprotected steel yard lines may comply with paragraph (c)(2)(D) of this section or include the following requirements in their replacement plan:

“(1) Perform leakage surveys at six month intervals;

“(2) Notify all customers in the defined area with a written recommendation that all unprotected steel yard lines should be scheduled for replacement; and

“(3) Replace all unprotected steel yard lines in the defined area that exhibit active corrosion.”

(j) 49 C.F.R. 192.455(a) shall be deleted and replaced by the following: “(a) Except as provided in paragraphs (c) and (f) of this section, each buried, submerged pipeline, or exposed

pipeline, installed after July 31, 1971, shall be protected against external corrosion by various methods, including the following:

“(1) An external protective coating meeting the requirements of 49 C.F.R. 192.461; and

“(2) A cathodic protection system designed to protect the pipeline in accordance with this subpart, installed and placed in operation within one year after completion of construction.”

(k) 49 C.F.R. 192.455(b) shall be deleted.

(l) 49 C.F.R. 192.457(b) shall be deleted and replaced by the following: “(b) Except for cast iron or ductile iron pipelines, each of the following buried, exposed or submerged pipelines installed before August 1, 1971, shall be cathodically protected in accordance with this subpart in areas in which active corrosion is found:

“(1) Bare or ineffectively coated transmission lines;

“(2) bare or coated pipes at compressor, regulator, and measuring stations; and

“(3) bare or coated distribution lines.”

(m) 49 C.F.R. 192.465(a) shall be deleted and replaced by the following: “Each pipeline that is under cathodic protection shall be tested at least once each calendar year, but in intervals not exceeding 15 months, to determine whether the cathodic protection meets the requirements of 192.463. If tests at those intervals are impractical for separately protected short sections of mains or transmission lines not in excess of 100 feet, or separately protected service lines, these pipelines may be surveyed on a sampling basis. At least one-third of the separately protected short sections, distributed over the entire system, shall be surveyed each calendar year, with a different one-third checked each subsequent year, so that the entire system is tested in each three-year period.”

(n) 49 C.F.R. 192.465(d) shall be deleted and replaced by the following: “(d) Each operator shall begin corrective measures within 30 days, or more promptly if necessary, on any deficiencies indicated by the monitoring.”

(o) 49 C.F.R. 192.465(e) shall be deleted and replaced by the following: “(e) After the initial evaluation required by 49 C.F.R. 192.455 (b) and K.A.R. 82-11-4(l), each operator shall, at least every three calendar years at intervals not exceeding 39 months, reevaluate its unprotected pipelines and cathodically protect them in accordance with this subpart in areas in which active corrosion is found. The operator shall determine the areas of active corrosion by electrical survey, where practical.”

(p) The following shall be added to 49 C.F.R. 192.465: “(f) It shall be considered practical to conduct electrical surveys in all areas, except the following:

“(1) Where the pipe lies under wall-to-wall pavement;

“(2) where the pipe is in a common trench with other utilities;

“(3) in areas with stray current; or

“(4) in areas where the pipeline is under pavement, regardless of depth, and more than two feet away from an unpaved area.

“(g) Where an electrical survey is impractical as listed in paragraph (f) of this section, the operator shall conduct leakage surveys using leak detection equipment in accordance with K.A.R. 82-11-4(dd) and evaluate for areas of active corrosion. The evaluation for active corrosion shall include review and analysis of leak repair records, corrosion monitoring records, exposed pipe inspection records, and the analysis of the pipeline environment.

“(h) for unprotected steel transmission lines and mains, a repair/replacement program shall be established based upon the number of leaks in a defined area.

~~“(i) In this section:~~

~~“(1) ‘Active corrosion’ means continuing corrosion which, unless controlled, could result in a condition that is detrimental to public safety.~~

~~“(2) ‘Electrical survey’ means a series of closely spaced pipe to soil readings and/or earth current readings over a pipeline that are subsequently analyzed to identify locations where a corrosive current is leaving the pipeline.~~

~~“(3) 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.”~~

(q) 49 C.F.R. 192.491(a) shall be deleted and replaced by the following: “(a) For as long as the pipeline remains in service, each operator shall maintain records and maps to show the locations of all cathodically protected piping, cathodic protection facilities other than unrecorded galvanic anodes installed before August 1, 1971, and neighboring structures bonded to the cathodic protection system.”

(r) 49 C.F.R. 192.491(b) shall be deleted.

(s) 49 C.F.R. 192.509(b) shall be deleted and replaced by the following: “(b) Each steel main that is to be operated at less than 1 p.s.i.g. shall be tested to at least 10 p.s.i.g. and each main to be operated at or above 1 p.s.i.g. shall be tested to at least 100 p.s.i.g.”

(t) The following shall be added to 49 C.F.R. 192.517(a): “(8) Test date. (9) Description of facilities being tested.”

(u) 49 C.F.R. 192.517(b) shall be deleted and replaced by the following: “For any pipeline installed after May 1, 1989, each operator shall make, and retain for the useful life of the pipeline, a record of each test performed under §§ 192.509, 192.511 and 192.513.”

(v) 49 C.F.R. 192.553(a)(1) shall be deleted and replaced by the following: “(1) At the end of each incremental increase, the pressure shall be held constant while the entire segment of pipeline that is affected is checked for leaks. This leak survey by flame ionization shall be conducted within eight hours after the stabilization of each incremental pressure increase provided in the uprating procedure. If the operator elects to not conduct the leak survey within the specified time frame because of nightfall or other circumstance, the pressure increment in the line shall be reduced that day with repetition of that particular increment during the next day that the uprating procedure is continued.”

(w) 49 C.F.R. 192.603(b) shall be deleted and replaced by the following: “(b) Each operator shall establish a written operating and maintenance plan meeting the requirements of this part and keep records necessary to administer the plan. This plan and future revisions shall be submitted to the gas pipeline safety section.”

(x) The following shall be added to 49 C.F.R. 192.603:

“(d) Each operator shall have regulator and relief valve test, maintenance and capacity calculation records in its possession whether the town border station is owned by the operator or by a wholesale supplier, if the supplier's relief valve capacity is utilized to provide protection for the operator's system.

“(e) Each operator shall be responsible for ensuring that all work completed by its consultants and contractors complies with this part.”

(y) The following shall be added to 49 C.F.R. 192.605(b):

“~~(12)~~ (13) Classifying underground leaks according to K.A.R. 82-11-4(bb).

“~~(13)~~ (14) Performing leakage surveys of underground pipelines.

~~“(14) (15) Identifying conditions which will require patrols of a distribution system at intervals shorter than the maximum intervals listed in K.A.R. 82-11-4 (cc).”~~

(z) 49 C.F.R. 192.617 shall be deleted and replaced by the following: “Investigation of failures. (a) Each operator shall establish procedures for analyzing accidents and failures, including:

“(1) The maintenance of records that contain information for each failure including the type of pipe and the reason for failure.

“(2) The selection of samples of the failed facility or equipment for laboratory examination, where appropriate, for the purpose of determining the causes of the failure and minimizing the possibility of recurrence.

“(b) Each operator shall investigate each accident and failure.”

(aa) 49 C.F.R. 192.625(f) shall be deleted and replaced by the following:

“(f) Each operator shall assure the proper concentration of odorant and shall maintain records of these samplings for at least two years in accordance with this section. Proper concentration of odorant shall be assured by conducting periodic sampling of combustible gases as follows:

“(1) Conduct monthly odorometer sampling of combustible gases at selected points in the system; and

“(2) conduct sniff tests during each service call where access to a source of gas in the ambient air is readily available.

“(g) Operators of master meter systems may comply with this requirement by the following:

“(1) Receiving written verification from their gas source that the gas has the proper concentration of odorant; and

“(2) Conducting periodic sniff tests at the extremities of the system to confirm that the gas contains odorant.”

(bb) 49 C.F.R. 192.703 shall be deleted and replaced by the following: “General. (a) No person shall operate a segment of pipeline unless it is maintained in accordance with this subpart.

“(b) Odorometers and leak detection equipment shall be calibrated according to manufacturer’s specifications. Leak detection equipment shall be tested monthly with a calibration gas of known hydrocarbon concentration, except if equipment is not used, then testing with calibration gas shall be performed prior to the next use.

“(c) Each segment of pipeline that becomes unsafe shall be replaced, repaired or removed from service within five days of the operator being notified of the existence of the unsafe condition. Minimum requirements for response to each class of leak are as follows:

“(1) A class 1 leak requires immediate repair or continuous action until the conditions are no longer hazardous. After conditions are no longer hazardous, a class 1 leak shall be replaced, repaired, or removed from service within five days of the operator being notified of its existence.

“(2) A class 2 leak shall be repaired within six months after detection. Under adverse soil conditions, a class 2 leak shall be monitored weekly to ensure that the leak will not represent a probable hazard and that it reasonably can be expected to remain nonhazardous.

“(3) A class 3 leak shall be rechecked at least every six months and repaired or replaced within 30 months.

“(d) Each operator shall inspect and classify all reports of gas leaks within two hours of notification.

“(e) Each underground leak shall be classified using the operator’s underground leak classification procedure as follows:

“(1) A class 1 leak means a leak that represents an existing or probable hazard to persons or property, and requires immediate repair or continuous action until the conditions are no longer hazardous. This class of leak may include the following conditions:

“(A) Any leak which, in the judgment of operating personnel at the scene, is regarded as an immediate hazard;

“(B) any leak in which escaping gas has ignited;

“(C) any indication that gas has migrated into or under a building, or into a tunnel;

“(D) any percentage reading gas in air at the outside wall of a building, or where gas would likely migrate to an outside wall of a building;

“(E) any reading of 4% gas in air, or greater, in a confined space;

“(F) any reading of 4% gas in air, or greater, in a small substructure from which gas would likely migrate to the outside wall of a building; or

“(G) any leak that can be seen, heard, or felt, and which is in a location that may endanger the general public or property.

“(2) A class 2 leak means a leak that is nonhazardous at the time of detection, but justifies scheduled repair based on probable future hazard. This class of leak may include the following conditions:

“(A) any reading of 2% gas in air, or greater, under a sidewalk in a wall-to-wall paved area that does not qualify as a class 1 leak;

“(B) any reading of 5% gas in air, or greater, under a street in a wall-to-wall paved area that has significant gas migration and does not qualify as a class 1 leak;

“(C) any reading less than 4% gas in air in a small substructure from which gas would likely migrate creating a probable future hazard;

“(D) any reading between 1% gas in air and 4% gas in air in a confined space;

“(E) any reading on a pipeline operating at 30% SMYS, or greater, in a class 3 or 4 location, which does not qualify as a class 1 leak;

“(F) any reading of 4% gas in air, or greater, in a gas associated substructure; or

“(G) any leak which, in the judgment of operating personnel at the scene, is of significant magnitude to justify scheduled repair.

“(3) A class 3 leak means a leak that is nonhazardous at the time of detection and can reasonably be expected to remain nonhazardous. This class of leak may include the following conditions:

“(A) any reading of less than 4% gas in air in a small gas associated substructure;

“(B) any reading under a street in areas without wall-to-wall paving where it is unlikely the gas could migrate to the outside wall of a building; or

“(C) any reading of less than 1% gas in air in a confined space.”

(cc) 49 C.F.R. 192.721(a) shall be deleted and replaced by the following two paragraphs: “(a) The frequency with which mains are patrolled shall be determined by the severity of the conditions which could cause failure or leakage, and the consequent hazards to public safety. Intervals between patrols shall not be longer than those prescribed in the following table:

## Maximum Intervals Between Patrols

Location of Line	Mains in places or on structures where anticipated physical movement or external loading could cause failure or leakage	Mains at all other locations
Inside business districts	4 ½ months, but at least four times each calendar year	7 ½ months, but at least twice each calendar year
Outside business districts	7 ½ months, but at least twice each calendar year	18 months, but at least once each calendar year

“(b) Service lines and yard lines shall be patrolled at least once every three calendar years at intervals not exceeding 42 months.”

(dd) 49 C.F.R. 192.723 shall be deleted and replaced by the following:

“Distribution systems: leak surveys and procedures.

“(a) Each operator of a distribution system shall conduct periodic leakage surveys using leak detection equipment in accordance with this section. The leak detection equipment used for this survey shall utilize a continuously sampling technology.

“(b) The type and scope of the leakage control program shall be determined by the nature of the operations and the local conditions. A leakage survey using leak detection equipment shall be conducted on all distribution mains and shall meet the following minimum requirements:

“(1) In business districts, a leakage survey shall include 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. This survey shall be conducted at intervals on the distribution mains within the business district as frequently as necessary with the maximum interval between surveys not exceeding 15 months, but at least once each calendar year.

“(2) A leakage survey with leak detection equipment shall be conducted on the distribution mains outside the business areas. The survey shall be made as frequently as necessary, but it shall meet the following minimum requirements:

“i. Cathodically unprotected steel mains and ductile iron mains located in class 2, 3, and 4 areas shall be surveyed at least once each calendar year at intervals not exceeding 15 months.

“ii. Cathodically unprotected steel mains and ductile iron mains located in class 1 areas, cathodically protected bare steel mains, cast iron mains, and mains constructed of PVC plastic shall be surveyed at least once every three calendar years at intervals not exceeding 39 months.

“iii. Cathodically protected externally coated steel mains and mains constructed of polyethylene plastic shall be surveyed at least once every five calendar years at intervals not exceeding 63 months.

“(3) Operators in existence on January 1, 2007 must be in compliance with paragraph (b)(2) of this section no later than June 1, 2010. Prior to compliance with subparagraphs (b)(2)(i) and (b)(2)(ii) of this section, a leakage survey with leak detection equipment of the distribution system shall be conducted outside business districts as frequently as necessary, but it shall be performed at least once every 3 calendar years at intervals not exceeding 39 months.

“(c) Except for the service lines and yard lines described in paragraph (d) of this section, a leakage survey using leak detection equipment shall be conducted for all service lines and yard lines as follows:

“(1) In business districts, this survey shall be conducted as frequently as necessary with the maximum interval between surveys not exceeding 15 months, but at least once each calendar year.

“(2) Outside business districts, the survey shall be made as frequently as necessary, but it shall meet the following minimum requirements:

“i. Cathodically unprotected steel service or yard lines and service or yard lines constructed of PVC plastic, cast iron, or copper shall be surveyed at least once each calendar year at intervals not exceeding 15 months.

“ii. Cathodically protected bare steel service or yard lines shall be surveyed at least once every three years at intervals not exceeding 39 months.

“iii. Cathodically protected externally coated steel service or yard lines and service or yard lines constructed of polyethylene plastic shall be surveyed at least once every five calendar years at intervals not exceeding 63 months.

“(d) For yard lines more than 300 feet in length and operating at a pressure less than 10 p.s.i.g., only the portion within 300 feet of a habitable dwelling must be leak surveyed in accordance with these regulations.

“(e) Each operator’s operations and maintenance manual shall state that company-designated employees are to be trained in and conduct vegetation leak surveys where vegetation is suitable to such analysis.

“(f) Each leakage survey record shall be kept for at least six years.”

(ee) The following shall be added to 49 C.F.R. 192.755: “(c) Each operator with cast iron piping shall institute all of the following for the purposes of evaluation and replacement of cast iron pipelines:

“(1) Each time a leak in the body of a cast iron pipe is discovered, collect a coupon from the joint of pipe that is leaking within five feet of the leak site.

“(2) Conduct laboratory analysis on all coupons to determine the percentage of graphitization. Using the following equation:

$$\text{Percent of Graphitization} = \frac{(\text{Maximum Depth of Graphitization})}{(\text{Wall Thickness})} \times 100$$

“(3) Replace at least one city block (approximately 500 feet) within 120 days of the operator’s discovery of a leak in cast iron pipe due to external corrosion or each time the laboratory analysis of a coupon shows graphitization equal to or greater than the following:

Diameter	Percent Graphitization
2.0 inch	25%
3.0 inch and 4.0 inch	60%
6.0 inch and 8.0 inch	75%
10.0 inch or greater	90%

“(4) Submit coupons for analysis within 30 days of collection. Retain all sampling records for the life of the facility, but not less than five years.

“(5) For each operator with cast iron piping that is 3 inches or less in nominal diameter, shall have a replacement program that will remove all cast iron piping with nominal diameter of 3 inches and smaller from natural gas service by January 1, 2013.”

(ff) 49 C.F.R. 192.801(b)(3) shall be deleted and replaced by the following: “(3) Is performed as requirement of K.A.R. 82-11-4; and.” (Authorized by and implementing K.S.A. 66-1,150; effective, T-82-10-28-88, Oct. 28, 1988; effective, T-82-2-25-89, Feb. 25, 1989; revoked, T-82-3-31-89, April 30, 1989; effective May 1, 1989; amended April 16, 1990;

amended March 12, 1999; amended July 7, 2003; amended Jan. 25, 2008; amended June 26,  
2009; amended P-\_\_\_\_\_.)

Proposed