

**DEPARTMENT OF LICENSING AND REGULATORY AFFAIRS**

**PUBLIC SERVICE COMMISSION**

**GAS SAFETY**

(By authority conferred on the public service commission by section 2 of 1969 PA 165, MCL 483.152, and section 231 of 1965 PA 380, MCL 16.331, and Executive Reorganization Order Nos. 1996-2, 2003-1, 2008-4, and 2011-4, MCL 445.2001, MCL 445.2011, MCL 445.2025, and MCL 445.2030)

**PART 1. GENERAL PROVISIONS**

**R 460.20101 Applicability of rules.**

Rule 101. (1) These rules apply to the design, fabrication, installation, inspection, testing, and safety aspects of the operation and maintenance of gas pipeline facilities used in the transportation of gas.

(2) These rules do not apply to either of the following:

(a) The onshore gathering of gas under either of the following conditions:

(i) Through a pipeline that operates at less than 0 psig.

(ii) Through a pipeline that is not a regulated onshore gathering line as determined by 49 C.F.R. § 192.8.

(b) Any pipeline system that transports only petroleum gas or petroleum gas and air mixtures under either of the following circumstances:

(i) The pipeline has fewer than 10 customers and no portion of the system is located in a public place.

(ii) The pipeline has only 1 customer.

(3) The work performed within the scope of these rules shall meet or exceed all of the safety standards in these rules.

History: 1998-2000 AACS; 2009 AACS; 2014 AACS.

**R 460.20102 Definitions.**

Rule 102. As used in these rules:

(a) "Commission" means the Michigan public service commission.

(b) "Corrosion" means the destruction or deterioration of a material, usually a metal, by an electrochemical process, due to a reaction with the material's environment.

(c) "Customer" means a person or company who purchases gas from a distributor for the person's or company's own use or for the use of a tenant, or both.

(d) "Hoop stress" means the stress in a pipe wall which acts circumferentially in a plane perpendicular to the longitudinal axis of the pipe and which is produced by the pressure of the fluid in the pipe.

(e) "Leak" means the unintentional escape of gas from a pipeline facility or a customer's facility.

(f) "Leakage survey" means a systematic inspection that is made to locate leaks in a gas pipeline.

(g) "Pressure" means gauge pressure, unless otherwise stated, expressed in pounds per square inch above atmospheric pressure and is abbreviated "psig."

(h) "Sour gas" means gas containing a concentration of hydrogen sulfide (H<sub>2</sub>S) greater than or equal to 300 parts per million (ppm.).

(i) "System" means all pipeline facilities used by a particular operator in the transportation of gas, including all of the following:

(A) Line pipe.

(B) Valves.

(C) Other appurtenances connected to line pipe.

(D) Compressor units.

(E) Fabricated assemblies associated with compressor units.

(F) Metering.

(G) Customers' meters.

(H) Delivery stations.

(I) Fabricated assemblies in metering and delivery stations.

(j) "Vault" means an underground structure that may be entered and that is designed to contain piping and piping components, such as valves and pressure regulators. The terms "vault" and "pit" are used interchangeably in these rules.

History: 1998-2000 AACCS.

### **R 460.20103 Adoption of documents by reference generally.**

Rule 103. (1) Any documents or parts of documents adopted by reference in these rules are a part of these rules as though set out in full. When only a portion of a document is referenced, the remainder is not adopted in these rules.

(2) Copies of all adopted documents are available at the addresses provided in R 460.20602.

(3) The full titles for the publications adopted by reference in these rules are provided in R 460.20603 to R 460.20606. Numbers in parentheses indicate applicable editions of the publications. Earlier editions of documents listed or editions of documents formerly listed in the Michigan gas safety code (R 460.14001 to R 460.14999) or these rules may be used for materials and components manufactured, designed, or installed in accordance with the earlier editions or earlier documents at the time they were listed. The user shall refer to the appropriate previous version of the Michigan gas safety code or these rules for a listing of the earlier listed editions or documents.

(4) Standards and specifications cited in R 460.20603 to R 460.20606 may be supplemented by specific requirements elsewhere in these rules. Users of these rules are advised against attempting direct application of any of these standards without carefully observing the rule's reference to that standard.

History: 1998-2000 AACCS.

**R 460.201104 Rescission.**

Rule 104. R 460.14001 to R 460.14999 of the Michigan Administrative Code, noted on page 1027 of the 1997 Annual Supplement to the 1979 Michigan Administrative Code and appearing on pages 630 to 642 of the 1986 Annual Supplement to the Code, pages 900 to 917, 919 to 921, and 923 to 925 of the 1991 Annual Supplement to the Code, and pages 1175 to 1199 of the 1995 Annual Supplement to the Code, are rescinded.

History: 1998-2000 AACCS.

**PART 2. SAFETY STANDARDS AND TESTING REQUIREMENTS**

**R 460.20201 Pipeline safety standards; adoption by reference.**

Rule 201. (1) Except for 49 C.F.R. §192.1, an operator shall ensure that a gas pipeline is in compliance with all of the minimum safety standards contained in 49 C.F.R. part 192 entitled "Transportation of Natural and Other Gas by Pipeline: Minimum Federal Safety Standards," which are adopted by reference in R 460.20606.

(2) An operator shall ensure that a pipeline which is subject to the standards specified in subrule (1) of this rule is also in compliance with all of the additional safety standards contained in R 460.20301 to R 460.20331.

(3) In addition to the requirements imposed by subrules (1) and (2) of this rule, an operator shall ensure that a pipeline which transports sour gas is also in compliance with the additional safety standards contained in R 460.20401 to R 460.20431.

History: 1998-2000 AACCS; 2003 AACCS.

**R 460.20202 Drug and alcohol testing requirements.**

Rule 202. (1) An operator shall meet the drug and alcohol testing requirements in 49 C.F.R. part 199 entitled "Drug and Alcohol Testing," which is adopted by reference in R 460.20606.

(2) An operator shall conduct the drug and alcohol testing required by subrule (1) of this rule according to the requirements of 49 C.F.R. part 199 and the procedures prescribed in 49 C.F.R. part 40 entitled "Procedures for Transportation Workplace Drug and Alcohol Testing Programs," which is adopted by reference in R 460.20606.

(3) Subrule (1) of this rule applies only to operators who operate facilities subject to the natural gas pipeline safety act of 1968, 49 U.S.C. §60101 et seq., as amended.

History: 1998-2000 AACCS.

**PART 3. ADDITIONAL MINIMUM SAFETY STANDARDS**

**R 460.20301 Scope.**

Rule 301. (1) The rules contained in this part are additional requirements for the design, fabrication, installation, inspection, testing, and safety aspects of the operation and maintenance of gas pipeline facilities operated within the state of Michigan.

(2) Operators of pipeline facilities used in the transportation of gas that are under the jurisdiction of the commission shall meet all of the requirements of 49 C.F.R. §192, which is adopted by reference in R 460.20606, and all of the additional requirements in this part.

History: 1998-2000 AACCS.

**R 460.20302 Compressor station piping.**

Rule 302. (1) An operator shall install and test gas piping, other than instrument, control, and sample piping, in accordance with these rules.

(2) An operator shall identify all emergency valves and controls by signs. An operator shall identify important gas pressure piping by signs or color coding to indicate its function.

(3) An operator shall ensure that fuel gas lines within a compressor station conform to both of the following provisions:

(a) Are provided with master shutoff valves located outside of a building.

(b) Are equipped with pressure limiting devices to prevent the maximum allowable operating pressure from being exceeded by more than 10%.

(4) An operator shall equip the air piping within a compressor station that is part of an air starter with a check valve in the starting air line near each engine to prevent backflow from the engine into the air piping system. An operator shall also place a similar check valve in the main air line on the immediate outlet side of the air tank or tanks. An operator shall install equipment for cooling the air and removing the moisture and entrained oil between the starting air compressor and the air storage tank.

History: 1998-2000 AACCS; 2009 AACCS.

**R 460.20303 Vault and pit sealing, venting, and ventilation.**

Rule 303. In addition to the requirements contained in 49 C.F.R. §192.187(a)(3), which is adopted by reference in R 460.20606, an operator shall ensure that the outside end of the ventilation ducts of an underground vault or closed top pit is equipped with a suitable weatherproof fitting or vent head designed to prevent foreign matter from entering or obstructing the duct.

History: 1998-2000 AACCS.

**R 460.20304 Welding procedures.**

Rule 304. In addition to the requirements contained in 49 C.F.R. §192.225, which is adopted by reference in R 460.20606, an operator shall ensure that a welding procedure meets all of the following requirements:

(a) Is qualified under either section IX of the ASME boiler and pressure vessel code, which is adopted by reference in R 460.20604, or section 5 of API standard 1104, which is adopted by reference in R 460.20603, whichever is appropriate to the function of the weld.

(b) Is qualified under appendix B of API standard 1104, which is adopted by reference in R 460.20603, for pipelines operating at greater than 60 psig.

(c) A copy of the welding procedure being followed is on the jobsite when welding is performed.

History: 1998-2000 AACS; 2009 AACS; 2014 AACS.

#### **R 460.20305 Welder qualification records.**

Rule 305. An operator shall establish and maintain a record of all qualified welders that indicates the date and results of tests. The record shall specifically include the welding procedure for which each welder has qualified. An operator shall make the record available for inspection at each jobsite.

History: 1998-2000 AACS.

#### **R 460.20306 Nondestructive testing.**

Rule 306. (1) In addition to the requirements in 49 C.F.R. §192.243, which is adopted by reference in R 460.20606, if nondestructive testing is required under 49 C.F.R. §192.243, then an operator shall ensure that 100% of each day's field butt welds are nondestructively tested over their entire circumferences in the following locations:

(a) Regulating stations.

(b) Measuring stations.

(c) Compressor stations.

(2) If it is not practical to test 100% of each day's field butt welds as required by subrule (1) of this rule, then an operator shall nondestructively test a random sample of not less than 90% of each day's field butt welds made at the locations specified in subrule (1) of this rule.

History: 1998-2000 AACS; 2010 AACS.

#### **R 460.20307 Welding preheating.**

Rule 307. In addition to the requirements contained in 49 C.F.R. §192.235, which is adopted by reference in R 460.20606, if preheating is required, then an operator shall monitor the preheat temperature to ensure that the required preheat temperature is reached before beginning, and is maintained during, the welding operation.

History: 1998-2000 AACS.

**R 460.20308 Customer meters and regulators; location.**

Rule 308. The requirements contained in 49 C.F.R. §192.353, which is adopted by reference in R 460.20606, are superseded by all of the following provisions:

(a) An operator shall ensure that a customer's meter and regulator installation is located outside the building or shall include an outside above grade riser, except for the following:

(i) A distribution system that operates at 10 psig or less if an outside meter set assembly is not practical.

(ii) A commercial building, industrial building, or apartment building if an outside meter set assembly is not practical.

(iii) Row-type houses or houses where the proximity of adjoining buildings makes outside meter set assemblies impractical.

(b) A service line excluded under subrule (1) of this rule shall include an outside above grade riser, if practical.

(c) If an outside meter set assembly or an outside above grade riser is installed, then the above grade piping shall be designed to prevent an external force that is applied to the service line from being transferred to and damaging the inside piping.

(d) An operator shall install a meter and service regulator, whether inside or outside of a building, in a readily accessible location and shall protect the meter and regulator from corrosion and other damage. An operator shall not install a meter in a bedroom, closet, bathroom, under a combustible stairway, or in an unventilated or inaccessible place.

(e) An operator shall ensure that a service regulator installed in a building is located as near as practical to the point of service line entrance.

(f) An operator shall ensure that a meter installed in a building is located in a ventilated place not less than 3 feet from a source of ignition or heat that might damage the meter.

(g) An operator shall ensure that the upstream regulator in a series is located outside of the building unless it is located in a separate metering or regulating building.

History: 1998-2000 AACCS.

**R 460.20309 Service lines; valve location.**

Rule 309. (1) In addition to the requirements contained in 49 C.F.R. §192.365, which is adopted by reference in R 460.20606, an operator shall ensure that service lines are equipped with a valve located on the service line outside the building if any of the following provisions apply:

(a) The service line operates at a pressure of more than 10 psig.

(b) The service line is 2 inches or larger in diameter.

(c) The service line supplies any of the following:

(i) A hospital.

(ii) A church.

(iii) A theater.

(iv) A school.

(v) A building of public assemblage similar to the buildings listed in paragraphs (i) to (iv) of this subdivision.

(vi) A commercial or industrial building.

(vii) A dwelling that houses more than 4 families.

(2) An operator shall ensure that an outside valve required by subrule (1) of this rule is located aboveground in an accessible place, if feasible. If an aboveground location is not feasible, then the operator shall ensure that a curb valve or other remote valve is installed.

(3) If a curb valve is installed, then the operator shall establish a planned procedure which permits accurately locating the service line valve within a reasonable period of time when the service line valve is not plainly visible at the surface of the ground during all periods of the year.

History: 1998-2000 AACCS; 2009 AACCS.

**R 460.20310 Galvanized or aluminum pipe prohibited for direct burial or submerged use.**

Rule 310. In addition to the requirements contained in 49 C.F.R. §192.453, which is adopted by reference in R 460.20606, an operator shall not utilize galvanized pipe or aluminum pipe for direct burial or submerged use.

History: 1998-2000 AACCS.

**R 460.20311 Test requirements for pipelines operating below 100 psig.**

Rule 311. The requirements contained in 49 C.F.R. §192.509(b), which is adopted by reference in R 460.20606, are superseded by all of the following provisions:

(a) An operator shall test a main that is to be operated at less than 1 psig to not less than 10 psig.

(b) An operator shall test a main that is to be operated at or above 1 psig, but not more than 60 psig, to not less than 90 psig.

(c) An operator shall test a main that is to be operated at more than 60 psig, but less than 100 psig, to not less than 1 ½ times the proposed maximum allowable operating pressure.

(d) An operator shall ensure that the test pressure is maintained at or above the test pressure requirement for the pipeline being tested for not less than 1 hour. However, the operator shall test a relatively short segment for not less than 30 minutes.

History: 1998-2000 AACCS.

**R 460.20312 Leak test requirements; service lines.**

Rule 312. In addition to the requirements contained in 49 C.F.R. §192.511, which is adopted by reference in R 460.20606, an operator shall test all service lines at the leak

test pressures prescribed in 49 C.F.R.§192.511, which is adopted by reference in R 460.20606, for not less than 10 minutes.

History: 1998-2000 AACCS.

**R 460.20313 Strength test requirements; plastic pipelines.**

Rule 313. In addition to the requirements contained in 49 C.F.R.§192.513, which is adopted by reference in R 460.20606, an operator shall maintain the test pressure at or above the test pressure requirement for the pipeline being tested for not less than 1 hour. However, an operator shall test a relatively short segment for not less than 30 minutes, except as provided in R 460.20311.

History: 1998-2000 AACCS.

**R 460.20314 Test records.**

Rule 314. In addition to the requirements contained in 49 C.F.R.§192.517, which is adopted by reference in R 460.20606, an operator shall retain the following test record information:

- (a) The proposed maximum operating pressure of the pipeline.
- (b) The class location existing at the time of the test of the area in which the pipeline is located.

History: 1998-2000 AACCS.

**R 460.20315 Leaks occurring during uprating; repairs and monitoring required.**

Rule 315. (1) In addition to the requirements contained in 49 C.F.R. §192.553, which is adopted by reference in R 460.20606, if the new and higher maximum allowable operating pressure will be more than 10 psig, then an operator shall expose and repair and monitor a leak that is detected during the uprating operation.

(2) An operator shall file a complete copy of the written plan described in 49 C.F.R. §192.553(c), which is adopted by reference in R 460.20606, with the commission not less than 30 calendar days before commencement of a project.

History: 1998-2000 AACCS; 2014 AACCS.

**R 460.20316 Leakage survey required in addition to requirements in 49 C.F.R. § 192.555(b)(2).**

Rule 316. In addition to the requirements contained in 49 C.F.R.§192.555(b)(2), which is adopted by reference in R 460.20606, an operator shall make a leakage survey and repair all leaks found before the operator subjects any segment of a steel pipeline to an operating pressure that will produce a hoop stress of 30% or more of the specified minimum yield strength for the pipeline.



History: 1998-2000 AACCS.

**R 460.20317 Provisions of 49 C.F.R. § 192.557(b)(2) superseded by leakage survey and repair requirement.**

Rule 317. The provisions contained in 49 C.F.R. §192.557(b)(2), which is adopted by reference in R 460.20606, are superseded by the requirement in R 460.20316 that a leakage survey be conducted and that all leaks found be repaired.

History: 1998-2000 AACCS.

**R 460.20318 Gas leak investigation; establishment of service; customer leak complaint records.**

Rule 318. (1) An operator shall conduct an investigation of every gas leak report received as soon as possible. If the investigation reveals a hazardous situation, then the operator shall take immediate action to evacuate, repair, or isolate the facilities involved to reduce any danger to the public.

(2) A distribution utility shall not establish gas service to an applicant until the utility has made a leakage test, using gas at utilization pressure, to ensure that the applicant's fuel line is gastight and has made a determination that gas odor is detectible, where applicable. If fuel lines are not present upon completion of meter installation, the operator shall comply with all of the following:

(a) A valve shall be installed on the outlet piping of the meter. This valve shall be in the closed position.

(b) The valve shall be tagged with contact information of the distribution utility and notice that the fuel line installation must comply with applicable fuel piping codes.

(c) A mechanical device or fitting that will prevent the flow of gas shall be installed at the outlet piping.

(3) An operator shall keep records of all customer leak complaints and the disposition of the complaints.

History: 1998-2000 AACCS; 2014 AACCS.

**R 460.20319 Filing of operation and maintenance manual with commission required.**

Rule 319. In addition to the requirements contained in 49 C.F.R. §192.605, which is adopted by reference in R 460.20606, an operator shall file the operation and maintenance manual required by 49 C.F.R. §192.605 with the commission in paper or electronic form. The operation and maintenance manual shall include procedures that address both the federal rules and the rules contained in the Michigan gas safety standards. An operator shall file a change in the operation and maintenance manual with the commission within 90 calendar days after the change is made. An operator shall identify the specific changes.

History: 1998-2000 AACCS; 2014 AACCS.

**R 460.20320 Rescinded.**

History: 1998-2000 AACS; 2009 AACS.

**R 460.20321 Rescinded.**

History: 1998-2000 AACS; 2009 AACS.

**R 460.20322 Maximum allowable operating pressure of pipeline containing cast-iron pipe.**

Rule 322. Notwithstanding the requirement contained in 49 C.F.R.§192.621(a)(3), which is adopted by reference in R 460.20606, a person shall not operate any segment of a pipeline containing cast-iron pipe that has unreinforced bell and spigot joints at a pressure of more than 10 psig.

History: 1998-2000 AACS.

**R 460.20323 Odorization of gas; records maintenance.**

Rule 323. In addition to the requirements contained in 49 C.F.R.§192.625, which is adopted by reference in R 460.20606, an operator shall establish and maintain adequate records to establish compliance with the requirements of 49 C.F.R. §192.625, including the quantity of odorant used per million cubic feet of gas and sampling to determine the effectiveness of odorization.

History: 1998-2000 AACS.

**R 460.20324 Fenced areas; alternate means of exit.**

Rule 324. An operator shall ensure that a fence which may hamper or prevent the escape of persons from the vicinity of a meter or regulator station in an emergency has an alternate means of exit, such as a second gate, exit ladder, or platform.

History: 1998-2000 AACS.

**R 460.20325 Transmission line patrolling.**

Rule 325. In addition to the requirements contained in 49 C.F.R.§192.705, which is adopted by reference in R 460.20606, at intervals of not more than 6 weeks, but not less than 12 times each calendar year, an operator shall patrol all transmission lines that are operating at 40% or more of specified minimum yield strength to observe surface

conditions on, and adjacent to, the transmission line right-of-way for indications of leaks, construction activity, and other factors affecting safety and operation.

History: 1998-2000 AACS.

**R 460.20326 Transmission lines; permanent field repair of leaks.**

Rule 326. (1) In accordance with the requirements contained in 49 C.F.R. §192.717(b)(3), which is adopted by reference in R 460.20606, an operator shall repair a leak that is due to a corrosion pit or that occurs in a transmission line that is joined by mechanical couplings and that operates at less than 40% of the specified minimum yield strength of the pipeline through any of the following procedures:

- (a) The methodology set forth in 49 C.F.R. § 192.717(a).
- (b) The methodology set forth in 49 C.F.R. § 192.717(b)(1).
- (c) The methodology set forth in 49 C.F.R. § 192.717(b)(2).

(2) An operator shall not repair a leak described in subrule (1) of this rule through use of a fillet welded patch.

History: 1998-2000 AACS; 2009 AACS.

**R 460.20327 Distribution system; leakage surveys and procedures.**

Rule 327. In addition to the requirements contained in 49 C.F.R. §192.723, which is adopted by reference in R 460.20606, all of the following requirements apply:

(a) A gas leak located by a survey that, due to its location or relative magnitude, constitutes a hazard or potential hazard to the public or to buildings shall receive immediate corrective action. Immediate corrective action shall consist of an immediate effort to protect life and property and continuous remedial action thereafter until the condition is no longer hazardous.

(b) An operator shall schedule a gas leak which does not constitute an immediate hazard to the public or to buildings, but which requires scheduled repair within the operator's maintenance manual, for repair within 1 year.

(c) An operator shall ensure that a gas leak which is located by a survey, other than a leak covered by subdivision (a) or (b) of this rule, is subjected to regular surveillance at intervals not exceeding 15 months, but at least once each calendar year.

History: 1998-2000 AACS; 2014 AACS.

**R 460.20328 Pressure-limiting and pressure-regulating stations; inspection and testing.**

Rule 328. In addition to the requirements contained in 49 C.F.R. §192.739, which is adopted by reference in R 460.20606, an operator shall tag a pressure-limiting or pressure-relief device installed to provide overpressure protection to a transmission line or distribution main to indicate the maximum allowable operating pressure of the facilities being protected and the set pressure or shall make a record of the information available at each location.

History: 1998-2000 AACS.

**R 460.20329 Valve maintenance; distribution systems.**

Rule 329. In addition to the requirements contained in 49 C.F.R. §192.747, which is adopted by reference in R 460.20606, an operator shall partially operate a valve that may be necessary for the safe operation of a distribution system at intervals of not more than 15 months, but at least each calendar year.

History: 1998-2000 AACS.

**R 460.20330 Prevention of accidental ignition.**

Rule 330. In addition to the requirements contained in 49 C.F.R. §192.751, which is adopted by reference in R 460.20606, before welding in or around a vault, pit, or other structure or area containing gas facilities, an operator shall make a thorough check to determine the possible presence of a combustible gas mixture. Welding shall begin only when safe conditions are indicated.

History: 1998-2000 AACS.

**R 460.20331 Caulked bell and spigot joints.**

Rule 331. In addition to the requirements contained in 49 C.F.R. §192.753, which is adopted by reference in R 460.20606, an operator shall seal a cast-iron, caulked bell and spigot joint subject to pressures of more than 10 psig with either of the following:

- (a) A mechanical leak clamp.
- (b) A material or device that has all of the following characteristics:
  - (i) Does not reduce the flexibility of the joint.
  - (ii) Permanently bonds, either chemically or mechanically, or both, with the bell and spigot metal surfaces or adjacent pipe metal surfaces.
  - (iii) Seals and bonds in a manner that meets the strength, environmental, and chemical compatibility requirements of 49 C.F.R. §192.53 and 49 C.F.R. §192.143, which are adopted by reference in R 460.20606.

History: 1998-2000 AACS.

**R 460.20332 Discontinuation of inactive service lines.**

Rule 332. (1) In addition to complying with the requirements contained in 49 C.F.R. § 192.727, which is adopted by reference in R 460.20606, an operator, within 9 months of October 15, 2014, shall discontinue gas service for any inactive service line with components located inside a structure pursuant to the methods specified in either of the following regulations:

- (i) In accordance with 49 C.F.R. § 192.727(d)(1) and (d)(2).

(ii) In accordance with 49 C.F.R. § 192.727(d)(3) by physically disconnecting the service line outside the building.

(2) As used in subrule (1) of this rule, “inactive service line” means a service line where there has been no customer of record for a continuous 24-month period and gas service to the premises has not been discontinued.

History: 2014 AACS.

## **PART 4. SOUR GAS PIPELINES**

### **R 460.20401 Scope; conversion of existing pipeline to sour gas service.**

Rule 401. (1) The rules in this part are additional requirements for the design, fabrication, installation, inspection, testing, and safety aspects of the operation and maintenance of gas pipeline facilities used in the transportation of sour gas.

(2) Operators of pipeline facilities used for the transportation of sour gas that are under the jurisdiction of the commission shall meet all of the requirements in parts 2, 3, and 5 of these rules, all of the requirements in 49 C.F.R. Part 192, which is adopted by reference in R 460.20606, and all of the additional requirements in this part.

(3) Existing pipeline facilities not designed and built for the transportation of sour gas shall not be converted for use in the transportation of sour gas without prior review and approval of the commission.

History: 1998-2000 AACS; 2003 AACS.

### **R 460.20402 Materials for pipe and components; requirements.**

Rule 402. In addition to the requirements in 49 C.F.R. §192.55, which is adopted by reference in R 460.20606, metallic materials for pipe and other components used to transport sour gas shall meet the requirements in the national association of corrosion engineers international standard NACE MR0175/ISO 15156, 2004-2007, which are adopted by reference in R 460.20605.

History: 1998-2000 AACS; 2003 AACS; 2009 AACS; 2010 AACS.

### **R 460.20403 Steel pipe; design formula.**

Rule 403. In addition to the requirements set forth in 49 C.F.R. §192.105 through §192.115, which are adopted by reference in R 460.20606, steel pipe designed for use in the transportation of sour gas shall use a design factor of 0.40.

History: 1998-2000 AACS; 2003 AACS.

### **R 460.20404 Purging of sour gas pipelines; plan; personnel.**

Rule 404. In addition to satisfying the requirements set forth in 49 C.F.R. §192.629, which is adopted by reference in R 460.20606, an operator of pipeline facilities used in the transportation of sour gas shall comply with both of the following provisions:

(a) The purging of sour gas from a pipeline shall be accomplished by burning or by equivalent control of H<sub>2</sub>S.

(b) All purging and blowing down of sour gas pipelines shall be done in accordance with a written plan. The plan shall include public and operator personnel safety and environmental protection considerations. Properly equipped personnel who are trained and familiar with the potential hazards of sour gas shall perform all purging and blowing down operations.

History: 1998-2000 AACS; 2003 AACS.

**R 460.20405 Valves; qualification for sour gas service.**

Rule 405. An operator shall ensure that valves used for sour gas service are qualified for sour gas service in accordance with the national association of corrosion engineers international standard MR0175/ISO 15156, 2004-2007, which is adopted by reference in R 460.20605.

History: 1998-2000 AACS; 2003 AACS; 2009 AACS; 2010 AACS.

**R 460.20406 Compressor station; emergency shutdown.**

Rule 406. In addition to the requirements set forth in 49 C.F.R. §192.167(a)(2), which is adopted by reference in R 460.20606, if there is an emergency shutdown, all gas released from sour gas pipeline facilities shall be flared in a manner that minimizes the danger to the general public.

History: 2003 AACS.

**R 460.20407 Sectionalizing block valves.**

Rule 407. In addition to the requirements in 49 C.F.R. §192.179, which is adopted by reference in R 460.20606, an operator of pipeline facilities used in the transportation of sour gas shall comply with all of the following requirements for any portion of the pipeline that contains more than 10 pounds of H<sub>2</sub>S per mile, with the weight calculated according to the formula  $W=0.0933 (P) (V) (MW) (H) /T$ , where W=Weight of H<sub>2</sub>S in pounds per mile of pipe, P=Absolute pressure in pounds per square inch, V=Volume of one mile of pipe in cubic feet, mw=Molecular weight of natural gas, H=Percentage of H<sub>2</sub>S in the gas, and T=Temperature in degrees Rankine:

(a) Sectionalizing block valves shall be installed and located so that each point on the pipeline is within 3 miles of a sectionalizing block valve with a block valve located at each end of the pipeline.

(b) A pipeline shall incorporate block valve automation so that block valves will automatically close upon the registering of low pressure readings. The system shall

be designed to operate even in the event of a power failure or malfunction of electronic devices and shall be designed to fail in a closed position.

(c) A pipeline shall incorporate a supervisory control and data acquisitions (SCADA) system that complies with all of the following provisions:

(i) Is monitored by the operator to ensure appropriate response to emergencies.

(ii) Is programmed to automatically close block valves based on operating data gathered at each metering site and at each automated block valve.

(iii) Automatically closes the upstream and downstream sectionalizing block valves surrounding any sectionalizing block valve that is in an alarm condition.

(iv) Allows the operator monitoring the SCADA system to close, but not open, any or all of the block valves and metering points.

(d) H<sub>2</sub>S sensors shall be located at all sectionalizing block valve sites. The sensors shall provide a warning to the SCADA system at H<sub>2</sub>S levels of 10 ppm and shall close the block valve at H<sub>2</sub>S levels of 30 ppm.

(e) Control valves shall be installed at appropriate locations at well sites or laterals to automatically shut off the flow of gas into the pipeline in the event of a line break or over pressure conditions.

History: 2003 AACS; 2009 AACS; 2010 AACS.

#### **R 460.20408 Qualification of welding procedures.**

Rule 408. In addition to the requirements 49 C.F.R. §192.225, which is adopted by reference in R 460.20606, an operator of pipeline facilities used in the transportation of sour gas shall use welding procedures that conform to the welding provisions of the national association of corrosion engineers international standard NACE MR0175/ISO 15156, 2004-2007, which is adopted by reference in R 460.20605.

History: 2003 AACS; 2009 AACS; 2010 AACS.

#### **R 460.20409 Inspection and testing of welds.**

Rule 409. In addition to the requirements set forth in 49 C.F.R. §192.241, which is adopted by reference in R 460.20606, an operator of pipeline facilities used in the transportation of sour gas shall engage in nondestructive testing of 100% of all girth butt welds. Nondestructive testing of welds shall be performed by any process that clearly indicates all defects in the welds.

History: 2003 AACS.

#### **R 460.20410 Threaded joints.**

Rule 410. In addition to the requirements set forth in 49 C.F.R. §192.273, which is adopted by reference in R 460.20606, an operator of pipeline facilities used in the transportation of sour gas shall not use threaded joints to join any sections or other components of a buried pipeline.

History: 2003 AACS.

**R 460.20411 Repair of steel pipe.**

Rule 411. In addition to the requirements set forth in 49 C.F.R.§192.309, which is adopted by reference in R 460.20606, an operator of pipeline facilities used in the transportation of sour gas shall remove any imperfection or damage discovered during construction that impairs the serviceability of a length of steel pipe by cutting out the damaged portion of the pipe as a cylinder and replacing it with an undamaged piece of pipe which meets or exceeds the specifications of the original pipe.

History: 2003 AACS.

**R 460.20412 Strength test requirements.**

Rule 412. In addition to the requirements set forth in 49 C.F.R.§192.505, which is adopted by reference in R 460.20606, an operator of pipeline facilities used in the transportation of sour gas shall pressure test in place all sour gas pipelines to not less than 2 times their maximum allowable operating pressure (MAOP) for not less than 8 hours.

History: 2003 AACS.

**R 460.20413 Underground clearances.**

Rule 413. In addition to the requirements set forth in 49 C.F.R.§192.325, which is adopted by reference in R 460.20606, an operator of pipeline facilities used in the transportation of sour gas shall, if practical, install the pipeline with not less than 48 inches of clearance from all other underground structures not associated with the pipeline. If this clearance cannot be practicably attained, the pipeline shall be protected from damage that might result due to its proximity to the other structure or structures.

History: 2003 AACS.

**R 460.20414 Cover.**

Rule 414. In addition to the requirements set forth in 49 C.F.R.§192.327, which is adopted by reference in R 460.20606, an operator of pipeline facilities used in the transportation of sour gas shall comply with all of the following provisions:

(a) Pipelines shall be buried, except where special conditions of usage necessitate above ground construction.

(b) A buried pipeline shall be installed with a minimum cover of 48 inches.

(c) When practical, a warning tape shall be installed not less than 12 inches directly above the pipeline, but not more than 36 inches below grade, for the purpose



of warning excavators of the existence of the pipeline and the hazardous nature of sour gas.

History: 2003 AACS.

**R 460.20415 Pipeline location.**

Rule 415. In addition to the requirements set forth in 49 C.F.R.§192.327, which is adopted by reference in R 460.20606, an operator of pipeline facilities used in the transportation of sour gas shall comply with both of the following provisions:

- (a) A pipeline shall be routed to avoid class 3 and 4 locations, if practical.
- (b) Use of road rights-of-way shall be avoided, if practical.

History: 2003 AACS.

**R 460.20416 Internal corrosion control; generally.**

Rule 416. In addition to the requirements set forth in 49 C.F.R.§192.475, which is adopted by reference in R 460.20606, an operator of pipeline facilities used in the transportation of sour gas shall not transport by pipeline any gas containing H<sub>2</sub>S, unless the corrosive effect of the H<sub>2</sub>S has been investigated and steps have been taken to minimize internal corrosion for the pipeline facilities.

History: 2003 AACS.

**R 460.20417 Internal corrosion control; monitoring.**

Rule 417. In addition to the requirements set forth in 49 C.F.R.§192.477, which is adopted by reference in R 460.20606, an operator of pipeline facilities used in the transportation of sour gas shall use coupons or other suitable means to determine the effectiveness of the steps taken to minimize internal corrosion. Initially, each coupon or other means of monitoring internal corrosion shall be checked 4 times each calendar year, but with intervals of not more than 3 1/2 months until a monitoring schedule can be developed that will adequately identify internal corrosion. The monitoring schedule shall not exceed the schedule set forth in 49 C.F.R. §192.477.

History: 2003 AACS.

**R 460.20418 Remedial measures.**

Rule 418. In addition to the requirements set forth in 49 C.F.R.§192.485, which is adopted by reference in R 460.20606, an operator of pipeline facilities used in the transportation of sour gas shall remove from service and replace every segment of a pipeline that has general corrosion resulting in a remaining wall thickness less than that required for the MAOP of the pipeline.

History: 2003 AACS.

**R 460.20419 Sour gas pipeline operating and maintenance manual; contents.**

Rule 419. The manual required by 49 C.F.R. §192.605, which is adopted by reference in R 460.20606 and which shall be filed with the commission and updated as specified in R 460.20319, shall address all hazards inherent with the transportation of sour gas and shall contain plans and procedures to minimize the health risk to the operator's employees and the general public during normal operating conditions.

History: 2003 AACS; 2014 AACS.

**R 460.20420 Safety procedures for abnormal operating conditions.**

Rule 420. The manual required by 49 C.F.R. §192.605, which is adopted by reference in R 460.20606 and which shall be filed with the commission and updated as specified in R 460.20319, shall also address the hazards inherent with the transportation of sour gas and shall include plans and procedures to minimize the health risk to the operator's employees and the general public during abnormal operating conditions.

History: 2003 AACS; 2014 AACS.

**R 460.20421 Damage prevention program.**

Rule 421. In addition to the requirements set forth in 49 C.F.R. §192.614, which is adopted by reference in R 460.20606, an operator of pipeline facilities used in the transportation of sour gas shall comply with both of the following provisions:

(a) When notified by the "One-Call" system or by other means of possible excavation activity in the pipeline right-of-way, the pipeline operator shall monitor the excavation activity using on-site personnel.

(b) When responding to requests to mark the pipeline location, the operator shall notify the excavator of the hazards inherent in the release of sour gas.

History: 2003 AACS.

**R 460.20422 Emergency procedures.**

Rule 422. The plan required by 49 C.F.R. §192.615, which is adopted by reference in R 460.20606, shall address the hazards inherent with the transportation of sour gas and shall include plans and procedures to minimize the health risk to the operator's employees and the general public in the event of an emergency.

History: 2003 AACS.

**R 460.20423 Sour gas education programs.**

Rule 423. In addition to the requirements set forth in 49 C.F.R. §192.616, which is adopted by reference in R 460.20606, an operator of pipeline facilities used

in the transportation of sour gas shall establish continuing education programs that enable the public, appropriate government organizations, and persons engaged in excavation-related activities to accomplish both of the following:

- (a) Recognize a sour gas pipeline emergency for the purpose of reporting it to the operator or other appropriate public officials.
- (b) Take appropriate action in the event of an unplanned release of sour gas.

History: 2003 AACS.

**R 460.20424 Telephonic notice to the commission of sour gas leak.**

Rule 424. In addition to each of the reporting requirements set forth in R 460.20503, an operator of pipeline facilities used in the transportation of sour gas shall, at the earliest practicable moment, but not more than 8 hours following the release of any quantity of sour gas that has the potential to harm the public, give telephonic notice to the commission staff of the release.

History: 2003 AACS.

**R 460.20425 Sour gas pipeline patrolling.**

Rule 425. In addition to the requirements set forth in 49 C.F.R.§192.705, which is adopted by reference in R 460.20606, an operator of pipeline facilities used in the transportation of sour gas shall, at intervals of not more than 6 weeks, but not less than 12 times each calendar year, patrol all pipelines that are used in the transportation of sour gas.

History: 2003 AACS; 2009 AACS.

**R 460.20426 Leakage surveys.**

Rule 426. In addition to the requirements set forth in 49 C.F.R.§192.706, which is adopted by reference in R 460.20606, an operator of pipeline facilities used in the transportation of sour gas shall conduct leak surveys of those pipeline facilities using leak detection equipment at intervals of not more than 7 1/2 months, but not less than 2 times each calendar year, for all areas falling within the class 1 and class 2 location designations set forth in 49 C.F.R. §192.5, which is adopted by reference in R 460.20606.

History: 2003 AACS.

**R 460.20427 Line markers for sour gas pipelines.**

Rule 427. In addition to the requirements set forth in 49 C.F.R.§192.707, which is adopted by reference in R 460.20606, an operator of pipeline facilities used in the transportation of sour gas shall comply with both of the following provisions:

(a) Line markers shall be placed and maintained as close as practical over a sour gas pipeline and shall clearly identify the pipeline as a carrier of sour gas.

(b) Where practical, at least 1 line marker shall be visible from any location on the sour gas pipeline.

History: 2003 AACS.

**R 460.20428 Prohibition on temporary repairs.**

Rule 428. (1) In addition to the requirements set forth in 49 C.F.R.§192.711, which is adopted by reference in R 460.20606, an operator of pipeline facilities used in the transportation of sour gas shall comply with all of the following provisions:

(a) Temporary repairs are not allowed on pipeline facilities used in the transportation of sour gas.

(b) Sour gas pipeline facilities in need of repair shall be removed from service until permanent repairs can be made.

(2) This rule does not prohibit emergency repairs solely designed to protect the operator's employees and the public from a release of sour gas.

History: 2003 AACS.

**R 460.20429 Permanent field repair of leaks.**

Rule 429. In addition to the requirements set forth in 49 C.F.R.§192.717, which is adopted by reference in R 460.20606, an operator of pipeline facilities used in the transportation of sour gas shall perform a permanent field repair of a leak by cutting out a cylindrical piece of pipe and replacing it with pipe of similar or greater design strength which meets the design criteria for facilities used in the transportation of sour gas.

History: 2003 AACS.

**R 460.20430 Inspection of pressure limiting and pressure regulating stations.**

Rule 430. In addition to the requirements set forth in 49 C.F.R.§192.739, which is adopted by reference in R 460.20606, an operator of pipeline facilities used in the transportation of sour gas shall inspect all pressure limiting and pressure regulating devices at intervals of not more than 7 ½ months, but not less than twice each calendar year.

History: 2003 AACS; 2009 AACS.

**R 460.20431 Valve maintenance; sour gas pipelines.**

Rule 431. In addition to the requirements set forth in 49 C.F.R.§192.745, which is adopted by reference in R 460.20606, an operator of pipeline facilities used

in the transportation of sour gas shall inspect and partially operate each pipeline valve that might be required during an emergency at intervals of not more than 7 1/2 months, but not less than twice each calendar year.

History: 2003 AACS.

## **PART 5. RECORDS AND REPORTS**

### **R 460.20501 Records.**

Rule 501. (1) An operator shall maintain the information generated by any recordkeeping requirement in these rules within the state at the operating headquarters office of each service area and shall make the information available to the commission and its staff for inspection and copying upon request.

(2) An operator shall maintain all of the following additional records:

(a) Maps and records showing the locations of pipelines and service lines, including lines that have been abandoned but not removed.

(b) An up-to-date schematic drawing of station piping, which shall be available at each aboveground pressure-regulating station containing buried station components.

History: 1998-2000 AACS.

### **R 460.20502 Reports.**

Rule 502. (1) An operator or other person proposing to construct a gas transmission line wherein the maximum operating pressure will result in a hoop stress of 30% or more of specified minimum yield strength, or to construct any gas metering or regulating facility, gas treatment plant, gas production plant, or gas compressor station connected to, and forming part of, such transmission line shall, not less than 60 days before starting construction, file all of the following data with the commission:

(a) A map showing the proposed route of the line on a scale not less than 3/8 of an inch to 1 mile.

(b) Engineering specifications covering design, construction, materials, and testing and operating pressures.

(c) Certification that the facilities will be in compliance with these rules.

(2) An application for a certificate of public convenience and necessity filed under 1929 PA 9, MCL 483.101 et seq., meets the requirements of subrule (1) of this rule.

(3) Within 60 days following the completion of construction and testing of facilities covered by subrules (1) and (2) of this rule, an operator shall file a report with the commission giving details of the test pressures applied and the dates of the tests, the results of the tests, including leaks and failures, and a route map of the "as-built" facility.

History: 1998-2000 AACS; 2003 AACS; 2010 AACS.

**R 460.20503 Reports of incidents; telephonic notice to the commission.**

Rule 503. (1) At the earliest practicable moment following discovery, an operator shall give notice to the commission staff of any of the following situations:

(a) An incident that is reportable pursuant to 49 C.F.R. §191.5, which is adopted by reference in R 460.20606.

(b) An event resulting in estimated property damage of \$10,000.00 or more including loss to the operator and others, or both, but excluding the cost of gas lost. As used in this subdivision, an “event” means on or relating to an operator’s facilities that may or may not involve a release of gas.

(c) An event resulting in the loss of service to more than 100 customers.

(d) An event involving a customer's gas facility that results in a fatality or an explosion causing structural damage.

(e) An event that receives or is likely to receive extensive news coverage or is significant in the judgment of the operator, even though it did not meet the criteria of subdivisions (a), (b), (c), or (d) of this subrule. This subdivision is not subject to the penalty provisions of section 11 of 1969 PA 165, MCL 483.161.

(f) An event resulting in an unintentional estimated gas loss of 1 million cubic feet or more.

(2) If additional information is received by the operator after the initial report that indicates a different cause, more serious injury, or more serious property damage than was initially reported, then the operator shall make a supplemental telephone report to the commission staff as soon as practicable.

(3) When requested by the commission staff, an operator shall supplement a report made in accordance with subrule (1) of this rule within a reasonable time, with a written report giving full details, such as the cause of the incident or occurrence, the extent of injuries or damage, and the steps taken, if any, to prevent a recurrence of the incident or occurrence.

History: 1998-2000 AACS; 2014 AACS.

**R 460.20504 Address for written reports.**

Rule 504. An operator shall concurrently submit a written report that is required to be filed with any federal agency by 49 C.F.R. §§191.9, 191.11, 191.13, 191.15, 191.17, 191.23, or 191.25, which are adopted by reference in R 460.20606, to the commission at P.O. Box 30221, Lansing, Michigan 48909.

History: 1998-2000 AACS.

**PART 6. ADOPTION OF STANDARDS**

**R 460.20601 Adoption by reference.**

Rule 601. (1) The publications listed in R 460.20603 to R 460.20606 are adopted by reference and are a part of these rules, except where they are inconsistent with these rules. Publications identified as published by a specific organization are

available from the organization at the addresses specified in R 460.20602. The public service commission also has copies of the publications available for inspection and distribution at cost at its offices located at 6545 Mercantile Way, Lansing, Michigan 48911. The mailing address is Michigan Public Service Commission, P.O. Box 30221, Lansing, Michigan 48909.

(2) The numbers in parentheses following the publications adopted by reference indicate the applicable editions.

History: 1998-2000 AACCS; 2003 AACCS.

#### **R 460.20602 Names, addresses, and phone numbers of organizations.**

Rule 602. The names, addresses, and phone numbers of organizations that sponsor or publish documents that have been adopted by reference in these rules are as follows:

(a) American Petroleum Institute (API), 1220 L Street, NW, Washington, DC 20005, ((202) 682-8000).

(b) American Society of Mechanical Engineers (ASME), Three Park Avenue, New York, New York, 10016-5990, ((212) 591-7000) or ((800) 843-2763), or contact its publishing division, 22 Law Drive, P.O. Box 2900, Fairfield, New Jersey, 07007, ((973) 882-1167).

(c) National Association of Corrosion Engineers International (NACE), 1400 South Creek Drive, Houston, Texas 77084-4906, ((281) 228 6200) or (800) 797-6223).

(d) U.S. Department of Transportation Pipeline and Hazardous Materials Safety Administration (PHMSA), East Building, 2nd Floor, 1200 New Jersey Ave., SE, Washington, D.C., 20590, ((202) 366-4433). To order a standard published in the Code of Federal Regulations (C.F.R.), contact the Government Printing Office, Superintendent of Documents, Attention: New Orders, P.O.Box 371954, Pittsburgh, PA 15250-7954, ((202) 512 1803), or visit the website at [bookstore.gpo.gov](http://bookstore.gpo.gov).

History: 1998-2000 AACCS; 2003 AACCS; 2009 AACCS; 2010 AACCS.

#### **R 460.20603 American petroleum institute standard; adoption by reference.**

Rule 603. The following American petroleum institute standard is adopted by reference in these rules and is available at the price listed:

API standard 1104 titled "Welding of Pipelines and Related Facilities," (20th edition, 2007, including errata 1 (2007) and errata 2 (2008)), at a cost as of the time of adoption of these rules of \$295.00.

History: 1998-2000 AACCS; 2003 AACCS; 2009 AACCS; 2010 AACCS; 2014 AACCS.

#### **R 460.20604 American society of mechanical engineers standard; adoption by reference.**

Rule 604. The following American society of mechanical engineers standard is adopted by reference in these rules and is available at the price listed:

ASME boiler and pressure vessel code, section IX, titled “Welding and Brazing Procedures, Welders, Brazers, and Welding and Brazing Operators” (2007 edition, July 1, 2007), at a cost as of the time of adoption of these rules of \$440.00.

History: 1998-2000 AACS; 2003 AACS; 2009 AACS; 2014 AACS.

**R 460.20605 National association of corrosion engineers international standard; adoption by reference.**

Rule 605. The following national association of corrosion engineers international standard is adopted by reference in these rules and is available at the price listed:

NACE MR0175/ISO 15156, 2009, titled “Petroleum and natural gas industries - materials for use in H<sub>2</sub>S-containing environments in oil and gas production” at a cost as of the time of adoption of these rules of \$242.00.

History: 1998-2000 AACS; 2003 AACS; 2009 AACS; 2010 AACS; 2014 AACS.

**R 460.20606 Pipeline and hazardous materials safety administration standards; adoption by reference.**

Rule 606. (1) The following pipeline and hazardous materials safety administration standard is adopted by reference in these rules and may be ordered from the U.S. government printing office via the internet at <http://bookstore.gpo.gov> at a cost at the time of adoption of these rules at the price listed. The standard is also available for public inspection and distribution at the price listed from the Michigan Public Service Commission, 7109 W. Saginaw Highway, Lansing, MI 48917: 49 C.F.R. part 40 entitled “Procedures for Transportation Workplace Drug and Alcohol Testing Programs,” (2009 edition), at a cost as of the time of adoption of these rules of \$60.00.

(2) The following office of pipeline and hazardous materials safety administration standards are adopted by reference in these rules and may be ordered from the U.S. government printing office via the internet at <http://bookstore.gpo.gov> at a cost at the time of adoption of these rules of \$23.00 for a single volume that contains all of the standards. The standards are also available for public inspection and distribution at the price listed from the Michigan Public Service Commission, 7109 W. Saginaw Highway, Lansing, MI 48917:

(a) 49 C.F.R. part 191 entitled “Transportation of Natural and Other Gas by Pipeline: Annual Reports, Incident Reports, and Safety-related Condition Reports,” (2014 edition or 2013 edition and all additional final rule changes through October 1, 2014).

(b) 49 C.F.R. part 192 entitled “Transportation of Natural and Other Gas by Pipeline: Minimum Federal Safety Standards,” (2014 edition or 2013 edition and all additional final rule changes through October 1, 2014).

(c) 49 C.F.R. part 199 entitled “Drug and Alcohol Testing,” (2014 edition or 2013 edition and all additional final rule changes through October 1, 2014).

History: 1998-2000 AACS; 2001 AACS; 2003 AACS; 2006 AACS; 2009 AACS; 2010 AACS; 2014 AACS.