STATE OF MICHIGAN

BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

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In the matter, on the Commission's own motion, to amend the rules governing the technical standards for gas service.	))))	Case No. U-20608

At the August 20, 2020 meeting of the Michigan Public Service Commission in Lansing, Michigan.

PRESENT: Hon. Daniel C. Scripps, Chair
Hon. Sally A. Talberg, Commissioner
Hon. Tremaine L. Phillips, Commissioner

ORDER FORMALLY ADOPTING ADMINISTRATIVE RULES

On July 16, 2019, the Commission sought permission from the Michigan Office of Administrative Hearings and Rules (MOAHR) to amend the rules governing the technical standards for gas service. MOAHR approved the request on July 18, 2019, 2019-061 LR. The Commission submitted the draft rules to MOAHR and the Legislative Service Bureau (LSB) for informal approvals, which were granted on August 9 and August 12, 2019, respectively. The Regulatory Impact Statement was submitted to MOAHR on August 30, 2019, and it was approved on September 6, 2019.

On October 17, 2019, the Commission issued an order providing the public with an opportunity to comment on the proposed rules. A public hearing was held on November 13, 2019. No one provided comments at the hearing. On December 4, 2019, the Commission received written comments from the Michigan Department of the Attorney General (Attorney General), the

Retail Energy Supply Association, and DTE Gas Company, and jointly filed written comments from Consumers Energy Company, DTE Energy Company, and Michigan Gas Utilities Corporation (Joint Commenters). The Commission also received written comments from Aaron Adamczyk which were submitted to MOAHR on August 5, 2019.

On December 19, 2019, the Commission issued an order extending the deadline for public comment based, in part, upon the Joint Commenters' concern with the proposed adoption of the American Petroleum Institute (API) Standard 1164 (API standard) as the applicable security standard. The Commission noted that the standard was available at the Commission's office for interested parties to review which would provide additional clarity and opportunity for public comment upon the adoption of the API standard.

On January 8, 2020, the Citizens Utility Board of Michigan filed comments. On January 9, 2020, the Attorney General and the Joint Commenters filed additional comments.

On January 23, 2020, the Commission issued an order approving the rules for submission to LSB and MOAHR for formal approvals, which were granted on February 24 and March 12, 2020, respectively. On March 12, 2020, the rules were filed with the Joint Committee on Administrative Rules (JCAR), which, by virtue of MCL 24.245a(1), had 15 session days to object to the rules by filing a notice of objection. JCAR did not take any action to prevent the rules from being transmitted to the Secretary of State. The Commission therefore has the authority to formally adopt these rules.

THEREFORE, IT IS ORDERED that the rules governing technical standards for gas service, attached to this order as Exhibit A, are adopted and transmitted to the Michigan Office of Administrative Hearings and Rules for filing with the Secretary of State.

The Commission reserves jurisdiction and may issue further orders as necessary.

MICHIGAN PUBLIC SERVICE COMMISSION

Daniel C. Scripps, Chair

Sally A. Talberg, Commissioner

Tremaine L. Phillips, Commissioner

By its action of August 20, 2020.

Lisa Felice, Executive Secretary

DEPARTMENT OF LICENSING AND REGULATORY AFFAIRS

PUBLIC SERVICE COMMISSION

TECHNICAL STANDARDS FOR GAS SERVICE

Filed with the secretary of state on

These rules become effective immediately upon filing with the secretary of state unless adopted under sections 33, 44, or 45a(6) of the administrative procedures act of 1969, 1969 PA 306, MCL 24.233, 24.244, or 24.245a. Rules adopted under these sections become effective 7 days after filing with the secretary of state.

(By authority conferred on the public service commission by sections 4 and 6 of 1939 PA 3, MCL 460.4 and 460.6, section 2 of 1969 PA 165, MCL 483.152, section 5 of 1919 PA 419, MCL 460.55, sections 3, 9, and 231 of the executive organization act of 1965, 1965 PA 380, MCL 16.103, 16.109, and 16.331, and section 2(12) of 1909 PA 300, MCL 462.2(12), and Executive Reorganization Order Nos. 1996-2, 2003-1, 2008-4, and 2011-4, MCL 445.2001, 445.2011, 445.2025, and 445.2030)

R 460.2301, R 460.2302, R 460.2321, R 460.2323, R 460.2331, R 460.2332, R 460.2333, R 460.2335, R 460.2341, R 460.2351, R 460.2353, R 460.2354, R 460.2355, R 460.2362, R 460.2363, R 460.2371, R 460.2373, R 460.2381, R 460.2382, and R 460.2383 of the Michigan Administrative Code are amended, R 460.2324, R 460.2344, R 460.2345, and R 460.2351a are added, and R 460.2342, R 460.2352, R 460.2361, R 460.2364, and R 460.2374 are rescinded, as follows:

PART 1. GENERAL PROVISIONS

R 460.2301 Definitions.

Rule 1. As used in these rules:

(a) "Approved by the commission" means that a commission order has been issued.

(b) "British thermal unit" means the quantity of heat that must be added to 1 avoirdupois pound of pure water to raise its temperature from 58.5 degrees Fahrenheit to 59.5 degrees Fahrenheit under standard pressure. Standard pressure is 30 inches mercury at 32 degrees Fahrenheit or 14.73 pounds per square inch absolute and with acceleration due to gravity equal to 32.174 feet per second per second.

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

(d) "Cubic foot of gas" means either of the following:

(i) For billing purposes, a standard cubic foot of gas is that quantity of dry gas that, at a temperature of 60 degrees Fahrenheit and an absolute pressure of 14.65 pounds per square inch, occupies 1 cubic foot. The commission may, however, approve a different absolute pressure base.

(ii) For testing purposes, such as testing for heating value, a standard cubic foot of gas is that quantity of gas that, when saturated with water vapor at a temperature of 60 degrees Fahrenheit and an absolute pressure of 14.73 pounds per square inch, occupies 1 cubic foot.

(e) “Customer” means an individual, firm, association, or corporation excluding other gas utilities, or any agency of the federal, state, county, or municipal government that purchases or otherwise receives gas or transportation services, or both, on the utility’s system.

(f) “Hazardous condition” means any condition that the utility determines poses an immediate and serious threat to the health, safety, or welfare of a customer or the general public and that requires immediate action.

(g) “Meter” means a device owned by a utility that is used in measuring a quantity of gas.

(h) “Meter accuracy” means the volume that is measured by a meter as a percent of the actual volume that flowed through the meter as measured by a working standard.

(i) “Meter error” means a failure to accurately measure and record all of the natural gas used that is required by the applicable rate or rates.

(j) “Mixed gas” means a gas that is produced by mixing natural gas with any of the following:

(i) Air.

(ii) Inert gas.

(iii) Liquefied petroleum gas.

(iv) Other flammable gas.

(v) Substitute natural gas.

(k) “Premises” means an individual piece of land or real estate that is not separated by public roads, streets, or alleys, including buildings and other appurtenances on that land or real estate.

(l) “Potentially hazardous condition” means any condition that the utility determines has the potential to become a hazardous condition, but that does not require immediate action, including, but not limited to, any of the following:

(i) Customer failure to permit the utility to perform inspections and maintenance on the utility’s facilities in or on the customer’s premises.

(ii) Customer alterations or modifications of the utility’s facilities located in or on the customer’s premises.

(iii) Customer construction of a structure or appurtenance near or over the main, service line piping, or meter set assembly so that the utility’s facilities are not in compliance with the provisions of R 460.20101 to R 460.20606 of the Michigan gas safety standards or the utility’s standards.

(iv) Customer failure to correct or replace gas utilization equipment or gas fuel line piping that has been previously identified and classified as potentially hazardous by the utility.

(m) “Rate book” means the assembled rate schedules, rules, regulations, and standard forms of the utility as filed with the commission and available on the commission’s website.

(n) “Required access” means access that is necessary to conduct any of the following:

(i) Routine inspections and maintenance.

(ii) Meter readings of gas usage.

(iii) Scheduled replacement, repairs, relocation, or disconnection of branch service lines or other changes with respect to service lines and meter assembly piping.

(o) “Substitute natural gas” means gas that is interchangeable and compatible with natural gas and that is manufactured from carbon and hydrogen-bearing materials.

(p) “Utility” means a person, firm, corporation, cooperative, association, or agency that is subject to the jurisdiction of the commission and that delivers or distributes and sells gas to the public for heating, power, or other residential, commercial, or industrial purposes.

R 460.2302 Application, intention, and interpretation of rules; utility rules and regulations.

Rule 2. (1) These rules apply to a gas utility that operates within the state of Michigan and that is subject to the jurisdiction of the commission.

(2) These rules are intended to promote safe and adequate gas service to the public, to provide technical standards for uniform and reasonable practices by gas utilities, to encourage efficiency and economy, and to establish a basis for determining the reasonableness of such demands as may be made by the public upon gas utilities.

(3) Questions that concern the application or interpretation of these rules and disagreements with respect to any service rules and regulations that are promulgated by a ~~gas~~ utility shall be referred to the commission for a ruling.

(4) A utility shall adopt reasonable rules and regulations, subject to commission approval, governing its relations with customers. The rules and regulations must not be inconsistent with these rules and any other rules of the commission. A utility's rules and regulations must constitute an integral part of the utility's rate book.

(5) Upon written request of a customer, utility, or on its own motion, the commission may waive any requirements of these rules when it determines the waiver will further the effective and efficient administration of these rules and is in the public interest.

PART 2. RECORDS, REPORTS, AND OTHER INFORMATION

R 460.2321 Retention of records.

Rule 21. All records that are required to be made or maintained pursuant to these rules must be preserved by the utility for a period of time specified in R 460.2501 to R 460.2582. If a time period is not specified in these rules or in R 460.2501 to R 460.2582, all records must be preserved by the utility for, at a minimum, 1 year after the records are completed.

R 460.2323 Reports and records generally.

Rule 23. (1) Volumetric data that is contained in any report must define the pressure, temperature, and water saturation upon which the data is based.

(2) In addition to reports or records that are required to be filed with the commission pursuant to these rules, a utility shall provide the commission with a current list of the name, title, address, telephone number, and email address of the person who should be contacted in connection with all of the following:

(a) General management duties.

(b) Customer complaints that relate to operations.

(c) Construction, maintenance, operations, and emergencies during office and nonoffice hours for each major operating headquarters.

(d) Meter tests and repairs.

R 460.2324 Security reporting.

Rule 24. (1) To inform the commission regarding matters that may affect the security or safety of persons or property, whether public or private, a utility must do both of the following:

(a) Provide a written or oral annual report, individually or jointly with other utilities, to designated members of the commission staff regarding the utility's cybersecurity program and related risk planning. This report on the threat assessment and preparedness strategy must contain all of the following information:

(i) An overview of the program describing the utility's approach to cybersecurity awareness and protection.

(ii) A description of cybersecurity awareness training efforts for the utility's staff members, specialized cybersecurity training for cybersecurity personnel, and participation by the utility's cybersecurity staff in emergency preparedness exercises in the previous calendar year.

(iii) An organizational diagram of the utility's cybersecurity organization, including positions and contact information for primary and secondary cybersecurity emergency contacts.

(iv) A description of the utility's communications plan regarding unauthorized actions that result in loss of service, financial harm, or breach of sensitive business or customer data, including the utility's plan for notifying the commission and customers.

(v) A redacted summary of any unauthorized actions that resulted in material loss of service, financial harm, or breach of sensitive business or customer data, including the parties that were notified of the unauthorized action and any remedial actions undertaken.

(vi) A description of the risk assessment tools and methods used to evaluate, prioritize, and improve cybersecurity capabilities, including work completed pursuant to R 460.2345.

(vii) General information about current emergency response plans regarding cybersecurity incidents, domestic preparedness strategies, threat assessments, and vulnerability assessments.

(b) In addition to the information required under subdivision (a) of this subrule, an investor-owned public utility must include in its annual report to the Michigan public service commission an overview of major investments in cybersecurity during the previous calendar year and plans and rationale for major investments in cybersecurity anticipated for the next calendar year.

(2) As soon as reasonably practicable and prior to any public notification, a utility must orally report the confirmation of a cybersecurity incident to a designated member of the commission staff and to the Michigan fusion center, unless prohibited by law or court order or instructed otherwise by official law enforcement personnel, if any of the following occurred:

(a) A person intentionally interrupted the production, transmission, or distribution of natural gas.

(b) A person extorted money or other things of value from the utility through a cybersecurity attack.

(c) A person caused a denial of service in excess of 12 hours.

(d) A security breach, as defined by section 3(b) of the identity theft protection act, 2004 PA 452, MCL 445.63(b), prior to public and customer notification.

(e) At the utility's discretion, any other cybersecurity incident, attack, or threat that the utility deems notable, unusual, or significant.

(3) As used in subrule (2) of this rule, "person" means any individual, firm, corporation, educational institution, financial institution, governmental entity, or legal or other entity.

(4) As used in subrule (2)(c) of this rule, "denial of service" means, for a utility, a successful attempt to prevent a legitimate user from accessing electronic information made accessible by the utility or by another party on the behalf of the utility.

PART 3. SERVICE REQUIREMENTS

R 460.2331 Sale of gas.

Rule 31. (1) All gas that is sold by a utility must be on the basis of meter measurement, unless otherwise approved by the commission.

(2) The utility shall provide the terms and conditions of service available to prospective customers upon request.

(3) If gas is supplied and metered to a customer at a nominal delivery pressure of 0.25 pounds per square inch gauge, then, for billing purposes, both of the following provisions apply:

(a) The gas volume that is registered by the meter is assumed to be measured at standard billing conditions as defined in R 460.2301(d)(i), regardless of the actual temperature of the gas or actual atmospheric pressure. All meters that are to operate at ambient outdoor conditions must be equipped with a temperature-compensating device.

(b) If the billing pressure base is 14.65 pounds per square inch absolute, then the atmospheric pressure is assumed to be 14.4 pounds per square inch absolute. If the commission has approved a different billing pressure base, then the assumed atmospheric pressure is equal to the difference between such absolute billing pressure base and 0.25 pounds per square inch.

(4) If gas is supplied to a customer through a low-pressure distribution system such that a service regulator is not used before metering, then, for billing purposes, the gas must be assumed to be supplied and metered at 0.25 pounds per square inch gauge. The low-pressure system must be operated so that the gauge pressure at the outlet of the meter must be maintained within a range of 3 inches water column minimum to a maximum of 14 inches water column. However, delivery to the customer may be as high as 18 inches water column if the pressure to the gas utilization equipment is regulated to not more than 14 inches water column. A utility may implement different standards for operating its low-pressure system if those standards are approved by the commission.

(5) If gas is supplied and metered to a customer at a nominal delivery pressure of more than 0.25 pounds per square inch gauge, then, for billing purposes, all of the following provisions apply:

(a) The gas volume that is measured by the meter must be corrected to standard billing conditions as defined in R 460.2301(d)(i).

(b) Gas volume corrections for temperature must be made pursuant to Charles' law. Gas volume corrections for pressure must be made pursuant to Boyle's law. Gas volume corrections for supercompressibility must be made pursuant to either of the following publications, both of which are adopted by reference in R 460.2344:

(i) "Manual for the Determination of Supercompressibility Factors, PRCI Project NX-19" as adopted by reference in R 460.2344.

(ii) "American Gas Association (AGA) Report No. 8, Part 1, "Thermodynamic Properties of Natural Gas and Related Gases, DETAIL and GROSS Equations of State." (2017) AGA Catalog No. XQ1704-1 as adopted by reference in R 460.2344.

(c) If the pressure at which the gas is metered is established on a gauge basis rather than an absolute basis, then the absolute pressure at which the gas is metered must be inferred by summing the gauge pressure and either the actual atmospheric pressure or a reasonable estimate thereof or an atmospheric pressure that is filed with, and approved by, the commission.

(d) If a pressure-compensating device is used with the meter, the device must be calibrated using the actual atmospheric pressure or a reasonable estimate thereof.

R 460.2332 **S**ervice line tariffs.

Rule 32. Within 30 days after a company commences operating as a gas utility, the utility shall file its service line tariffs for commission approval. These tariffs must constitute an integral part of the utility's rate book.

R 460.2333 Main extension tariffs.

Rule 33. Within 30 days after a company commences operating as a gas utility, the utility shall file its main extension tariffs for commission approval. These tariffs must constitute an integral part of the utility's rate book.

R 460.2335 Interruptions of service.

Rule 35. (1) This rule does not apply to service interruptions that result from a utility's shutoff of service due to nonpayment of bills, unauthorized use of gas service, or pursuant to the provisions of R 460.2371 and R 460.2373.

(2) A utility shall make a reasonable effort to prevent interruptions of service and, when such interruptions occur, shall endeavor to reestablish service with the shortest possible delay consistent with the safety of its customers, its employees and others engaged in work for the utility, and the general public. If service is necessarily interrupted for the purpose of working on the distribution system or plant equipment, it must be done at a time that causes the least inconvenience to customers, and those customers who may be seriously affected shall be notified in advance.

(3) If the supply of gas diminishes to the point where continuous service to customers is threatened, the utility may limit or shut off service to its customers pursuant to curtailment procedures approved by the commission.

(4) A utility shall keep records of reportable outages on its entire system or in major divisions or operating districts of its system. The records must include a statement of the time, duration, and cause of the interruption. A utility shall report interruptions of service, as required by R 460.20101 to R 460.20606 and shall periodically make an analysis of the records to determine steps to be taken to prevent the recurrence of these interruptions.

PART 4. ENGINEERING

R 460.2341 Gas facilities; construction and installation.

Rule 41. (1) Gas facilities of a utility must be constructed and installed pursuant to accepted engineering practices in the gas industry and R 460.20101 to R 460.20606 to ensure, to the extent reasonably practicable, continuity of service, uniformity in the quality of service provided, and the safety of persons and property.

(2) All new meters must conform to 1 of the following standards adopted by reference in R 460.2344:

(a) American National Standards Institute (ANSI) B109.1-2019 for Diaphragm-Type Gas Displacement Meters (Under 500 Cubic Feet per Hour Capacity).
(b) ANSI B109.2-2000 (R2008) for Diaphragm-Type Gas Displacement Meters (500 Cubic Feet per Hour Capacity and Over).
(c) ANSI B109.3-2019 for Rotary Type Gas Displacement Meters.
(d) AGA Report No. 3, Orifice Metering of Natural Gas Part 2: Specifications and Installation Requirements.
(e) AGA Report No. 7, Measurement of Gas by Turbine Meter.
(f) AGA Report No. 9, Measurement of Gas by Multipath Ultrasonic Meters.
(g) AGA Report No. 11, Measurement of Natural Gas by Coriolis Meter, Second Edition.

R 460.2342 Rescinded.

R 460.2344 Adoption of standards by reference.
Rule 44. (1) The publications and standards listed in this rule are adopted by reference and are a part of these rules. Publications identified as published by a specific organization are available from the organization at the address specified in this rule. All prices are current at the time of the adoption of these rules. The commission also has copies of the publications available for inspection and distribution at its offices located at 7109 W. Saginaw Highway, Lansing, Michigan 48917 at a cost of 10 cents per page unless otherwise specified in this rule.
(2) The numbers in parentheses following the publications adopted by reference indicate the applicable editions.
(a) The current edition of the Michigan gas safety standards, which is available online at www.michigan.gov/mpsc or may be ordered from the Michigan public service commission. $61.49.
(b) The following publications of the American Gas Association (AGA), available from the American Gas Association, 400 North Capitol Street, NW, Suite 450, Washington, DC 20001, 202-824-7000, www.aga.org:
(i) "Manual for the Determination of Supercompressibility Factors, PRCI Project NX-19," (1970) AGA Catalog No. L00340. $149.00.
(ii) AGA Report No. 8, Part 1, "Thermodynamic Properties of Natural Gas and Related Gases, DETAIL and GROSS Equations of State." (2017) AGA Catalog No. XQ1704-1. $320.00.
(iii) AGA Report No. 3, "Orifice Metering of Natural Gas Part 1: General Equations and Uncertainty Guidelines." (2013, includes errata) AGA Catalog No. XQ1201. $168.00.
(iv) AGA Report No. 3, Part 2, "Orifice Metering of Natural Gas and Other Related Hydrocarbon Fluids – Concentric, Square-edged Orifice Meters, Specifications and Installation Requirements." (2017, includes errata) AGA Catalog No. XQ1601. $168.00.
(v) AGA Report No. 3, "Orifice Metering of Natural Gas Part 3: Natural Gas Applications." (2013) AGA Catalog No. XQ1304. $148.00.
(vi) AGA Report No. 3, "Orifice Metering of Natural Gas Part 4: Background, Development, Implementation Procedures." (1992) AGA Catalog No. XQ9211. $148.00.
(vii) American National Standards Institute (ANSI) B109.1-2019, "Diaphragm-Type Gas Displacement Meters, Under 500 Cubic Feet per Hour Capacity." AGA Catalog No. X61902. $110.00.

(viii) ANSI B109.2-2000 (R2008), "Diaphragm-Type Gas Displacement Meters, 500 Cubic Feet per Hour Capacity and Over." AGA Catalog No. XQ0009. $110.00.

(ix) ANSI B109.3-2019, "Rotary Type Gas Displacement Meters." (2000) AGA Catalog No. XM1901. $110.00.

(x) AGA Report No. 7, "Measurement of Gas by Turbine Meter." (2006) AGA Catalog No. XQ0601. $352.00.

(xi) AGA Report No. 9, "Measurement of Gas by Multigraph Ultrasonic Meters." (2017) AGA Catalog No. XQ1705. $400.00.

(xii) AGA Report No. 11, "Measurement of Natural Gas by Coriolis Meter, Second Edition." (2013) AGA Catalog No. XQ1301. $440.00.

(xiii) National Fuel Gas Code. (2018) AGA Catalog No. Z223118. $60.00.

(c) The following publications of the American Society for Testing and Materials (ASTM) International available from ASTM International, 100 Barr Harbor Drive, PO Box C700, West Conshohocken, PA, 19428, 610-832-9585, www.astm.org:

(i) ASTM D1826-94, "Standard Test Method for Calorific (Heating) Value of Gases in Natural Gas Range by Continuous Recording Calorimeter." (2017) ASTM Catalog No. D-1826. $46.00.

(ii) ASTM D1945-14, "Standard Test Method for Analysis of Natural Gas by Gas Chromatography." ASTM Catalog No. D-1945. $52.00.

(iii) ASTM D3588-98, "Standard Practice for Calculating Heating Value, Compressibility Factor, and Relative Density of Gaseous Fuels." (2017) ASTM Catalog No. D-3588. $46.00.

(d) The following publications of the American Society for Quality (ASQ) available from American Society for Quality, PO Box 3005, Milwaukee, WI 53201, 800-248-1946, www.asq.org:

(i) ANSI/ASQ Z1.9-2003 (R2018), "Sampling Procedures and Tables for Inspection by Variables for Percent Nonconforming." $149.00.

(ii) ANSI/ASQ Z1.4-2003 (R2018), "Sampling Procedures and Tables for Inspection by Attributes." $159.00.

(e) American Petroleum Institute (API) Standard 1164 Ed. 2 (2009/R2016), "Pipeline SCADA Security," available from API Publishing Services, 1220 L Street, NW, Washington DC 20005. $146.00.

R 460.2345 Security standards.

Rule 45. Unless otherwise approved by the commission, all utilities utilizing supervisory control and data acquisition systems shall implement API Standard 1164 Ed. 2 (2009/R2016), as adopted by reference in R 460.2344.

PART 5. METERS METERING EQUIPMENT INSPECTIONS AND TESTS

R 460.2351 Meters and associated metering devices; inspections; tests; and records.

Rule 51. Inspections and tests of meters and associated metering devices must be made by, or on behalf of, each utility as follows:

(a) A meter or an associated metering device that is not included as a part of the meter, or both, must be inspected and tested before being placed in service, and the error must not be more than 1.0%.

(b) A meter or an associated metering device, or both, must be tested after it is removed from service. These tests must be made before the meter or associated metering device is adjusted, repaired, or retired.

(c) A repaired meter or a meter that is removed from service must be leak-tested before being returned to service, subject to the following requirements:

(i) If tested in the field, a meter must be tested at the actual meter operating pressure of the system.

(ii) If tested in the shop, a meter must be subjected to an internal pressure test of, at a minimum, 3.0 pounds per square inch gauge pressure. In addition, any meter that will operate above 3.0 pounds per square inch gauge pressure must be so marked on the meter and must be subjected to 1 of the following tests:

(A) An internal pressure test of, at a minimum, the manufacturer's rated operating pressure.

(B) An internal pressure test at 10% above the maximum operating pressure to which the meter could be subjected.

(C) Any suitable test that is approved by the commission.

(iii) During the pressure test, the meter must be checked for leaks by 1 of the following tests:

(A) Immersion test.

(B) Soap test.

(C) Pressure drop test of a type that is approved by the commission.

(d) As part of its rate book, a utility shall file, for commission approval, a statement of its policy with regard to testing meter accuracy upon a customer's request. In the absence of a filed policy approved by the commission, the utility shall adhere to both of the following provisions:

(i) A utility shall test meter accuracy upon the request of a customer if the customer does not request a test more than once every 2 years and if the customer agrees to accept the results of the test as the basis for determining the difference claimed. A charge must not be made to the customer for the first test in any 5-year period, but if subsequent tests during the same period, for the same customer, show the meter to be within the allowable limits of accuracy, the utility may charge the customer an amount for subsequent tests which is uniform and which does not exceed the utility's direct cost thereof, plus a reasonable charge for administrative overhead. The customer may be present at the test if he or she makes a request before the test.

(ii) A written report must be made to the customer by the utility. The report must state the results of the test. A record of the test must be kept by the utility.

(e) A utility shall make periodic tests of meters, associated devices, and instruments to ensure their accuracy. The tests must be conducted according to the following schedule, unless otherwise approved by the commission. A utility may test meters more frequently than provided in the following schedule without commission approval:

(i) Positive displacement diaphragm-type meters that have capacities of less than 500 cubic feet per hour, not to exceed 123 months.

(ii) Positive displacement diaphragm-type meters that have capacities over 500 cubic feet per hour, not to exceed 87 months.

(iii) Rotary meters that have capacities of less than 15,000 cubic feet per hour, which may be tested in place, not to exceed 51 months.

(iv) Rotary meters that have capacities of 15,000 cubic feet per hour or more, which may be tested in place, not to exceed 27 months.

(v) Other meter types, such as turbine, Coriolis, 4-Path or greater ultrasonic, or other metering technology, which may be tested in place when possible, not to exceed 27 months.

(vi) Orifice meters, 2 times per year with intervals not to exceed 7.5 months.

(vii) Gas instruments, such as base volume, base pressure, and base temperature-correcting devices, must be checked for calibration at intervals that correspond to the schedule for their associated meters. The testing interval must not exceed 51 months.

(viii) Test bottles, deadweight testers, certified test meters, not to exceed 123 months.

(ix) Meter testing systems must be calibrated when first installed and after alterations, damages, or repairs that might affect accuracy. To ensure that the accuracy of a meter testing system is maintained on a continuous basis, a daily leakage test must be made and a weekly accuracy test with a comparison meter of known accuracy must be made. If the test results differ by more than plus or minus 0.5% from the comparison meter, the cause of the error must be determined and necessary corrections must be made before the system is reused. The comparison meter must be checked at an interval of 1 year not to exceed 13 months.

(f) Utilities shall maintain records of meters that have been tested during the preceding calendar year and shall make this information available to the commission upon request. The record must contain all of the following information for each meter tested:

(i) Set year.

(ii) Type of case.

(iii) Manufacturer.

(iv) Customer class, either commercial and industrial or residential.

(v) Results of the meter test.

(vi) Whether the meter was retired and if so the reasons for the retirement.

R 460.2351a Statistical quality sampling program for diaphragm-type meters.

Rule 51a. (1) A utility shall comply with the provisions of R 460.2351, except that a utility that receives approval from the commission may adopt the requirements of this rule for statistical sampling and quality control of in-service diaphragm meters. Statistical sampling and quality control must be supervised by an individual trained in statistical sampling techniques.

(2) A utility may use any of the following statistical quality control programs for meter testing, as adopted by reference in R 460.2344:

(a) ANSI B109.1-2019, "Diaphragm-Type Gas Displacement Meters, Under 500 Cubic Feet per Hour Capacity."

(b) ANSI B109.2-2000 (R2008), "Diaphragm-Type Gas Displacement Meters, 500 Cubic Feet per Hour Capacity and Over."

(c) ANSI/ASQ Z1.9-2003 (R2018), "Sampling Procedures and Tables for Inspection by Variables for Percent Nonconforming."

(d) ANSI/ASQ Z1.4-2003 (R2018), "Sampling Procedures and Tables for Inspection by Attributes."

(3) A utility may use an alternative statistical quality sampling program if approved by the commission. An application to use an alternative program must include all of the following information:

(a) A description of the sampling program that must include all of the following:

(i) The type or types of meters subject to the sampling plan.

(ii) The frequency of testing.

(iii) The procedures to be used for the sampling.

(iv) The meter test method to be used.

(v) The accuracy of the testing and of the sampling plan.

(b) An explanation of the reason or reasons for the requested sampling plan.

(c) An analysis that demonstrates that, with respect to assuring the accuracy of the meters tested, the requested sampling program is at least as effective as the standards listed in subrule (2) of this rule.

(4) Meters for quality control sampling must be separated into homogenous groups by year set and may be further separated by manufacturer, capacity rating, model, case type, diaphragm material, year manufactured, or other distinguishing characteristics. When 1 or more groups established are believed to be too small for practical quality control sampling, they may be combined with another group of similar operating characteristics to establish a larger sampling base. Combined groups must have sample size and acceptance-rejection numbers based on the combined total of meters. Samples must be drawn by a random method that ensures each meter in the group has an equal chance of being selected.

(5) All meter groups, or combined meter groups, must be subject to acceptance or rejection on the basis of the statistical results unless it becomes obvious that the rejected meters are predominantly from 1 identifiable subgroup which may be shown by test data to have been affected by location, age, or other common factors. If this result should occur, the identifiable subgroup may be separated and the remaining meters treated as a new combined group with appropriate sample size and acceptance-rejection numbers.

(6) A meter removed from a customer's premises and tested as part of any business practice not related to the statistical quality control program must be included only in the program's sample if the meter is randomly selected according to subrule (4) of this rule.

(7) Not later than March 1 of each year, utilities shall file a report of the meters that have been tested during the preceding calendar year. The report must include separate sections addressing results for meters tested as part of the statistical quality control program and meters tested as part of routine meter removals or exchanges. The report must detail both of the following:

(a) All of the following meter characteristics:

(i) Set year.

(ii) Type of case.

(iii) Manufacturer.

(iv) Type of diaphragm.

(v) Revenue classification, either commercial and industrial or residential.

(b) The number of meters in each meter class tested and found within the norm and within each 1% variance from norm between 94% accuracy and 106% accuracy. Meters that are slower than 94% and faster than 106% must each be grouped separately. Meters that are determined to be nonregistering must be reported to either have been repaired, tested, and returned to the field, or retired.

R 460.2352 Rescinded.

R 460.2353 Retirement of meters.

Rule 53. (1) Meters must be retired from service whenever abnormal conditions affecting accuracy cannot be corrected for economic or other reasons. Examples of such conditions are basic defects due to manufacture, design, or excessive damage. Meters may also be retired due to obsolescence, unavailability of repair parts, or other reasons.

(2) Notwithstanding the provisions of any other rule, meters that are found to be overregistering must be repaired or replaced within 6 months of the discovery of the error unless a different period is approved by the commission.

R 460.2354 Accuracy of metering equipment; tests; standards.

Rule 54. (1) A utility shall use the applicable provisions of the standards adopted by reference in R 460.2344 as criteria of accepted practice in testing meters.

(2) Metering equipment must be tested by comparison with the standards that are adopted by reference in R 460.2344.

(3) A gas service meter that is repaired or removed from service for any cause must, before installation, be tested and adjusted to be correct within 1% fast or 1% slow.

(4) Every diaphragm-type gas meter must be tested before installation and adjusted, if required, to a meter accuracy of 100% plus or minus 1% at a low flow rate and at a high flow rate so that the numerical difference between the meter accuracy at these 2 flow rates is not more than 1 percentage point. A low flow rate is a flow at 20% to 50% of the rated capacity of the meter. A high flow rate is a flow at 80% to 120% of the rated capacity of the meter. The average meter accuracy of a diaphragm-type meter must be defined as 1/2 the sum of the meter accuracy at the low flow test and at the high flow test.

(5) All recording-type meters or associated instruments that have a timing element that serves to record the time at which the measurement occurs for billing purposes must be adjusted at intervals of not more than 2 years so that the timing element is not in error by more than plus or minus 4 minutes in 24 hours, under laboratory conditions, as set forth in ANSI B109.1-2019, "Diaphragm Type – Gas Displacement Meters, Under 500 Cubic Feet per Hour Capacity", which is adopted by reference in R 460.2344, or by more than plus or minus 10 minutes in 24 hours under field conditions.

R 460.2355 Meter shop; design; meter testing system; standards; handling; calibration cards; calibrated orifices.

Rule 55. (1) A utility shall maintain or designate a meter shop within Michigan for the purpose of inspecting, testing, and repairing meters. The shop must be open for inspection by authorized representatives of the commission at all reasonable times. A utility may obtain approval from the commission to have its meters tested outside of Michigan upon showing, to the satisfaction of the commission, that the meter test facilities so utilized are in compliance with these rules. Records of test results must be maintained in Michigan or the administrative headquarters of the utility.

(2) The area within the meter shop that is used for the testing of meters must be designed so that the meters and meter-testing equipment are protected from drafts and excessive changes in temperature. The meters to be tested must be stored in such a manner that the temperature of the meters is substantially the same as the temperature of the prover.

(3) A utility shall own and maintain, or have access to, a meter-testing system (working standard) of an approved type, subject to all of the following provisions:

(a) Means must be provided to maintain the temperature of the liquid in a meter-testing system at substantially the same level as the ambient temperature in the prover area.

(b) The meter-testing system must be maintained in good condition and in correct adjustment so that it is capable of determining the accuracy of any service meter to plus or minus 0.5%.

(c) A utility may use a properly calibrated test meter or transfer prover or may use a properly designed flow prover for testing meters.

(4) Meter-testing systems (working standards) must be checked by comparison with a secondary standard. Both of the following provisions must be complied with:

(a) At least once every 5 years, bell and flow provers must be checked with a 1-cubic foot bottle or must be calibrated by dimensional measurement or any other test that is approved by the commission. The accuracy of the secondary standard that is used must be traceable to the National Institute of Standards and Technology.

(b) At least once every 10 years, rotary displacement transfer provers must be checked with a standard that has its calibration traceable to the National Institute of Standards and Technology or must be checked by any other suitable test that is approved by the commission.

(5) Extreme care must be exercised in the use and handling of standards to ensure that their accuracy is maintained.

(6) Each standard must have a certificate or calibration card which must be duly signed and dated and which must record the corrections that were required to compensate for errors found on the last test.

(7) A utility shall have properly calibrated orifices to achieve the rates of flow required to test the meters on its system.

PART 6. BILL ADJUSTMENT; METER ACCURACY

R 460.2361 Rescinded.

R 460.2362 Determination of adjustment.

Rule 62. (1) If the date that the period of inaccurate meter registration began can be determined, that date must be the starting point for calculating an adjustment pursuant to the provisions of R 460.115.

(2) If the date that the period of inaccurate meter registration began cannot be determined, it must be assumed that the inaccuracy existed for a period equal to 1/2 of the time elapsed since the meter was last installed or tested.

(3) The adjustment must be made on the basis of actual monthly consumption, if possible. Otherwise, the average monthly consumption that is determined from the most recent 36 months' consumption data must be used.

R 460.2363 Refunds.

Rule 63. Refunds shall be made to the 2 most recent customers who received service through the meter found to be registering inaccurately. In the case of a previous customer who is no longer a customer of the utility, a notice of the amount of the refund shall be mailed to his or her last known address and the utility shall, upon demand made within 3 months, refund the amount.

R 460.2364 Rescinded.

PART 7. SHUTOFF OF SERVICE

R 460.2371 Conditions for establishing gas service; liability; notice and record of inability to establish service; refusal of service to customer using other gaseous fuel; exception; service quality.

Rule 71. (1) A utility shall establish gas service to a customer's premises in compliance with the Michigan gas safety standards.

(2) The utility shall not be liable for the installation, maintenance, or use of piping or gas utilization equipment that is owned by the customer, nor be held liable for any continuing duty of inspection of piping or equipment.

(3) If the condition of the customer's fuel line is such that service cannot be established, the utility shall notify the customer, in writing, of the reason or reasons that service was not established.

(4) A record must be kept by the utility of all cases where refusal to establish service is made. The record must provide all of the following information:

(a) The name of the customer.

(b) The address or location of the premises.

(c) The date of the test.

(d) The name of the service person.

(e) All changes or rearrangements recommended.

(5) Except in certain commercial and industrial applications that require a standby fuel that is authorized by the utility, the utility shall have the authority to refuse gas service to a customer that uses another gaseous fuel, such as liquefied petroleum gas, in the same building.

(6) A utility shall have a meter reading factor of 85% or more for meters requiring billing reads within the meter reading period pursuant to the approved tariff, including customer reads.

(7) If there is an existing main at a requesting address, a utility shall complete 90% or more of its new service installations within 15 business days of customer payment per tariff requirements and site readiness, or by a later date that is mutually agreed upon between the utility and customer.

R 460.2373 Shutoff of service.

Rule 73. Under any of the following conditions, gas service may be shut off by the utility:

(a) A hazardous condition exists. In this instance**,** gas service may be shut off without prior notification.

(b) A potentially hazardous condition exists. In this instance**,** gas service may be shut off after providing the customer with written notice of shutoff by first class mail at least 10 days before the shutoff is scheduled to occur.

(c) Refusal of required access. In this instance**,** gas service may be shut off after providing the customer with written notice of the shutoff by first class mail at least 10 days before the shutoff is scheduled to occur.

R 460.2374 Rescinded.

PART 8. GAS QUALITY

R 460.2381 Gas purity.

Rule 81. (1) Gas that is distributed by a utility to a customer must not contain more than 0.3 grains of hydrogen sulfide or more than 20 grains of total sulfur per 100 cubic feet, including the sulfur in any hydrogen sulfide.

(2) Gas that is distributed by a utility to a customer must not contain flammable liquids in quantities that interfere with the normal operation of the customer's equipment.

(3) Gas that is distributed by a utility to a customer must not contain more than 2% carbon dioxide or 5 parts per million oxygen.

(4) Gas that is distributed by a utility to a customer must not contain water in excess of 7 pounds per million cubic feet.

R 460.2382 Heating value; authorized variations.

Rule 82. (1) The heating value of substitute natural gas and mixed gas must be considered as being under the control of the utility. The average heating value on 1 day must not be more than or less than the standard total heating value range set forth in the utility's rules. A utility shall not add air to a gas stream if this results in a heating value that is below 1,000 British thermal units per standard cubic foot.

(2) The average monthly heating value of gas that is supplied by a utility shall be 1,025 British thermal units per standard cubic foot, plus or minus 75 British thermal units. A greater variation may be approved by the commission upon a showing by the utility that the variation will not adversely affect the efficient and satisfactory operation of its customers' gas utilization equipment.

R 460.2383 Heating value records; location and accuracy of measuring equipment; frequency of heating value determination.

Rule 83. (1) A utility shall maintain records of the heating value of the gas it distributes. Heating value test records must be preserved for a minimum of 6 years. A utility shall utilize either the industry standards that are adopted by reference in R 460.2344(d) or other standards that are approved by the commission for heating value determination methods.

(2) Heating value measuring equipment must be installed in suitably located testing stations.

(3) The accuracy of all heating value measuring equipment and the method of making heating value tests must meet the industry standards that are adopted by reference in R 460.2344(d) or must otherwise be approved by the commission. Recording equipment must be tested, at a minimum, annually.

(4) The utility shall determine the heating value of substitute natural gas and mixed gas at a minimum of twice a day and shall make the tests during the periods of the a.m. and p.m. peak demands.

(5) The utility shall determine the heating value of gas at least once a month. A utility that sells gas subject to a thermal adjustment shall determine the heating value at least once a day.

P R O O F O F S E R V I C E

STATE OF MICHIGAN)

Case No. U-20608

County of Ingham)

Brianna Brown being duly sworn, deposes and says that on August 20, 2020 A.D. she electronically notified the attached list of this **Commission Order via e-mail transmission**, to the persons as shown on the attached service list (Listserv Distribution List).

Brianna Brown

Subscribed and sworn to before me
this 20th day of August 2020.

Angela P. Sanderson
Notary Public, Shiawassee County, Michigan
As acting in Eaton County
My Commission Expires: May 21, 2024

Service List for Case: U-20608

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