

CHAPTER 14
RESIDENTIAL WATER TREATMENT

641—14.1(714) Purpose. The purpose of these rules is to establish procedures for the testing and sale of residential water treatment systems. These rules are established pursuant to Iowa Code section 714.16, which prohibits false or deceptive representations of reducing the concentration of health-related contaminants in drinking water by a person selling a residential water treatment system in Iowa.

641—14.2(714) Applicability. The provisions contained within apply to the seller or manufacturer of any residential water treatment system offered for sale, lease, or rent for which representations of reducing health-related contaminants are made.

641—14.3(714) Definitions.

“Annual registration” means the renewal of registration of a water treatment system for years subsequent to the initial registration.

“Buyer” means the person to whom the water treatment system is being sold, leased or rented.

“Consumer information pamphlet” means a publication which explains water quality, health effects, quality expectations for drinking water, and the effectiveness and functions of water treatment systems.

“Consummation of sale” means the completion of the act of selling, leasing, or renting. Where the water treatment system is ordered by telephone or mail, “consummation of sale” means delivery.

“Department” means the Iowa Department of Public Health, Lucas State Office Building, Des Moines, Iowa 50319.

“Health-related contaminant” means any particulate, chemical, microbiological, or radiological substance in water which has a potentially adverse health effect and for which a maximum contaminant level (MCL) has been specified in the national primary drinking water regulations.

“Initial registration” means the first registration of a water treatment system after certification by an approved third-party testing agency.

“Label” means the written, printed, or graphic matter attached to or printed on the water treatment system so it is not likely to be separated during normal shipping and handling and can only be removed with a purposeful effort by the owner.

“Manufacturer’s performance data sheet” means a manufacturer’s booklet, document, or other printed material containing, at a minimum, the information required pursuant to Iowa Code section 714.16.

“National Sanitation Foundation (NSF)” means the National Sanitation Foundation, 3475 Plymouth Road, P.O. Box 1468, Ann Arbor, Michigan 48106.

“Performance testing” means (1) the third-party laboratory testing of a water treatment system in accordance with the performance testing protocol or (2) an audit of manufacturers’ facilities and data by third-party testing agencies.

“Seller” means the person offering the water treatment system for sale, lease, or rent.

“State hygienic laboratory” means the University Hygienic Laboratory, University of Iowa, Oakdale Campus, Iowa City, Iowa 52242.

“Temporary registration” means the registration of a water treatment system between the enactment of these rules and July 1, 1990, during which a testing protocol has not been approved for the water treatment system or the water treatment system has not been tested and certified by an approved third-party testing agency.

“Third-party testing agency” means an independent laboratory which is authorized by the department to conduct performance testing and is not wholly or partially owned or managed by the manufac-

turer of the water treatment system to either conduct performance laboratory testing of water treatment systems or conduct laboratory audits of manufacturers' facilities and data.

“*Water treatment system*” means a water treatment device or assembly for which a claim is made that it will improve the quality of public or private drinking water by reducing one or more health-related contaminants through mechanical, physical, chemical or biological processes or combinations of the processes. Each model of a water treatment system shall be deemed a distinct water treatment system.

641—14.4(714) Performance testing. All water treatment systems must be performance tested in accordance with approved protocols by a third-party testing agency.

14.4(1) Approval of performance testing protocols. State hygienic laboratory must approve testing protocols for the performance testing of water treatment systems. A manufacturer or seller must submit a performance testing protocol to the laboratory for review and approval. Where applicable, the information must include, but not necessarily be limited to, the following:

- a. Name, address and telephone number of the submitter or official representative.
- b. The brand name and model number of each water treatment system requiring performance testing for verification of health-related claims.
- c. A detailed drawing, with part numbers identifying each component of the water treatment system.
- d. Identification of the water treatment system materials which are in direct contact with the water.
- e. Identification of the contaminants claimed to be reduced by the submitter's design.
- f. A detailed description of the performance testing protocol or the National Sanitation Foundation (NSF) Testing Protocol contained within the NSF Standard reference number applicable to the submitter's water treatment system. The performance testing protocol shall include the following conditions and procedures:

(1) A statement clarifying if the water treatment system would be advertised or sold for treatment of water from private wells, public water supplies, or both.

(2) Each water treatment system shall be tested to at least 120 percent of its capacity.

(3) The water used for the performance testing shall be characterized as to its key parameters, i.e., pH, hardness, total dissolved solids (TDS), turbidity, and others as necessary for the evaluation of the water treatment system's performance in the treatment of water from either private wells or public water supply systems, or both.

(4) Procedures shall be included to demonstrate that the test rig without the water treatment system in place has no effect on the water characteristics or on the concentration of any challenge material.

(5) The temperature of the challenge water must be maintained at 20 degrees Celsius plus or minus 2 degrees Celsius throughout the test.

(6) For plumbed-in water treatment systems, the test pressure must be 55 pounds per square inch (PSI) plus or minus 5 PSI during the challenge period.

(7) Samples taken from the influent challenge water immediately prior to the water treatment system being tested are analyzed for the specific challenge material or surrogate deemed suitable by the University Hygienic Laboratory (UHL). Environmental Protection Agency (EPA) approved methods of analysis, where appropriate, are required.

(8) For water treatment systems challenged to 120 percent of capacity, samples shall be collected after the passage of 10 unit volumes of test water without the specific challenge material present and at least 10, 50, 100, and 120 percent of capacity with the specific challenge material present. Additional samples may be collected and included in the test report.

(9) Influent and effluent samples collected for volatile organic compound (VOC) analyses must comply with acceptable methods pertaining to storage and analysis. Samples must be collected in glass vials with Teflon-lined cap septa in accordance with standard EPA protocol.

g. Proposals for modifications or additions to the above requirements must be submitted with the performance testing protocol. The state hygienic laboratory shall determine if the modifications are appropriate and reasonable for the water treatment system to be tested. The state hygienic laboratory may approve using a single testing protocol for a number of water treatment models which are based on the same treatment technology.

14.4(2) Reserved.

641—14.5(714) Approval of third-party testing agencies. The department must approve third-party testing agencies.

14.5(1) Testing laboratory. A third-party testing agency will be approved for independent laboratory testing based upon:

a. The submission of a U.S. Environmental Protection Agency laboratory certification under the Safe Drinking Water Act for the claimed contaminant(s) and a review by the department of the testing agency documentation of the instrumentation, equipment and experience of personnel to conduct the required physical testing of the water treatment system according to the approved performance testing protocol, or

b. A written verification to the department that the testing agency has the capability to perform the U.S. Environmental Protection Agency approved methods of analysis for the claimed contaminants and demonstration that the agency has:

(1) The essential instrumentation, equipment and experience of personnel to conduct the required testing of the water treatment system according to the approved testing protocol, and

(2) A satisfactory quality assurance program and demonstrated performance in an approved proficiency testing program for the claimed contaminants.

14.5(2) Testing auditor. A third-party testing agency may be approved for the auditing of manufacturers' data and facilities based upon:

a. Written description of the agency's qualifications and experience in performing laboratory audits and laboratory analysis.

b. Written verification that U.S. Environmental Protection Agency (EPA) or equivalent procedures for auditing quality control of laboratories are followed in performing an audit of a manufacturer's testing of a water treatment system.

c. The submission of a U.S. Environmental Protection Agency laboratory certification under the Safe Drinking Water Act, or

d. A written verification to the department that the testing agency has the capability to perform the U.S. Environmental Protection Agency approved methods of analysis for the claimed contaminants and demonstration that the agency has:

(1) The essential instrumentation, equipment and experience of personnel to conduct the required testing of the water treatment system according to the approved testing protocol, and

(2) A satisfactory quality assurance program and demonstrated performance in an approved proficiency testing program for the claimed contaminants.

14.5(3) Certification by third-party testing agency. Upon completion of the laboratory performance testing or auditing, the third-party testing agency shall submit to the department in writing the following:

a. *Testing laboratory.*

(1) A copy of all test results applicable to the water treatment system tested. A copy of all test results must be maintained by the third-party testing agency for a period of at least two years.

(2) A statement that the testing was conducted in accordance with each provision of the approved testing protocol.

b. *Testing auditor.* Upon completion of an audit of a manufacturer's testing facility, the third-party auditing agency shall submit to the department a record of the audit and a statement that the manufacturer's testing facility did or did not have the capability to perform.

14.5(4) *Manufacturer's testing approval.* A manufacturer's test data from tests performed may be approved in lieu of third-party laboratory testing provided that the manufacturer's testing facility and test data are found to be adequate when audited by a qualified third-party testing agency.

14.5(5) *Certification by manufacturers of testing performed prior to audit evaluations.*

a. Prior to third-party audit evaluations, the manufacturer must submit to the department in writing a copy of all test results applicable to the water treatment system tested and a statement that manufacturer's testing was conducted in accordance with each provision of an approved performance testing protocol as outlined in 641—14.4(714).

b. A written verification to the department that the manufacturer's laboratory has the capability to perform the U.S. Environmental Protection Agency approved methods of analysis for the claimed contaminants and demonstration that the manufacturer has:

(1) The essential instrumentation, equipment and experience of personnel to conduct the required testing of the water treatment system according to the approved testing protocol, and

(2) A satisfactory quality assurance program and demonstrated performance in an approved proficiency testing program for the claimed contaminants.

641—14.6(714) *Labeling and manufacturer's performance data sheet.* All water treatment systems must be provided with a label and accompanying manufacturer's performance data sheet to provide the consumer with clear information on the effectiveness of reducing health-related contaminants from typical water found in Iowa public and private water supplies.

14.6(1) *Label.* Each water treatment system must bear a conspicuous and legible label stating, "IMPORTANT NOTICE—Read the manufacturer's performance data sheet."

14.6(2) *Manufacturer's performance data sheet.* The manufacturer's performance data sheet shall be given to the buyer by the seller and shall be signed and dated by the buyer and the seller prior to the consummation of the sale of the water treatment system and retained on file by the seller for a minimum of two years. The manufacturer's performance data sheet shall contain information including, but not limited to:

a. The name, address, and telephone number of the seller.

b. The name, brand, or trademark under which the water treatment system is sold, and its model number.

c. Performance and test data including, but not limited to:

(1) The list of contaminants found to be reduced by the water treatment system.

(2) The test influent concentration level of each contaminant.

(3) The percentage reduction or effluent concentration of each contaminant.

(4) The maximum contaminant level (MCL) specified in the U.S. Environmental Protection Agency's national primary drinking water regulations.

(5) The approximate capacity in gallons or the period of time during which the water treatment system is effective in reducing the concentration of contaminants based upon the contaminant influent concentrations used for the performance tests. The claimed volume capacity of a water treatment system needs only to be based upon the claimed contaminant most likely to break through into the effluent during the test period.

(6) Where applicable, the flow rate, pressure, and temperature of the water during the performance tests.

d. The following information must be contained on the performance data sheet or may be referred to the owner's manual.

(1) Installation instructions.

(2) Procedures and requirements necessary for the proper operation of the water treatment system including, but not limited to, electrical requirements; maximum and minimum pressure; flow rate; temperature limitations; maintenance requirements; and expected replacement frequencies.

(3) The seller's warranty limitations.

(4) Non-health-related substances may be listed on the performance data sheet but may not be referred to as contaminants.

641—14.7(714) Consumer information pamphlet. A consumer information pamphlet prepared by the department must be given to the buyer by the seller along with the manufacturer's performance data sheet prior to the consummation of the sale of a water treatment system. The consumer information pamphlet may be printed in detail by the manufacturer.

641—14.8(714) Registration. All water treatment systems meeting the criteria of these rules shall be registered with the department according to the following schedule.

14.8(1) Temporary registration. Each manufacturer of a water treatment system subject to these rules shall within 120 days of the adoption of these rules register all models of applicable water treatment system. Temporary registration shall expire one year after the establishment of an approved testing protocol but no later than July 1, 1990.

To obtain a temporary registration the manufacturer shall submit for each model of a water treatment system the following:

- a. Manufacturer's name, address, telephone number, and contact person.
- b. Name and description of the water treatment system.
- c. Model number.
- d. A list of trade names the system is sold under.
- e. A temporary registration fee of \$30 for each model of a water treatment system subject to these rules.

14.8(2) Initial registration. Upon completion of the performance testing required in 641—14.4(714) and upon completion of the labeling and manufacturer's performance data sheet requirements of 641—14.6(714), the manufacturer shall submit the following to the department for each model of water treatment system subject to these rules:

- a. Test results and laboratory certification documents for the water treatment system.
- b. Manufacturer's performance data sheet.
- c. An initial registration fee of \$400 for each model of water treatment system subject to these rules.

14.8(3) Annual registration. Beginning July 1, 1990, and after meeting the requirements of initial registration contained in subrule 14.8(2), the manufacturer of a water treatment system subject to these rules shall submit the following to the department between April 1 and June 30 of each calendar year.

- a. Certification that there has been no change in the water treatment system's design since the system was tested during the initial registration process.
- b. Any change in the performance data sheet. Changes must be explained and supported by third-party testing results.
- c. A list of trade names the system is sold under.
- d. An annual registration fee of \$200 for each model of water treatment system subject to these rules.

14.8(4) A fee not to exceed \$200 will be paid by the manufacturer directly to the university hygienic laboratory for review of each performance testing protocol submitted under these rules.

14.8(5) Third-party testing agency or third-party audit costs and fees necessary for compliance with these rules shall be paid directly by the manufacturer.

14.8(6) A fee not to exceed \$200 will be paid directly to the department by third-party agencies for the review process as described in rule 14.5(714).

641—14.9(714) Penalties. A seller of a water treatment system or unit violating any provision of these rules shall be subject to civil penalties pursuant to the authority of Iowa Code chapter 714.

These rules are intended to implement Iowa Code section 714.16.

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