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Ohio Administrative Code

Rule 3701-28-04 Inspection; water sample collection and analysis and water quality standards.

Effective: January 1, 2020

(A) The board of health or the department of health may perform inspections as often as necessary to determine satisfactory compliance with this chapter. For purposes of this rule, "inspection" means the observation and documentation of the location, construction, or physical condition of a private water system or any component of such a system and includes, without limitation, water sampling for the detection of any contaminants, the documentation of a violation of construction standards, technical procedures, or any other requirement established under this chapter.

(B) The owner or the designated agent of a new or altered private water system is responsible to contact the board of health for an inspection and the collection of water samples when work on the private water system has been completed. The property owner shall provide reasonable access to the board of health for pre-construction site evaluations and for conducting final inspection of the outside and inside components of the private water system and for collection of required water sample(s) while the permit remains valid.

(C) The board of health shall inspect each private water system constructed, altered, or sealed after the effective date of this rule to determine compliance with this chapter. When a property owner has not contacted the board of health within thirty working days after the board of health has received documentation indicating that the private water system construction, alteration, or sealing has been completed, such as a well log, completion form, or other notification, the board of health shall contact the property owner in order to determine the completion status of the private water system and to schedule an inspection and water sample (when applicable).

(D) The inspection by the board of health shall include an examination of at least the following, as applicable:

(1) A review of all required forms for compliance within thirty days of receipt by the board of health and prior to collecting a water sample and conducting a site inspection.

(2) The well casing for proper ASTM, API, ANSI or NSF designations, casing type, wall thickness, and height above final grade.

(3) The surface condition of the annular space around the casing to determine the presence of grout, and the absence or presence of subsidence, using a probe or other visual indication of the surface condition of the annular space.

(4) All isolation distance requirements as provided in rule 3701-28-07 of the Administrative Code and any other potential sources of contamination.

(5) The pitless adapter, when necessary.

(6) Removal of the well cap for determination of proper well cap type, proper installation and venting and observation of the inside of the casing, when necessary.

(7) The dedicated water sample faucet(s) and pressure relief valve.

(8) Required backflow devices.

(9) The complete disinfection and filtration system, including all required signage and labeling.

(10) For cisterns, springs, reservoir tanks, and hauled water storage tanks, tank size, tank standards and specifications, manhole covers for safety, and intakes.

(11) Pond intakes, pond and spring watershed control area, wet side slope, and pond size.

(E) Where board of health or the department determines that any of the following conditions exist at a well, the registered contractor performing the work or the well owner may be required to excavate around the well head for verification of proper grouting.

(1) A visible open annular space surrounding the well casing.

(2) Grout is not detected at or below the water service line connection to the casing.

(3) The detection of dye in the well water after placement of tracer dye around the casing at or near the ground surface.

(4) A well log or sealing report which indicates that the well has not been grouted or which lacks information or contains incomplete or erroneous information pertaining to the grouting of a well.

(5) Or any other condition as determined by the department or the board of health to verify compliance with this chapter.

(F) Where the board of health determines, based on the inspection and review of the required forms, that a private water system has not been constructed, altered, or sealed in accordance of this chapter, the board of health shall either:

(1) Notify the contractor of the violation in writing and offer the opportunity to correct in a timely manner; this contact and any related correspondence shall be recorded in the permit file. If the violation is not corrected within the time frame established by the initial notification, the board of health shall issue a written notice of violation to the responsible persons as specified in paragraph (L) of rule 3701-28-02 of the Administrative Code and orders to comply with this chapter. Orders shall be copied to the department as well as the owner, applicant and all contractors identified on the permit; or,

(2) Issue a written notice of violation to the responsible persons as specified in paragraph (L) of rule 3701-28-02 of the Administrative Code and orders to comply with this chapter. Orders shall be copied to the department as well as the owner, applicant and all contractors identified on the permit.

(G) New registrant private water systems contractors who construct private water systems wells shall obtain a minimum of one construction and knowledge assessment inspection within the first twelve months of registration. The inspection shall be performed by the department or a person designated by the department, and shall take place during the construction process to determine that the private water system is being constructed in compliance with this chapter.

(H) New registrant private water systems contractors who perform work on private water systems

other than construction of a private water system well shall obtain a minimum of one construction and knowledge assessment inspection from a board of health within the first twelve months of registration. The inspection shall take place during key stages of the construction process to determine that the private water system is being constructed in compliance with this chapter.

(I) Private water systems contractor inspections shall be recorded on inspection report forms prescribed or approved by the department, and shall provide for a comprehensive review of compliance with this chapter. A copy shall be provided to the department, the board of health, and the registered contractor within thirty days of the inspection.

(J) The department may elect to conduct construction and knowledge assessment inspections for any registered contractor, as needed, to determine if work on a private water system is being completed in compliance with this chapter.

(K) The board of health shall collect and process water samples as required in paragraph (W) of rule 3701-28-03 of the Administrative Code after completion of the private water system and receipt of well logs and/or completion forms and when the private water system is determined to be in compliance with this chapter. Water samples shall be collected and processed according to the following procedures:

(1) Information regarding the private water systems owner, address of the property, and date of sampling shall be recorded.

(2) A sanitary survey shall be performed of the site for a pre-existing private water system that is being sampled for purposes of an inspection or bond claim.

(3) Water to be tested shall be checked at the time of collection by the person collecting the sample for the presence of chlorine or any other disinfectant used prior to disinfection of the sample faucet prior to submission for analysis.

(a) Water samples from private water systems wells and systems utilizing ultraviolet light for continuous disinfection shall be collected a minimum of forty-eight hours after the private water system has been chlorinated or disinfected with a material other than chlorine and completely flushed

to remove all residual chlorine or other disinfectant from the system.

(b) Water collected from hauled water storage tanks shall have at least two tenths of a milligram per liter residual of chlorine present at the time a water sample is collected.

(c) Water collected from private water systems utilizing continuous disinfection with a chemical disinfectant shall have a chemical disinfectant residual detected at the level required in paragraphs (M) and (O) of rule 3701-28-15 of the Administrative Code for the specific disinfection device at the time the water sample is collected.

(4) All water samples collected as part of the permit requirements of this chapter shall be collected at the point of discharge of the system, and shall not be collected from hoses, outside spigots, or yard hydrants. In circumstances where the sample faucet cannot be relocated to an accessible location, such as when the pressure tank is located in an inaccessible crawl space, in an underground vault or buried below the ground surface, and when no other sample faucets are accessible, a water sample may be collected from the closest faucet to the pressure tank. The need to collect the sample at this location shall be clearly denoted on the forms submitted by the private water systems contractor.

(5) If the water system is a well, it shall be purged a minimum of ten minutes. If there is no drain near the pressure tank several faucets throughout the building shall be turned on to assist in purging the system. Where the yield cannot be sustained for at least ten minutes the system shall be purged to insure flushing of the distribution system to get a representative sample from the well. A cistern, pond, hauled water storage tank, or spring, shall be purged long enough to remove all water standing in the distribution system prior to collecting the sample. Discharge of water to the sewage treatment system should be minimized when possible. If the water sample is collected from the well head out of the pitless adapter, it shall be run for a minimum of three minutes.

(6) The person collecting the water sample shall sanitize their hands just prior to collection.

(7) The sampling faucet, shall be sanitized with either a chlorine solution containing a minimum of four hundred milligrams per liter chlorine, or an isopropyl alcohol solution of not less than seventy per cent, or a solution of two hundred milligrams per liter quaternary ammonia, by spraying or flushing the faucet, by flaming a metal sample faucet, or by using other methods approved by the

department.

(8) Water samples shall be collected in a sterile sample container provided by the laboratory that will perform the analysis. The sample bottle shall not be rinsed prior to the collection of the sample. The lip or inside of the sample bottle or inside of the lid shall not come into contact with any sources of contamination.

(9) Water samples to be tested for nitrates, shall be stabilized at the site or delivered to the laboratory within the time frame required by the laboratory in accordance with the standard method. The private water system may be pre-screened on site with nitrate test strips or kit as authorized under paragraph (V) of rule 3701-28-03 of the Administrative Code and used in accordance with the manufacturer's directions. If the sample is prescreened and the presence of nitrates is detected at five milligrams per liter or greater, a sample shall be submitted to an approved lab for nitrate analysis.

(10) All water samples to be tested for bacteria, shall be transported in an insulated closed container containing ice or other equivalent cooling media and transported to the laboratory within the time frame required by the laboratory in accordance with the standard method.

(11) All water samples, shall be tested at a laboratory approved for the testing of microbiological contaminants, and primary drinking water standards under Chapter 3745-89 of the Administrative Code or a laboratory approved by the department. Testing for total coliform or coliform CFU or MPN counts shall use approved methods that are appropriate to the source of the water being tested and the observed or known water quality.

(12) When a coliform CFU or MPN count is required, the number of coliform bacteria CFU or MPN can be determined by using methods for bacterial enumeration described in the twenty-second edition of "Standard Methods for the Examination of Water and Wastewater," which is published jointly by the American public health association, the American water works association, and the water pollution control federation, or through other methods approved by the department.

(13) For private water systems required to utilize continuous disinfection or maintain a chemical disinfectant residual, the indicator bacteria shall be determined using approved methods that determine a CFU or MPN count or indicate the presence or absence of the indicator bacteria.

(L) The board of health may charge the private water system owner a fee for each water sample collected by the board of health for the purpose of determining the presence of any contaminants.

(M) The department shall provide for making the bacteriological examinations and the determination of the presence of nitrates in its laboratories of water samples required by these rules at the cost set forth in the fee schedule established in Chapter 3701-49 of the Administrative Code for each bacteriological examination and nitrate analysis performed, and shall establish a system to receive such water samples at its laboratories, and to make such charges therefore; provided, however, these rules do not prohibit such examination from being made by other laboratories approved by the Ohio department of health.

(N) The following microbiological standards and maximum contaminant levels (MCL) apply to all private water systems unless otherwise specified:

(1) For water wells not using continuous disinfection, or not required to have a disinfectant residual the acceptable level for bacteria indicators in the water sample shall be:

(a) Four or less total coliform CFU or 4.2 or less total coliform MPN per one hundred milliliters of water for the purposes of acceptable well construction and development and as an indication of the presence of opportunistic bacteria;

(b) No detection of Escherichia coli CFU or MPN per one hundred milliliters of water; and

(c) If additional microbiological speciation analysis or coliphage testing is done, there shall be no detection of any primary pathogenic microorganism, other fecal indicator microorganisms, or coliphages as determined by the department.

(2) For any private water system required to have a disinfectant residual or to have continuous disinfection and/or filtration in accordance with rule 3701-28-15 of the Administrative Code, there shall be no detection of total coliform CFU or MPN, or escherichia coli CFU or MPN per one hundred milliliters of water, or if additional microbiological testing or speciation analysis or coliphage testing is done, any primary pathogenic microorganism as determined by the director.

(3) Water sample results determined using membrane filter that indicate a high background count or confluent growth are considered invalid and may not be used to determine compliance with the water sample requirement of this rule.

(4) For the purposes of making recommendations for the consumption and treatment of water from private water systems, the maximum contaminant levels, health advisory levels, or action levels and standards of chemical constituents for private water systems shall be the same as the primary maximum contaminant levels health advisory levels, or action levels and standards established by the United States environmental protection agency for public water supplies in accordance with 40 CFR 141 (2018), or the agency for toxic substance and disease registry, or the centers for disease control and prevention.