



John R. Kasich, Governor
Mary Taylor, Lt. Governor
Craig W. Butler, Director

Re: McComb Village
Inspection
Letter of Compliance
Drinking Water Program
Hancock County
PWS ID: OH3200411

April 7, 2015

Mr. Kevin Siferd
Village of McComb
210 East Main Street
P. O. Box 340
McComb, Ohio 45858-0340

Subject: Sanitary Survey - Community Water System

Dear Mr. Siferd:

On March 25, 2015, I conducted a sanitary survey of the McComb Village public water system. Ann Scott and Thomas Shumaker were interviewed and the public water system was inspected in their presence.

The purpose of this evaluation is to determine the ability of the facility to provide adequate, safe and potable water that meets the requirements of the Ohio Administrative Code. The eight major elements that are generally reviewed during a sanitary survey include: source, treatment, distribution system, finished water, storage, pumps /pump facilities and controls, monitoring/reporting/data verification, water system management/operation, and operator compliance with State requirements. General supervision of the operation and maintenance of public water systems is a function of this Agency as set forth in Chapter 6109 of the Ohio Revised Code.

Identified below are regulatory requirements for which action must be taken to return to compliance, and recommendations to address deficiencies that have the potential to cause future violations or contamination.

REQUIREMENTS

Per Ohio Administrative Code rule 3745-81-60(D), a public water system must respond, in writing, within 30 days, indicating how and on what schedule the system will address the following requirements.

1. A total coliform (TC) monitoring plan must be submitted. The routine TC samples must be representative of the water quality throughout the distribution system in accordance with a monitoring plan. The samples must be collected at regular time intervals throughout the month. Several sites should be identified that will be readily accessible. The monitoring plan is being reviewed and amended by the operator. [rule 3745-81-21(A)(3)]

2. The unused well must be sealed properly that is adjacent to the parking lot, north of the intake pumphouse and between the reservoirs. The well sealing report must be submitted. [rule 3745-9-10(A)]
3. A 250 gpm intake pump (Pump 1) is out-of-service. The pump must be installed in accordance with the detail plans of the plan approval. The Pump 4 is scheduled for maintenance. The Pump 6 motor cap must be replaced. [rule 3745-91-08(G)(1)]
4. The contingency plan must be revised and updated annually, or as necessary, and then promptly distributed to holders of the plan. The current contingency plan is being amended by the operator. The contingency plan should include actions that could be necessary if the clearwell is out-of-service or because of a chlorine gas release or algal toxins in the reservoirs in accordance with the Public Water System Harmful Algal Bloom Response Strategy. [rules 3745-85-01(E)(1 & 2) & 3745-81-32(B)(1)(a) & RC 6109.06]
5. The ventilation fan and exhaust vent in the fluoridation room must installed and repaired. The spillage must be removed from the spill containment in the fluoridation room to avoid an unsanitary condition. [rule 3745-91-08(G)(1) & RSFWW 2007 section 2.18]
6. The operator of record of both the treatment plant and distribution system must daily prepare and retain records in accordance with the operator certification rules. [rule 3745-7-09]
7. The exterior coating of the clearwell will require repair and coating. Many areas of the tank exterior are observed from ground level where the tank coating is gone and corrosion holidays are present. If the tank will not be replaced, then proper maintenance and repairs must be scheduled and completed. Cathodic protection should be installed and routine preventative maintenance completed. Proper protection must be given to metal surfaces by paints or other protective coatings, by cathodic protection, or by both. [RSFWW 2007 section 7.0.17]
8. The chemical feed systems and spill containments must be installed in accordance with the detail plans of the plan approval (1029199, 2/26/2015). The existing chemical feed systems are severely deteriorated which must be replaced. Chemical tanks and feed systems must have spill containment to prevent an unsanitary condition, inadvertent release, and potential risk to health and safety. The ferric chloride and 50% caustic soda are incompatible chemicals that must not have a common spill containment. [rule 3745-91-08(G)(1) & RSFWW 2007 sections 5.1.9(d)(2), 5.1.10(j) & 5.1.11(b)]
9. The coagulant bulk chemical tank must have a means to measure the liquid level in the tank. Although 25 gal gradations are marked, the coagulant level cannot be seen in the FRP tank. Also, the bulk tank overflow must be turned downward and the terminal end screened. [rule 3745-91-08(G)(1) & RSFWW 2007 sections 5.1.10(c & f)]

10. Both vents from the bulk tanks and day tanks must have affixed a down-turned 24 mesh noncorrodible insect screen at the terminal end at the building exterior to avoid an unsanitary condition as well as in accordance the detail plans of the plan approval. [rule 3745-91-08(G)(1) & RSFWW 2007 section 5.1.10(f & g)]
11. The pressure gauges at both filter transfer pumps have malfunctioned and must be replaced. [rule 3745-91-08(G)(1) & RSFWW 2007 section 6.6.3]
12. The filter continuous turbidimeter must be in-service within fourteen days after it is taken out-of-service. The turbidimeter is out-of-service during the sanitary survey. Turbidity grab sampling must be collected every four hours until the continuous turbidity monitoring equipment is repaired or replaced, calibrated with a primary standard, and in-service. [rules 3745-81-74(B)(1 & 2)]
13. Filtered water turbidity continuous monitoring must be recorded at every fifteen minutes. Each continuous turbidimeter must report to a recorder that is designed and operated to allow the operator to accurately determine the turbidity. A digital data logger may be installed to record the turbidity monitoring data. A strip chart is installed that records the filter turbidimeters, but the strip chart was out-of-service during the sanitary survey. The strip chart recordings are acceptable, bit it is not recommended. [rule 3745-81-74(B)(1) & RSFWW 2007 section 4.2.5.5(a)(5)]
14. A general NPDES permit OHG870001 is required prior to using any algaecide such as copper sulfate in the reservoirs. Under the general permit, all applicators must submit a Notice of Intent (NOI) for any direct application to reservoirs used as a drinking water supply for aquatic algae, weed, or nuisance animal control.
15. As part of the elevated tank project, waterline replacement was installed without plan approval for the 4 inch waterline to the 12 inch. Detail plans for plan approval must be submitted for the waterline replacement. [RC 6109.07 & rule 3745-91-02(A)]

RECOMMENDATIONS

The following deficiencies are not regulatory violations, but are actions that are recommended by this Agency for optimum operation and to reduce the potential for future violations or contamination.

1. A corrosion control study is recommended using coupons to evaluate the stability and corrosivity of the water in the distribution system. The finished water pH is adjusted using 50 percent caustic soda. A finished water pH range should be determined that has been demonstrated to be effective for corrosion control. With prior plan approval, the caustic soda feed point could be located at the coagulant feed point for alkalinity adjustment when needed and pH adjustment.

2. A source water protection plan is recommended that should be prepared and implemented. Additional information and guidance are available at our website. [<http://epa.ohio.gov/ddagw/swap.aspx>]
3. The water main must be at least 6 inch diameter with fire hydrants for fire protection. Hydrants are installed where the water main is 4 inch diameter. Fire hydrants should have flow tests and be color coded in accordance with NFPA 291. Additional guidance is available from AWWA manual M17 Installation, Field Testing, and Maintenance of Fire Hydrants. [RSFWW 2007 section 8.2.2]
4. Waterline replacement of the small diameter mains should be considered. The distribution system has water mains with diameters that range between 2 and 12 inch.
5. A Type A leak repair kit is available onsite for 150 lb chlorine cylinder that is approved by the Chlorine Institute. The emergency responders should be trained to use the equipment if needed because of a chlorine gas release. [RSFWW 2007 section 5.3.3]
6. The preventative maintenance program should include routine and periodic verification of the chlorine detector in the chlorine room that is in accordance with the recommendations of the manufacturer. The product literature recommends that the sensors are periodically verified to assure that they have not reached its end of life and it will detect gas leaks. The procedure uses a mixture of white vinegar and hypochlorite that reacts and creates a slight chlorine fume.
7. The chlorine residual colorimeter must have a verification procedure at least every 90 days. The proposed rules will require this verification procedure when the rule becomes effective.
8. With prior plan approval, disinfection using hypochlorite (liquid bleach) instead of gas chlorine is recommended. According to the operator, approximately 10 lb/day of gas chlorine is used. The treatment plant is nearby the village park as well as residential homes.
9. Distribution system waterline replacements should be evaluated. Many distribution system waterlines are older than 30 years. Waterline replacements are necessary because of deterioration of distribution system waterlines. Water loss may become a significant deficiency because of waterline leakage. Excessive waterline leakage and waterline failures are significant deficiencies of a distribution system that result in an interruption of water service that causes unsanitary conditions. Waterline depressurizations resulting from waterline repairs or replacements are a threat to health because of microbial and chemical contamination of the distribution system.

10. A water loss audit is recommended. Unmetered service connections, inaccurate meter readings, excessive waterline leakage and waterline failures will be a significant deficiency of the distribution system. USEPA guidances including Control and Mitigation of Drinking Water Losses in Distribution Systems, EPA816R10019, November 2010, is available from their website.
[http://water.epa.gov/type/drink/pws/smallsystems/technical_help.cfm] Additional guidance is in the AWWA manual M36 Water Audits and Loss Control Programs.
11. The intake bar screen should be replaced as planned as soon as practical. The bar screen will retain debris from entering the intake pumphouse.
12. Water quality monitoring and reporting for manganese have been implemented. Manganese in the finished water must be less than 50 µg/L. [rules 3745-83-01(F)(6) & 3745-91-09(B)]
13. Routine calibration of the chemical pumps using calibration columns is recommended in addition to the weight scales. Calibration of the chemical pumps will enable proper control and optimization of the dosage. Calibration tubes or mass flow monitors which allow for direct physical measurement of actual feed rates should be provided. Feeders must be able to supply at all times the necessary amounts of chemicals at an accurate rate. [RSFWW 2007 sections 5.1.4(c) & 5.0.3(a)]
14. Preparation and implementation of a distribution system optimization plan is recommended. Periodic flushing of the mains is necessary to maintain water quality and sufficient free chlorine residual throughout the distribution system. Dead-end mains must be flushed more frequently than the regular flushing of the mains. Automatic flushing hydrants may be installed that are compliant with the Guidance for Installation of Automatic Flush Hydrants in Distribution Systems, September 17, 2007. In addition, GIS spatial maps of the distribution system are recommended.
15. The emergency shower and eyewash station must be installed in the plant lab in accordance with the detail plans of the plan approval (1029199, 2/26/2015).
16. Filter media sieve analyses are recommended in accordance with standards AWWA B100-09, Granular Filter Material, and B604-12, Granular Activated Carbon. The filter media should be periodically evaluated to verify that it is within acceptable specifications of the detail plans of the plan approval (3731, 11/10/1998). According to the operator, filter media have been replaced. The filter media sieve reports must be submitted for our review and records.
17. Periodic, routine, and comprehensive inspections of the elevated tank and clearwell are recommended that are consistent with the standards and guidance of the AWWA. According to the AWWA Manual of Water Supply Practices M42, Steel Water Storage Tanks, the maximum interval for periodic inspections of the tank interior should be 3 years. The most recent inspection of the clearwell was on October 19, 2010.

Additional guidance is in section 4.3.1 of the standard AWWA G200-09, Distribution Systems Operation and Management. Cleaning the tank is recommended at the time of inspection and every two to five years depending upon silt accumulation in the tank. Cathodic protection systems should be inspected in accordance with the recommendations of the manufacturer. Sanitary, safety, security and some structural conditions should be inspected every year. Coating system conditions should be inspected every two to five years. Records should be retained for each storage tank that will support the scope and frequency of inspections.

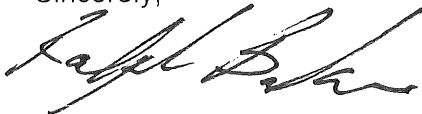
18. Prior to installation of the treatment system in the clearwell, a comprehensive inspection should be performed before any modifications to the clearwell are installed. Significant repairs or coating replacement could be necessary as well as clearwell replacement depending upon the findings of the inspection. Areas of paint overspray are visible on the tank exterior.
19. A second clearwell should be constructed with appropriate baffling. A minimum of two clearwells or a clearwell with two compartments must be provided. Failure to have sufficient disinfection in the clearwell will be a treatment technique violation for each day of noncompliance. [RSFWW section 7.1.2(d)]
20. On March 23, 2015, detail plans have been submitted for approval of an aeration and mixing system in the clearwell. The treatment system must be installed within 6 months of plan approval in accordance with the Bilateral Compliance Agreement.
21. The 125 KW diesel generator must be repaired and scheduled for preventative maintenance. Among other repairs, oil leakage must be eliminated that is collected in the drip pan underneath the engine. The generator is essential to operate the treatment plant during electric power outages. Carbon monoxide detectors are recommended because the generator is inside the treatment building. The diesel fuel tank is outside and adjacent to the building. Debris and diesel spillage in the spill containment is an unsanitary condition as well as potential fire hazard. [rule 3745-91-08(G)(1) & RSFWW 2007 sections 2.6, 3.2.1.3, & 6.6.6]
22. Installation of a SCADA (Supervisory Control and Data Acquisition) is recommended for treatment plant operation. [RSFWW 2007]
23. A filter assessment should be completed for optimization of the filtration. The filtration rates and filter runtime have been much less than the original performance. In addition, although the filtered water turbidity has been less than 0.3 NTU, the turbidity has been reported greater than 0.2 NTU. The filtered water turbidity should be consistently and reliably less than 0.1 NTU.
24. Any spillage from the bulk chemical filling will discharge into a storm drain. Discharge of chemical spillage must be prevented. Consultation is recommended with the Division of Surface Water to resolve any violation of wastewater discharge into the stormwater drainage. [RC 6111.04]

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25. Preparation and implementation of a reservoir management plan is recommended. Enacting ordinances are recommended to protect the reservoirs and the source water quality of the public water system. Motorcraft powered by gasoline motors are not recommended in the reservoirs. Routine monitoring is recommended of the water quality and algae that may cause taste and odor, or algal toxin. The procurement of a microscope is recommended for algae identification.
26. A butterfly valve was partially closed at the suction side of a high service pump. The operator was unaware of the purpose of the partial closure. The operator should determine if the valve should be fully open.
27. The chlorine residual colorimeter must have a verification procedure at least every 90 days. The proposed rules will require this verification procedure when the rule becomes effective.

If you have any questions regarding this letter, or any other matter involving your water system, you may contact me at (419) 373-3048, or by email [Ralph.Baker@epa.ohio.gov].

Sincerely,



Ralph J. Baker
Engineer
Division of Drinking and Ground Waters

//lr

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