Purpose and General Description

- Increases public health protection through the reduction of potential pathways of entry for fecal contamination into distribution systems.
- Establishes a Maximum Contaminant Level (MCL) for *E. coli*
- Uses *E. coli* and total coliform to initiate a "find and fix" approach to address fecal contamination that could enter into the distribution system.
- Requires public water systems (systems) to perform assessments to identify sanitary defects and subsequently take action to correct them.

Public Health Benefits

Implementation of the *Revised Total Coliform Rule* (RTCR) will result in a decrease in the pathways by which fecal contamination can enter the drinking water distribution system. This should reduce the potential risk from all waterborne pathogens including bacteria, viruses, and their associated illnesses.

Sampling Requirements

All systems are required to sample under an established Bacteriological Sample Siting Plan, that identifies locations representative of the water quality throughout the distribution system. *A chlorine residual test must be performed with each sample, at the time of field collection.*

Routine

- When collecting more than one sample per month, collect total coliform samples at regular intervals throughout the month. However, groundwater systems serving 4,900 or fewer people may collect all required samples on a single day, if the samples are taken from different sites.
- Each total coliform-positive (TC+) routine sample must be tested for the presence of *E. coli*.
- If the system is notified that any repeat TC+ sample is also EC+, then the EC+ sample result must be reported to the State by the end of that business day.
- Systems monitoring quarterly must take a minimum of three (3) routine samples the month following the initial TC+ routine.

Repeat

- Within 24 hours of learning of a TC+ routine sample(s), a minimum of three (3) repeat samples must be collected and analyzed for Total Coliform, for each TC+ routine.
- Repeat samples must be collected at the original site, within five (5) connections upstream, and five (5) connections downstream. *However, alternative repeat monitoring locations are permitted, that are expected to better represent pathways of contamination.*
- If one or more repeat sample is TC+, each TC+ sample must be analyzed for of *E. coli*.
- If the system is notified that any repeat TC+ sample is also EC+, then the EC+ sample result must be reported to the State by the end of that business day.
- The system must collect another set of repeat samples, unless an assessment has been triggered and the system has notified the state.

Assessments and Corrective Action

The RTCR requires systems that have an indication of coliform contamination (e.g., as a result of TC+ samples, *E. coli* MCL violations, performance failure) to assess the problem and take corrective action. There are two levels of assessments based on the severity or frequency of the problem.

Purpose

To find sanitary defects in the system that could provide a pathway of entry for contamination, or indicate failure of protective barriers against contamination.

Level 1 Assessment

Performed by the system owner or operator each time a treatment technique triggered occurs as follows:

- When a system collecting fewer than 40 samples per month has two (2) or more TC+ routine/repeat samples in the same month.
- When a system collecting at least 40 samples per month has greater than 5.0 percent TC+ routine/ repeat samples in the same month.
- When a system fails to take every required repeat sample after any single TC+ sample.

Level 2 Assessment

Performed by the State each time a Level 2 Assessment treatment technique triggered occurs as follows:

- When a system incurs an *E. coli* MCL violation.
- When a second Level 1 Assessment within a rolling 12-month period.

The system must ensure that the Level 2 Assessment is conducted.

Corrective Action

Systems are required to submit reports following each assessment, within 30 days of the initial routine positive. All corrective actions must be completed and included in the report. However, the 30 day requirement may be extended, with a schedule approved by the State. Guidance on how to conduct assessments and correct sanitary defects can be found at:

water.epa.gov/lawsregs/rulesregs/sdwa/tcr/regulation_revisions.cfm.

Requirements for Seasonal Systems

Seasonal system that do not maintain pressure during closure, must conduct a yearly State-approved start-up procedures. A report must be submitted and approved before the system can serve water to consumers.

Major Violations

E. coli MCL	Treatment Technique Violation
EC+ and any coliform-positive	Failure to conduct assessment within 30 days of trigger
Failure to collect repeat after EC+	Failure to correct sanitary defect within 30 days of trigger
Failure to test for E. coli after TC+	Failure to conduct State-approved start-up procedure

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