- Revised Total Coliform Rule - RTCR

An Overview of Proposed Rule Elements

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Importance of Water Operators

- Certified Operators are the Department of Public Health's front line in maintaining the purity and adequacy of the state's public drinking water.

- A well-trained, committed and ethical operator workforce, working to assure regulatory compliance, is essential for the security and safety of our public water supplies.

RTCR History / Status

- SDWA requires EPA to review and revise, as appropriate, the SDWA, no les often than every six years;
- In 2003, EPA reviewed and decided to revise the TCR.
- Advisory Committee – In July 2007, EPA convened the Total coliform Rule Distribution System Federal Advisory Committee (TCRDSAC), representing 15 organizations.
- Final Rule – On Feb. 13, 2013, after considering 134 public comment letters, EPA promulgated the final RTCR.
- The Federal Register notice for the Final Rule is available at: http://water.epa.gov/lawsregs/rulesregs/sdwa/tcr/regulation_revisions.cfm#revisedfinal
- CT RTCR Draft Regulation at Gov. Office (under formal review)

Importance of the TCR Revisions

Regulated PWSs are required, under the SDWA, to provide water that meets federal standards to their customers. If the water supply becomes contaminated, consumers can become seriously ill.

Contaminated drinking water with pathogenic microorganisms is one of the oldest known public health concerns.

Preventing waterborne disease is one of the primary objectives of any drinking water system.

Rule Goal: Increase Public Health Protection

Effective Date: April 01, 2016

Agenda

A. RTCR – Revision Key Points

B. Total Coliform Bacteriological Monitoring

C. Sample Site Plans

D. Level Assessments

E. Seasonal Start ups

F. Violations

A. RTCR – Revision Key Points

The RTCR retains basic TCR monitoring requirements, but, **offers greater opportunity for public health protection by the addition of new requirements** as summarized below:

A. Total Coliform Bacteriological Monitoring

- Keeps E. coli as the health indicator with an MCLG of zero and E. coli MCL similar to current TCR

B. Sampling Site Plans

- Sampling plan must include repeat sites if not within 5 service connections

C. Level Assessments

- Establishes a Treatment Technique (TT) in place of TC MCL Violations (i.e. Establishes a “find & fix” (Level 1 & 2 Assessments) approach to correcting bacteriological detections)

A. RTCR – Revision Key (cont.)

D. Seasonal Start Ups

- Requires Start-up Procedures for Seasonal Systems and sampling during high vulnerability
- TC Sample prior to opening to public

E. Violations

- 4 violation types (E.Coli MCL, Treatment Technique, Monitoring Violation, Reporting) and 3 Tiers (wrt Public Notification)

B. RTCR - Monitoring Requirements (cont.)

PWS TYPE	ROUTINE MONITORING	REDUCTION
All Communities	Monthly	NA
NTNCs & TNCs	Quarterly	NA
Seasonal	Monthly	Quarterly

Physical parameters (color, odor, turbidity and pH) in the distribution system have an MCLG

Retain the same coliform monitoring frequency at the time (i.e. Monthly or Quarterly)

Allows systems to transition at their current monitoring frequency during the transition from TCR to RTCR

B. Monitoring Requirements (cont.)

Number of Repeat Coliform Samples

- ALL PWSs of any size now take only 3 repeat samples for each TC+

TCR	RTCR
# of Repeats	# of Repeats
(-1 per Month or Quarter)	(-1 per Month or Quarter)
4 samples	3 samples

Note: Systems must collect a set of repeat samples for EACH routine TC+ sample, even if an MCL exceedance has occurred

B. RTCR - Monitoring Requirements (cont.)

Requires increase monitoring for high-risk small (<1,000 people) NC ground water systems with unacceptable compliance history

Beginning April 1, 2016,the State must perform a special monitoring evaluation during each sanitary survey to review the status of the system, including the distribution system, to determine whether the system is on an appropriate monitoring schedule.

The State may modify the system's monitoring schedule as necessary (NCWS).

B. RTCR - Monitoring Requirements (cont.)

- Small NC systems need to follow certain criteria to remain on a quarterly monitoring schedule or revert from monthly to quarterly by complying with the following criteria:

  -Within the last 12 months, such non-community water system shall have a completed sanitary survey, a site visit by the department or a voluntary level 2 assessment conducted by a level 2 assessor or the department, be free of sanitary defects, and have a source or sources of supply that are protected and that meet the separating distance requirements.

  -Such non-community water system shall have a “clean compliance history” for a minimum of 12 months.

Define: “clean compliance history” means a record of no maximum contaminant level violations, no monitoring violations, and no coliform treatment technique trigger exceedances or treatment technique violations.

C. RTCR – Sampling Siting Plans

PWSs are required to establish a written sampling siting plan that is representative of water quality throughout the entire distribution system.

Beginning on April 1st 2016, TC samples must be collected from these locations (and only those) identified in the SSP

The sample sites should include sites required for regulatory compliance monitoring - i.e. routine and repeat locations as required by the RTCR and the GWR and the collection schedule/frequency

SSP subject to state review and revision

F. RTCR - Level Assessments (1 or 2)

- **Requires systems to investigate and correct (AKA "Find & Fix") any "sanitary defects" found whenever monitoring results show a system may be vulnerable to contamination**.

  - Two levels (1 or 2) of assessment depending on the severity and frequency of contamination.

- **Sanitary defect:** "means a defect that is providing, or has the potential for providing, a pathway of entry for microbial contamination into the distribution system or that is indicative of a failure or imminent failure in a barrier that is already in place" – sanitary defects are identified by L1 and L2 assessments.

NOTE: A sanitary defect is different than a significant deficiency per GWR, however, in some instances there may be overlapping

F. Level 1 Assessment

<u>Triggers</u> that require Level 1 Assessment:

1. For a system collecting fewer than 40 samples per month, where more than one sample is TC (+);
2. The PWS fails to take every required repeat sample after any single routine TC (+)
3. For system collecting at least 40 samples per month where more than 5% of samples collected are TC (+)

NOTE: prior TC violation under the TCR becomes an assessment trigger under the RTCR;

F. Level 1 Assessment (cont.)

- Level 1 Assessments are conducted by the PWS, which is a basic examination of the source water, treatment, distribution system and relevant operational practices to identify sanitary defects

- Level 1 Assessment Reports must be submitted to DWS within 30 days of trigger
  - CT DPH Level 1 Assessment Form is being developed

- Sanitary Defects must be corrected within 30 days or per State approved correction plan

F. Level 2 Assessment

<u>Triggers</u> that require Level 2 Assessment:

1. Violation of the MCL for E. coli
   - The system has an E. coli (+) repeat sample following a TC (+) routine sample
   - The system has a TC (+) repeat sample following an E. coli (+) routine
   - The system fails to test for E. coli when any repeat sample tests (+) for TC
2. The system fails to take all repeat samples following a routine E. coli positive sample
3. Two Level 1 triggers in a 12 month period

The exception to this trigger is if the state has determined a likely reason for the TC+ samples that caused the initial Level 1 TT trigger, and the state establishes that the system has fully corrected the problem.

F. Level 2 Assessment (cont.)

- Level 2 Assessments are a more in-depth examination of the system and its monitoring and operational practices

- Performed by the DPH or a trained certified operator or a trained PE not currently employed by the system;
  - "trained" = completed CT DPH approved >= 6 hour course;
  - Assessment forms developed by DWS; will be provided to PWSs/web

- Level 2 Assessment Reports must be submitted to DWS within 30 days of trigger;

- Sanitary Defects must be corrected within 30 days or per State approved correction plan,

Corrective Actions = CA

Sanitary defects identified by L1 and L2 assessments => CA

Corrective action of Sanitary Defect - should prevent future incidences of contamination and exposure to fecal contamination and/or waterborne pathogens.

- A timetable for any corrective actions not already completed must also be specified in the form; the State will determine a schedule for implementing the corrective actions after consulting with the PWS
- The L1 or L2 form may also indicate that no sanitary defects were found
- The State determines if the assessment is sufficient

EPA developed a RTCR Assessments and Corrective Actions Guidance Manual – available on EPA and DWS website

D. RTCR - Seasonal Systems

Seasonal PWS, such as campgrounds, youth camps, some state parks, etc. are required to comply with new requirements to minimize the inherent risk in these systems:

- **Definition** – Seasonal PWS is a non-community water system that is not operated as a public water system on a year-round basis and starts up at the beginning and shuts down by depressurizing and dewatering the distribution system at the end of each operating season
- **Site Plan -** must designate the time period for monitoring based on high demand or vulnerability (if the PWS is monitoring less than monthly)
- Seasonal PWS must demonstrate completion of a State-approved start up procedure before the water is made available to the public

E. RTCR - Violations

Four different types of violations:

1. **E.Coli MCL Violation**
2. **Treatment Technique Violation**
3. **Monitoring Violation**
4. **Reporting Violation**

E. Violations (continued)

Four different types of violations:

1. **<u>E.Coli MCL violation</u> – TIER 1 VIOLAITON**

   Occur when:

   - Routine EC+ & Repeat TC+
   - Routine EC+ & any missing repeat
   - Routine EC+ & Repeat EC+
   - Routine TC+ & Repeat EC+
   - Routine TC+ & Repeat TC+ (but no E.coli analysis)

E. Violations (continued)

2. **<u>Treatment technique violation</u> – TIER 2 VIOLATION**

- A system fails to conduct a required Level 1 or Level 2 assessment within 30 days of learning of the trigger.
- A system fails to correct any sanitary defect found through either a Level 1 or 2 assessment within 30 days of learning of the trigger or in accordance with a schedule approved by the state.
- A seasonal system fails to complete state-approved start-up procedures prior to serving water to the public.

E. Violations (continued)

3. <u>Monitoring violation</u> – TIER 3 VIOALTION

PWS has failed to comply with a coliform monitoring requirement

- failure to take all required routine or additional routine samples
- failure to analyze for E. coli following a TC+ routine sample

4. <u>Reporting violation</u> – TIER 3 VIOALTION

PWS's failure to submit a monitoring results or completed assessment form after a system properly conducts monitoring or an assessment in a timely manner.

- failure to notify the state, in a timely manner, following an EC+ sample
- failure to submit certification of completion of state-approved start-up procedures by a seasonal system.

E. Violation - Public Notification

Each violation requires a different level of response and public notification.

Public Notification is no longer required for total coliform (TC) positive results - many of the organisms detected by the total coliform methods are not of fecal origin and do not have any direct public health implication.

PN required

Violation Type	PN Tier
E. Coli MCL Violation	Tier 1 (24 Hours)
TT Violation	Tier 2 (30 Days)
Monitoring Violation	Tier 3 (365 Days)
Reporting Violation	Tier 3 (365 Days)

Summary:

- A. RTCR – Revision Summary
- B. Total Coliform Bacteriological Monitoring
- C. Sample Site Plans
- D. Level Assessments
- E. Seasonal Start ups
- F. Violations

Questions:

Questions /Comments:

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