

Subject: Preparation for May TCRDSAC meeting -- proposed agenda and options for discussion and "please hold" dates for September  
Date: Fri, 9 May 2008 18:27:58 -0400  
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To: "Gail Bingham" <gbingham@resolv.org>  
Cc: "Kathy Grant" <kgrant@resolv.org>

Greetings at the end of a busy week.

As previously announced, the next meeting of the TCRDSAC will be May 21-22, 2008. Attached is a proposed agenda for your review. Also attached are five option packages proposed by various members. (Option A is the current Total Coliform Rule. See Option D from EPA for reference to the provisions of the current rule.) If others of you have specific ideas or concerns but have not prepared full options packages, the agenda should allow the flexibility for you to share them at the meeting.

Please note that everyone who has been working on these packages has put serious thought into what they've included but also asked me to convey that they continue to be open to what will emerge from further discussion of the issues. Also, please note that there are two versions of the degree of detail for a level one assessment, which are reflected in attachments not included here. I will be sending those out separately next week, after further consultation with the assessment and corrective action subgroup.

Updates: The technical work group's options analysis task group has been working very hard, with weekly conference calls and a face to face meeting last week. They will be presenting data to help you compare the implications of various options. They will be trying to provide the detail you requested with respect to break downs of the data. However, we know that you also recognize that there are limits to what data can be produced, not only with respect to workload but also with respect to what can be modeled meaningfully. Also, three Advisory Committee subgroups have been working hard on two topics associated with the research and information collection recommendations (a research partnership mechanism and priorities) and a third group has been clarifying issues and developing ideas for reconciling some of the differences in approach concerning assessments and corrective action. All three have made significant progress and will have reports, and in some cases proposed language, for you at the meeting.

Proposed Agenda: This agenda has been designed with the goal of leaving the meeting with a draft, \_single-text\_ option for the major elements of the rule that have been addressed in the options attached. This is ambitious, and we may end up with some variations for some of the elements. However, we believe it is possible and it certainly will help us complete our work by the July meeting. We propose to start the meeting with an overview of what's common in the proposals and what's different, along with time for each of the authors to articulate the key points and rationale. We won't debate the proposals at that point, but rather learn what the authors are seeking to accomplish with the proposal. In the morning, you also will get a presentation on the data analysis and have an opportunity to share perspectives on how the data can be interpreted to understand the relative value of different choices. We have divided the specific presentations of the options analyses in the afternoon by different system sizes and types for several reasons \_ the provisions of the options differ by system types and we think it will make it easier to talk about specific provisions in the context of the entire rule as a package. We hope that you will be able to resolve as many differences as possible as we work through the afternoon, noting where the packages differ most for a specific type of system (e.g. monitoring provisions for the smaller systems). Before we break for dinner, we will shift back to the list of what the options have in common and ask whether you can agree to include these as the starting point to fill in the elements of a draft, \_single text\_ option. This will not be meant as a final agreement, but just that these are \_likely to be included in the draft agreement

in principle\_ you will recommend to your organizations for ratification. You will notice that we propose an evening meeting. Looking at the list of TCR issues that may still need to be discussed on Thursday, we didn\_t see any way around it.\* There has been a great deal of progress by the subgroups on recommendations for the research and information collection portion of the charge, so we think this will be a satisfying conversation to have. That will allow us to focus Thursday on resolving the remaining variations among the proposed TCR options.

\* Please let Kathy and me know if you can adjust your plans and stay through 5:00 on Thursday and would prefer that to the evening session.

September dates to hold: We are still attempting to complete our work by the July meeting. However, please also \_pencil in\_ September 18-19 on your calendar just in case. As we understand it, all members currently have those dates available.

Please call or email either of us if you have any questions, and have a great weekend. Gail and Kathy

From: Gail Bingham  
Sent: **Friday, April 18, 2008 7:13 AM**  
To: **Gail Bingham**  
Cc: **Kathy Grant**  
Subject: **Important follow up from April meeting for options analyses**  
Importance: **High**

Greetings!

This email is an invitation to interested committee members to draft a TCR revision package that you would like to see considered at the May meeting. Please do not feel you have to make a proposal \_ we have at least two that were volunteered at last week\_s meeting plus the current TCR as a baseline for comparison. However, we want to give anyone who would like their ideas in the mix for the analyses for May discussion to have a chance to get them on the table. Also, it isn\_t a problem if you want to submit a proposal that duplicates parts of another proposal (that will show where points of consensus may be emerging), but highlights a couple elements of the rule where there is a variation of importance to you that you would like to see given more attention. Please let us know by COB Wednesday, April 23, if you intent to propose a package. Packages would be most useful if received by Wednesday, but if that isn\_t possible, please let me know if you can do it by the end of the week.

Attached also is a suggested template for the \_packages.\_ If you want to organize the package in a different way or if you want to include more elements, that is fine. Please just be sure to address at least these elements, since these are what are needed right now for the options analysis work.

The logic behind this request comes from our discussion at last week\_s meeting of the May agenda and what to try to accomplish at that meeting. Two messages we took away were first that it is helpful to see proposed revisions to the rule in the context of other changes and second that you would like to make as much progress as possible in May toward a draft that you can circulate within your organizations or memberships for comment. Although you clearly can and will evaluate the options using a variety of factors, including but not limited to the cost analyses and frequency of systems triggered data that will come from the TWG, the latter data still is important \_ and you have requested some additional breakdowns of that data. So, the bottom line is that, for you to have this data in the context of larger packages, the TWG needs to have these larger packages from you to work into the analyses.

The timing requested above obviously is short, but it is very important. When the options analysis task group of the technical work group met last Friday, following the Committee meeting, we discussed the value of trying to get at least some information to you a week or so in advance of the May meeting so that you can think about the pros and cons of different options in advance, talk with others, and come prepared to come to conclusions during the meeting. This may not be possible, but to try to accomplish that, the options analysis task group has scheduled a meeting for May 2, which means they really have to have an idea before their call on Thursday, April 24 about what options they will be working with \_ and to have those options at the same time or almost immediately after that call because that still leaves them only a week to generate data before their meeting.

Thank you in advance for everyone\_s joint efforts to move this forward! Last week\_s meeting really set the stage. Gail and Kathy

Gail Bingham

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*U.S. Environmental Protection Agency*  
**Total Coliform Rule / Distribution System Advisory Committee**

The Churchill Hotel  
Washington DC

**May 21-22, 2008**

**DRAFT AGENDA**

**Meeting Objectives/Desired Outcomes:**

- **Discuss options for revising the Total Coliform Rule, including rule construct, monitoring provisions, system categories, action levels, investigation and follow-up, and public notification, etc;**
- **Integrate proposed elements into a single draft package (possibly with variations on some elements);**
- **Discuss and reach preliminary agreement on priorities and coordination mechanisms for research and information collection concerning distribution systems; and**
- **Discuss next steps in the context of the Committee's overall time table.**

**Wednesday, May 21, 2008**

8:30-9:00 Arrival

9:00-9:15 Welcome, Introductions, Meeting Objectives and Agenda

*Objective: Review desired outcomes, agenda and materials for this meeting.*

9:15-10:30 Presentation: Overview of Current Option Packages

*Objective: Review the proposed options developed so far and give an overview of the key changes from the current TCR, what would remain unchanged, commonalities and variations among these initial options and what has not yet been addressed. Understand the intended objectives or anticipated effects for each for each option package. [Discussion will follow the presentation from the technical work group.]*

*Overview:*

Doug Owen, Malcolm Pirnie [15 min]

*Options highlights and rationale:*

Presenters TBD [15 min each]

10:30-10:45 Break

10:45-12:00 Presentation I and Discussion: Summary Results of Comparative Analysis for Proposed Options with Background Information Related to Options Review

*Objective: Provide overview of technical presentations for this meeting, what information was available, how the analysis was constructed and why, implications for what comparison data will*

and will not be available, and summary comparisons of the relative implications of the proposed options.

Doug Owen and Vanessa Speight, Malcolm Pirnie [15 min]

Discussion [60 min]

- Clarification questions
- How can we interpret the data to compare the consequences and benefits of the different options? How does or doesn't the data capture the preventative consequences or benefits of the new rule construct?

12:00-1:15 Lunch (on your own, time for caucuses)

1:15-2:30 Presentation II and Discussion: Specific Comparative Analysis for Community Water Systems Serving Fewer than 1,000

*Objective: Present results of options analysis for small systems making distinctions by system size and disinfection status, including systems serving less than 100, from 101-500, and from 501-1,000. Discuss and seek resolution of differences in the options that are specifically applicable to systems of this size. [Commonalities among the options will be discussed at the end of the day. Cross-cutting differences, such as sample siting plans, assessment levels or transition to the new rule, could be discussed here or tomorrow, depending on linkages with other provisions and time.]*

Doug Owen and Vanessa Speight, Malcolm Pirnie [15 min]

Discussion [60 min]

- Clarification questions about the analytical data presented
- What are the pros and cons of the different proposals for baseline, repeat, additional routine and reduced monitoring provisions for CWS serving fewer than 1,000 customers? What are the important linkages to other provisions of the rule for these systems?
- What are the appropriate criteria for reduced monitoring for these systems?
- What combination of monitoring and other provisions for small CWS do members feel achieves their objectives for improving the rule?
- Discuss any other specific policy questions in addition to monitoring that apply principally to small CWS.

2:30-3:30

Presentation III and Discussion: Specific Comparative Analysis for Non-Community Water Systems Serving Less than 1,000

*Objective: Present results of options analysis for both NTNCWS and TNCWS. Discuss and seek resolution of differences in the options that are specifically applicable to these types of systems. [Commonalities among the options will be discussed at the end of the day. Cross-cutting differences, such as sample siting plans, assessment levels or transition to the new rule, could be discussed here or tomorrow, depending on linkages with other provisions and time.]*

Doug Owen and Vanessa Speight, Malcolm Pirnie [15 min]

Discussion [45 min]

- Clarification questions about the analytical data presented
- What are the unique characteristics of non-community water systems that need to be taken into account in make decisions about rule options?
- What are the pros and cons of the different proposals for baseline, repeat, additional routine and reduced monitoring provisions for small NTNCWS and TNCWS? What are the important linkages to other provisions of the rule for these systems?
- What are the appropriate criteria for reduced monitoring for these systems?
- What should be the provisions for seasonal systems?
- What combination of monitoring and other provisions for small NCWS do members feel achieves their objectives for improving the rule?
- Discuss other policy questions that apply principally to small NTNCWS and TNCWS.

3:30-3:45 Break

3:45-4:45

Presentation IV and Discussion: Specific Comparative Analysis for Community Water Systems Serving More than 1,000

*Objective: Present results of options analysis for larger systems, making distinctions between systems of different sizes. Discuss and seek resolution of differences in the options that are specifically applicable to systems of this size. [Commonalities among the options will be discussed at the end of the day. Generally applicable issues such as sample siting plans, assessment levels or transition to the new rule, could be discussed here or tomorrow, depending on linkages with other provisions and time.]*

Doug Owen and Vanessa Speight, Malcolm Pirnie [15 min]

Discussion [45 min]

- Clarification questions
- Where do the proposed option packages vary with respect to larger community water systems, and how can these differences best be resolved?

4:45-5:15 Public Comment

5:15-6:00 General Discussion: Starting a “Single-Text” Option Package

*Objectives: Identify what is common in the proposed options and any preliminary agreements reached during the day (e.g. routine, repeat, additional routine and reduced monitoring). Confirm those that can be included in a draft, integrated option package for further discussion. [Members may take a short caucus before deciding, if requested.]*

Discussion:

- General observations about the current option packages
- Confirm commonalities and any agreements reached earlier in the day (e.g. monitoring, other?)

6:00-7:00 Working Dinner (*depending on logistics*)

*[NOTE: Discussion of commonalities in TCR options will continue until a decision is made as whether these can be included in a draft “single text” option or remaining issues are clarified and a plan for resolving them is developed.]*

7:00-8:00 Discussion: Implementation Mechanism for Research and Information Collection

*Objective: Discuss possible approaches for implementing the information collection and research needs recommendations, including time table, roles, approaches, etc.*

8:00-9:00 Discussion: Information Collection and Research Priorities

*Objectives: Decide some or all knowledge gaps to include in the draft agreement in principle and/or identify next steps to complete recommendations.*

**Thursday, May 22, 2008**

8:00-8:30 Arrival

8:30-8:45 Review Today’s Agenda

*Objective: Reflections on Day One discussions and review desired outcomes, agenda and materials for this meeting. Review and approve February meeting summary.*

8:45-10:15 General Discussion: Creating a “Single-Text” TCR Option Package [continued]

*Objectives: Identify remaining differences, discuss pros and cons of the proposals, and seek agreement. Includes report from FAC subgroup on assessments and corrective action, what constitutes a violation, public notification, transition provisions from current rule, etc.*

Suggested Discussion Questions

*[unless agreements were reached on day one]*

- What are the appropriate levels for assessment? How many levels and with what degree of detail?
- Who should do the assessments at each level?
- What should the trigger(s) be for a level two assessment?
- What should be the policy with respect to corrective actions? Who has the authority to make determinations at different levels? What appeal provisions are appropriate?
- What should be the timing for assessments and corrective action?

- What should be defined as a violation under the new TCR?
- What should the public notification requirements be?
- What should be the provisions for transition from the current TCR to a new rule?
- What should be the criteria and elements for sample siting plans?
- Other (operator training, etc)

10:15-10:30 Break

11:00-12:15 General Discussion: Creating a “Single-Text” TCR Option Package *[continued]*  
*Objectives: Continue discussion of remaining differences, discuss pros and cons of the proposals, and seek agreement.*

12:15-1:15 Working Lunch *(check what’s possible with hotel)*

1:15-2:30 General Discussion: Creating a “Single-Text” TCR Option Package *[continued]*

2:30-3:00 Recap and Discuss Next Steps  
*Objective: Summarize decisions made and issues remaining. Discuss the structure of and approach/timing for drafting the agreement in principle document, and implications for remaining meetings.*

3:00 Adjourn

*NOTE: This draft agenda was prepared by the facilitators for review by the Total Coliform Rule Distribution System Advisory Committee. The Total Coliform Rule Distribution System Advisory Committee is a federal advisory committee chartered by Congress, operating under the Federal Advisory Committee Act (FACA; 5 U.S.C., App.2). The committee provides advice to the Administrator of the U.S. Environmental Protection Agency on revisions to the Total Coliform Rule (TCR), and on what information about distribution systems is needed to better understand the public health impact from the degradation of drinking water quality in distribution systems. The findings and recommendations of the Committee do not represent the views of the Agency, and this document does not represent information approved or disseminated by EPA.*

# **TCR Option B AMWA/AWWA**

*[Note: All option packages were drafted for purposes of evaluation and discussion and do not reflect final positions of any participants.]*

## **Rule Construct:**

MCLG for *E Coli*

- No MCLG for fecal coliform or total coliform.
- MCL for E Coli
- No MCL for fecal coliform or total coliform.
- Current acute trigger – routine and associated repeat samples

Treatment Technique for TC

- Where a trigger (threshold is the current TCR non-acute MCL violation) would require systems triggered to investigate, assess and correct as appropriate, any deficiencies related to the TC positive samples that caused the trigger

## **System sizes:**

Same as current rule

## **Routine Monitoring (number of samples):**

Same as current rule

## **Reduced Monitoring Criteria (conditions and minimum sample frequency threshold):**

Basis (Eligibility)

- Opportunity to reduce monitoring at CWSs based on:
  - Current rule plus additional stand alone criteria such as:
    - o CWS < 1000 persons served with no M&R violations, no positive TC samples, clean sanitary survey
    - o Small ground water CWSs that disinfect
    - o Small ground water CWSs with history of monitoring demonstrates negligible TC occurrence
  - Opportunity to reduce monitoring at NCWSs based on:
    - o Same as CWS (as above), or
      - o System is supplied solely by a protected groundwater source and is free of sanitary defects
      - o *\*\* New idea \*\**if state licensure of NCWS business includes a minimum level of training and testing.
- Level of reduced monitoring at state discretion. – i.e., Similar to current rule given eligibility requirements met:
  - o CWS – Quarterly;
  - o NCWS – Quarterly or annually if approved/allowed by State

Threshold to return to baseline monitoring-

- MCL – Exceeding MCL trigger
- Treatment Technique – having a Level 2 or 3 assessment triggered (Level 1 assessment, If on reduced monitoring, remain on reduced monitoring)

**Repeat samples:**

Eliminate 5-up and 5-down requirement, all systems take 3 repeats at most

- Resample original site and 2 additional samples to help verify and determine the extent of potential contamination.

Eliminate small system requirement for a 4th repeat sample

Allow repeat sample site selection to be structured to understand a specific event (all system sizes and types)

**Next Month Samples (“additional routine”):**

Not applicable (Rationale is that additional samples could be taken as a part of investigation/corrective action component under primacy agency authority.)

**Criteria for returning to routine monitoring (and timing/criteria for being eligible to go back to reduced):**

Threshold for returning to reduced monitoring

- Level 1 Assessment - N/A - i.e., remain on reduced monitoring
- Level 2 Assessment - After returning to routine monitoring the system will remain on routine monitoring for 6 months or a shorter period if approved by the state
- Level 3 Assessment - After returning to routine monitoring the system will remain on routine monitoring for a year or a shorter period if approved by the state

**Provisions for transition to new rule:**

Current systems on reduced monitoring stay on reduced monitoring until:

- MCL - Exceeding MCL trigger, or
- Treatment Technique - Investigation at Level 2 / 3 is triggered.
- Sanitary Survey identifies a reason for a revised monitoring level (e.g., GWR, IESWTR, LT1ESWTR)

**Action Trigger:**

MCL - Same as current rule

Treatment Technique - Three different trigger levels

- Level 1 - (same as current non-acute TCR standard)
  - Systems >33,000 population served - Any individual month where routine 5% or more of routine and repeat monitoring samples are TC+
  - Systems <33,000 population served - Any individual month where routine 2 or more routine and repeat monitoring samples are TC+
- Level 2 - (new trigger)
  - Exceeding the applicable Level 1 trigger in 2 consecutive months, **2 out of 12 months, 2 out of 24 months, or 3 out of 24 months (TWG needs to conduct the appropriate analyses)**
- 
- Level 3 - (new trigger)

- Exceeding the applicable Level 1 trigger in 3 out of 12 months, **4 out of 12 months, 3 consecutive months, 3 out of 24 months, 4 out of 24 months, or 5 out of 24 months (TWG needs to conduct analyses).**

**Assessment (level(s) of effort, who conducts, circumstances that determine level):**

**See action Trigger for circumstances that determine level**

Level 1 - Initial System Self-assessment based on a simple checklist (see attached) self-assessment within 30 days of the end of the monitoring period for which samples are compiled

Level 2 - Detailed System Self-assessment based on detailed guidance by PWS but States already have authority to step in where necessary based on specific system situation. Assessment within 30 days of the end of the monitoring period for which samples are compiled

Level 3 - Directed Assessment

– Characteristics

- Assessment based on detailed guidance
  - Assessment undertaken by party approved by State, such as: PWS , State or PWS with assistance of consultant selected and procured by the PWS
- Responsibility for report rests with the PWS
- Directed Assessment leads to development of an Action Plan by the PWS
  - Action Plan is agreed upon with the state
  - Time frame for response will be as rapid as feasible within fiscal and operational constraints.

Three (3) levels that escalate in level of magnitude based on number of trigger exceedances in a 12-month period. Level 1 is a self-assessment. Level 2 is more detailed but could still be done by large systems and perhaps other systems as well Level 3 would require the PWS to procure assistance from another party approved by the primacy agency.

**Corrective Action:**

Following identification of an underlying cause of exceeding trigger conditions following Assessment Level 1, 2, and 3 : PWS will take steps required to address or fix if feasible, the cause identified. PWS will prepare an after-action report and maintained on file.

- Level 1 Follow-up - Routine Monitoring Compliance Report includes a check-off that after-action report was prepared and filed
- Level 2 Follow-up - After-action report is submitted to the state
  - Documentation is a simple checklist / letter submittal
- Level 3 Follow-up – After-action report is submitted to the state based on the Action Plan
  - Documentation is a detailed report to the state

# **DRAFT OPTION**

(Lynn Thorp and Mae Wu)

April 2008

## **Rule Construct:**

MCLG for EC

MCL for EC

TT for TC

No MCLG for FC

\*\*\* disclaimer \*\*\*

*This option presumes considering elimination of the non-acute MCL for TC+ hits; we remain concerned that the follow up action must be strong and enforceable to warrant losing the MCL.*

## **System sizes:**

Same as current

## **Routine Monitoring (number of samples):**

CWS, NCWS – same as current rule except all NCWS < 1000 with GW are now at monthly. (In other words, all CWS and NCWS < 1000 monitor once a month.)

Simultaneous analysis of TC and EC

Default sampling plan that includes critical points (including, but not limited to, point of entry to DS and areas influenced by storage tanks and other storage facilities, etc.) for medium to large systems. States can over ride plan as they deem fit.

## **Reduced Monitoring Criteria (conditions and minimum sample frequency threshold):**

*For systems < 1000 to get reduced monitoring, we think there are five important factors.*

*Two of them, clean sanitary surveys and regular site visits (most likely, semi-annual), must be required to be eligible for reduced monitoring.*

*The three other factors - TC+ trigger hits, EC+, and monitoring and reporting violations – must play a role in determining eligibility for reduced monitoring, we are just not sure of the specific parameters.*

## **Repeat samples:**

Within 24 hours, take 3 repeat samples (sampling location based on sampling site plan)

## **Next Month Samples (“additional routine”):**

CWS, NCWS doing 1 per month, have to take 2 samples the following month

## **Criteria for returning to routine monitoring (and timing/criteria for being eligible to go back to reduced):**

Monitoring or reporting violation of any kind, any EC+, two TC+ in a month (i.e. 1 routine + 1 repeat) or two TC+ in consecutive months. (*This only applies to CWS and NCWS that qualify for reduced monitoring as identified above.*)

Options to return to reduced monitoring:

- a) Stay on routine monitoring for one year,
- b) satisfy original criteria for getting reduced monitoring, or
- c) satisfy the original criteria or state discretion to make it one year

*\*Note: we have listed here possibilities that we are considering. We did not decide which option was preferred.*

### **Provisions for transition to new rule:**

Everyone who is on current routine monitoring, stays.

Systems < 1000, who are currently on reduced monitoring – go to one sample/month.  
In one year, state must review criteria to see if they can STAY on monthly monitoring.

### **Action Trigger:**

A = current TC+ trigger

B = TC+ in two consecutive months, or three in 12 months or an MCL violation for EC

C = monitoring & reporting violation...

*We believe that monitoring and reporting violations need to be taken seriously and have consequences. We are concerned with one-time violations, chronic violators, and medium to large system violations. (Note, we have addressed one-time, small system violators who are on reduced monitoring above.)*

*We would appreciate more information in this area about the number and types of monitoring and reporting violations that occur – both for various systems types and system sizes. We would also appreciate assistance from the FACA members to consider appropriate responses to different types of M & R violations. Again, to include repeated over time, missed some samples, intermittent, etc.*

### **Assessment (level(s) of effort, who conducts, circumstances that determine level):**

A = Basic system self-assessment and fix

- Main principle: TC+ leads to an assessment and to fixing all problems found in that assessment.
- Assessment to be conducted by system staff to find and correct possible cause of the TC+ and any problems found
- Assessment should include things like:
  - Evaluate cross connections, main breaks, storage tanks etc.
  - Review source quality, treatment and other parameters like loss of residual disinfectant
  - See Group 2's list of investigative/evaluation tools and corrective actions; we are also looking to the options small group to identify these more specifically

B = Full/Assisted system assessment

- Main principle: this situation merits more urgency, more detailed assessment, more oversight, reporting to state more quickly and more follow-up from the state to ensure that the fixes were done
- Because this is triggered by repeated TC+ or EC+, the assessment should be a more rigorous evaluation of the system than the Basic, and it must be conducted by a third party (approved by the state?).

In terms of what constitutes a more detailed assessment, we think a full or targeted sanitary survey might be warranted and look to the options subgroup to provide guidance on which investigative/evaluation activities belong in our “A” or “B” assessments.

C = Response to Monitoring and Reporting Violation

- *As noted above, we need more information on type and frequency of these violations but think they warrant attention and consequences. We know there are a lot of different types of violations – and we want some help thinking about to deal with it.*

**Corrective Action:**

All deficiencies regardless of whether they were the source of the TC hit need to be fixed within \_\_\_\_.

*We are open to suggestions or advice about what is an appropriate time limit. We recognize that there are different time constraints with different fixes. We are open to technical advice on how to address that issue.*

Failure to assess or failure to fix = TT violation

Tier 2 public notification?

What happens with repeated TT violations?

*We have not determined what the specific ramifications of a TT violation will be, but we recognize that this is an issue that must be addressed in the rule.*

*Everything tells us that cross connection control and back flow prevention programs are important and worthwhile, that they head off real public health threats, and that state and systems have recognized this importance. To incorporate these programs explicitly into the rule would garner improvements to the public health in accordance with the requirements under SDWA. We believe the premise plumbing complications of this can be worked into such a provision.*

The Total Coliform Rule should either:

- a) Require a system to have a cross connection control and backflow prevention program in place by some date in the future for the system to be considered in compliance with the TCR, or
- b) require states to have cross connection control and backflow prevention programs in place as part of TCR primacy determination, or
- c) some other as-yet-undefined option requiring a cross connection control and backflow prevention program be put in place (*open to suggestions*).

# **TCR Option E - State Proposal for Community Water Systems**

*[Note: All option packages were drafted for purposes of evaluation and discussion and do not reflect final positions of any participants.]*

## **Rule Construct:**

MCL and MCLG for E. coli (EC) only  
Treatment Technique for Total Coliform (TC)  
(TT = triggered assessment and corrective action as appropriate)  
Fecal Coliform is dropped from the rule

## **System sizes:**

No change in system size categories from the current TCR

## **Routine Monitoring (number of samples):**

As per current TCR  
Base: Monthly samples based on population (sample #s as in current TCR)

## **Reduced Monitoring Criteria (conditions and minimum sample frequency threshold):**

Reduced: GW systems with population <1000 may reduce to quarterly at State discretion

Criteria:

- 1) Sanitary Survey free of significant deficiencies or with documentation of correction of all significant deficiencies
- 2) Compliance History: no monitoring or quality violation for the last 1 or 2 years. (Note - we would like to evaluate both of these options)
- 3) Site Visit every 18 months

## **Repeat samples:**

3 repeats required for each TC+ sample (excludes GWR sample)

## **Next Month Samples (“additional routine”):**

1 sample the following month if PWS is sampling quarterly.

## **Criteria for returning to routine monitoring (and timing/criteria for being eligible to go back to reduced):**

Return to Routine: The system has a trigger action event more than 1 time in a rolling 12 month period.

Return to Reduced: A period of 6 months with no monitoring violations or trigger action events.

## **Provisions for transition to new rule:**

All PWS maintain current monitoring schedule for a period of 5 years, unless increased monitoring criteria is activated sooner, at the end of 5 years the system will be evaluated and assigned to the frequency supported by their compliance history and sanitary survey results.

**Action Trigger:**

Existing Non-Acute MCL definition

**Assessment (level(s) of effort, who conducts, circumstances that determine level):**

2 levels of assessment defined in the rule, corrective action where appropriate.

Level 1: 1<sup>st</sup> trigger event

Level 2: 2<sup>nd</sup> trigger event in a rolling 12 months

Assessment detail:

- 1) Assessors look at **ALL** things each time and reports back.
- 2) Not finding anything is an acceptable report.
- 3) For a “Level 2” assessment the items reviewed remain the same, the depth of the review increases and the assessor must be approved by the primacy agency.
- 4) Any further “Levels” are left to the primacy agency to prioritize and respond to appropriately.
- 5) Any rule language should be general in nature to capture the level of effort and the broad areas that may be looked at.
- 6) Sample forms should be put in guidance so that the primacy agency may use them or have the flexibility to create their own.
- 7) Most primacy agencies will likely create multiple forms tailored to community and non-community systems.

**Corrective Action:**

- 1) Any significant deficiencies found will be required to be corrected or have a correction schedule submitted as soon as practical but within not more than 120 days.
- 2) Other deficiencies will be addressed on a schedule acceptable to the primacy agency.

# **State Proposal for Non-Community Water Systems**

## **Rule Construct:**

MCL and MCLG for E. coli (EC) only  
Treatment Technique for Total Coliform (TC)  
(TT = triggered assessment and corrective action as appropriate)  
Fecal Coliform is dropped from the rule

## **System sizes:**

No change in system size categories from the current TCR

## **Routine Monitoring (number of samples):**

As per current TCR  
Base: Quarterly samples based on population (sample #s as in current TCR)

## **Reduced Monitoring Criteria (conditions and minimum sample frequency threshold):**

Reduced: GW systems with population <1000 may reduce to annual at State discretion

Criteria:

- 1) Sanitary Survey free of significant deficiencies or with documentation of correction of all significant deficiencies
- 2) Compliance History: no monitoring or quality violation for the last 1 or 2 years. (Note - we would like to evaluate both of these options)
- 3) Site Visit every 18 months

## **Repeat samples:**

3 repeats required for each TC+ sample

## **Next Month Samples (“additional routine”):**

1 sample the following month or after corrective action if PWS is sampling less than quarterly.

## **Criteria for returning to routine monitoring (and timing/criteria for being eligible to go back to reduced):**

Return to Routine: The system has a trigger action event and the “next month” follow-up sample is positive.

Return to Reduced: A period of 6 months with no monitoring violations or trigger action events.

## **Provisions for transition to new rule:**

All PWS maintain current monitoring schedule for a period of 5 years, unless increased monitoring criteria is activated sooner, at the end of 5 years the system will be evaluated and assigned to the frequency supported by their compliance history and sanitary survey results.

## **Action Trigger:**

Existing Non-Acute MCL definition

## **Assessment (level(s) of effort, who conducts, circumstances that determine level):**

2 levels of assessment defined in the rule, corrective action where appropriate.

Level 1: 1<sup>st</sup> trigger event

Level 2: 2<sup>nd</sup> trigger event in a rolling 12 months

Assessment detail:

- 1) Assessors look at **ALL** things each time and reports back.
- 2) Not finding anything is an acceptable report.
- 3) For a “Level 2” assessment the items reviewed remain the same, the depth of the review increases and the assessor must be approved by the primacy agency.
- 4) Any further “Levels” are left to the primacy agency to prioritize and respond to appropriately.
- 5) Any rule language should be general in nature to capture the level of effort and the broad areas that may be looked at.
- 6) Sample forms should be put in guidance so that the primacy agency may use them or have the flexibility to create their own.
- 7) Most primacy agencies will likely create multiple forms tailored to community and non-community systems.

**Corrective Action:**

- 1) Any significant deficiencies found will be required to be corrected or have a correction schedule submitted as soon as practical but within not more than 120 days.
- 2) Other deficiencies will be addressed on a schedule acceptable to the primacy agency.

**Items not for cost analysis, but need to be kept in mind:**

Need more detail on the sample site plans and what can be done with them in relation to minimum sampling for repeats and follow-up monitoring.

SDWIS needs to track the rule changes.

Seasonal systems are not addressed.

Monitoring and reporting violations are not included and require majority of state resources.

Clarification that these are only Total Coliform responses, not *e. coli*.

Concern was expressed about NCWS lack capability to do a self-assessment and return form.

Coliform analytical methods.

Direct Lab reporting to States.

# TCR Option F NWRA

[Note: All option packages were drafted for purposes of evaluation and discussion and do not reflect final positions of any participants.]

**Note – Following reflects a preferred approach and an alternative approach. The alternative approach is in blue italics when it diverges from the preferred approach.**

## **Rule Construct:**

MCLG for *E Coli*

- No MCLG for fecal coliform or total coliform.
- MCL for E Coli
- No MCL for fecal coliform or total coliform.
- Current acute trigger – routine and associated repeat samples

**Preferred Approach (F(1)) – No Treatment Technique or MCL for total coliform**

*Alternate Approach (F(2))- Treatment Technique for TC Where a trigger (threshold is the current TCR non-acute MCL violation) would require systems triggered to investigate, assess and correct as appropriate, any deficiencies related to the TC positive samples that caused the trigger*

## **System sizes:**

Same as current rule

## **Routine Monitoring (number of samples):**

Same as current rule

## **Reduced Monitoring Criteria (conditions and minimum sample frequency threshold):**

Basis (Eligibility)

- Opportunity to reduce monitoring at CWSs based on:
  - Current rule plus additional stand alone criteria such as:
    - CWS < 1000 persons served with no M&R violations, no positive TC samples, clean sanitary survey
    - Small ground water CWSs that disinfect
    - Small ground water CWSs with history of monitoring demonstrates negligible TC occurrence
  - Opportunity to reduce monitoring at NCWSs based on:
    - Same as CWS (as above), or
      - System is supplied solely by a protected groundwater source and is free of sanitary defects
      - *\*\* New idea \*\**if state licensure of NCWS business includes a minimum level of training and testing.
- Level of reduced monitoring at state discretion. – i.e., Similar to current rule given eligibility requirements met:
  - CWS – Quarterly;
  - NCWS – Quarterly or annually if approved/allowed by State

Threshold to return to baseline monitoring-

- MCL – Exceeding MCL trigger

## **Repeat samples:**

Eliminate 5-up and 5-down requirement, all systems take 3 repeats at most

- Resample original site and 2 additional samples to help verify and determine the extent of potential contamination.

Eliminate small system requirement for a 4th repeat sample

Allow repeat sample site selection to be structured to understand a specific event (all system sizes and types)

**Next Month Samples (“additional routine”):**

Not applicable (Rationale is that additional samples could be taken as a part of investigation/corrective action component under primacy agency authority.)

**Criteria for returning to routine monitoring (and timing/criteria for being eligible to go back to reduced).**

Still Working on this provision

**Provisions for transition to new rule:**

Current systems on reduced monitoring stay on reduced monitoring until:

- MCL – Exceeding MCL trigger, or
- Sanitary Survey identifies a reason for a revised monitoring level (e.g., GWR, IESWTR, LT1ESWTR)

**Action Trigger:**

MCL – Same as current rule

*Treatment Technique - Three different trigger levels*

- *Level 1 – (same as current non-acute TCR standard)*
  - *Systems >33,000 population served - Any individual month where routine 5% or more of routine and repeat monitoring samples are TC+*
  - *Systems <33,000 population served - Any individual month where routine 2 or more routine and repeat monitoring samples are TC+*
- *Level 2 – (new trigger)*
  - *Exceeding the applicable Level 1 trigger in 2 consecutive months,*
  - *If the cause for exceeding trigger in second month is different from that in first, response is limited to Level 1*
  - *If corrective action occurs in response to Level 1 trigger, trigger event count restarts and Level 2 trigger is not exceeded*
- *Level 3 – (new trigger)*
  - *Exceeding the applicable Level 1 trigger in 3 out of 12 months,*
  - *If preceding Level 1 or 2 trigger events have different causes than third trigger exceedance, count restarts and Level 3 trigger is not exceeded*
  - *If corrective action occurs in response to Level 1 or 2 trigger, trigger event count restarts and Level 3 trigger is not exceeded*

***Assessment (level(s) of effort, who conducts, circumstances that determine level):***

***See action Trigger for circumstances that determine level***

*Level 1 - Initial System Self-assessment based on a simple checklist (see attached) self-assessment within 30 days of the end of the monitoring period for which samples are compiled*

*Level 2 - Detailed System Self-assessment based on detailed guidance by PWS but States already have authority to step in where necessary based on specific system situation. Assessment within 30 days of the end of the monitoring period for which samples are compiled*

*Level 3 - Directed Assessment*

- Characteristics*
  - Assessment based on detailed guidance*
    - o Assessment undertaken by party approved by State, such as: PWS, State or PWS with assistance of consultant selected and procured by the PWS*
  - Responsibility for report rests with the PWS*
  - Directed Assessment leads to development of an Action Plan by the PWS*
    - o Action Plan is agreed upon with the state*
    - o Time frame for response will be as rapid as feasible within fiscal and operational constraints.*

*Three (3) levels that escalate in level of magnitude based on number of trigger exceedances in a 12-month period. Level 1 is a self-assessment. Level 2 is more detailed but could still be done by large systems and perhaps other systems as well Level 3 would require the PWS to procure assistance from another party approved by the primacy agency.*

***Corrective Action:***

*Following identification of an underlying cause of exceeding trigger conditions following Assessment Level 1, 2, and 3 : PWS will take steps required to address or fix if feasible, the cause identified. PWS will prepare an after-action report and maintained on file.*

- Level 1 Follow-up - Routine Monitoring Compliance Report includes a check-off that after-action report was prepared and filed*
- Level 2 Follow-up - After-action report is submitted to the state*
  - Documentation is a simple checklist / letter submittal*
- Level 3 Follow-up – After-action report is submitted to the state based on the Action Plan*
  - Documentation is a detailed report to the state*

**Violations**

MCL, same as current rule

*Treatment Technique*

- Federal violations associated with Treatment Technique are limited to monitoring and reporting violations.*

***State Primacy***

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	<p><b>MCLG for TC, EC, FC</b></p> <p><b>Option:</b></p> <ul style="list-style-type: none"> <li>• MCL for EC and TT for TC; eliminate FC (TT Includes investigation and correction)</li> <li>• MCLG for EC only</li> </ul>				
<p><b>Sanitary Survey (SS)</b></p>	<p><b>Current (systems &lt; 4100):</b> State must conduct SS at any system monitoring &lt; 5 samples/month. Repeat every 5 years (10 years for NCWS using protected, disinfected GW). State reviews results to determine adequacy of existing monitoring and whether additional measures are needed to improve DW quality.</p> <p><b>Option:</b> This provision no longer applies because systems comply with IESWTR or GWR</p>		<p><b>Current (systems ≥ 4101):</b> N/A under TCR. SS now required for all systems under IESWTR and GWR.</p>		
<p><b>Indicators</b></p>	<p><b>Current:</b> TC, FC, EC</p> <p><b>Option:</b> TC and EC</p>				
<p><b>Fecal coliform/<i>E. coli</i> determination</b></p>	<p><b>Current:</b> System must analyze all TC+ samples for FC/EC</p> <p>State may allow system to forgo FC/EC analysis if system assumes sample is FC+/EC+</p> <p><b>Option:</b> Same as current rule except use of FC has been eliminated.</p>				
<p><b>Analytical methods</b></p>	<p><b>Current:</b> Multiple approved methods for TC, FC, EC</p> <p><b>Option:</b></p> <ul style="list-style-type: none"> <li>• TC, EC</li> <li>• Agency needs to examine issue related to method timing, efficiencies, etc.</li> </ul>				
<p><b>Provision</b></p>	<p><b>NCWS ≤ 1000</b></p>	<p><b>CWS ≤ 1000</b></p>	<p><b>PWS 1001-4100</b></p>	<p><b>PWS 4101 – 33,000</b></p>	<p><b>PWS &gt; 33,000</b></p>
<p><b>Written sample siting plan</b></p>	<p><b>Current:</b> Collect samples at sites representative of water throughout DS according to written sample siting plan subject to State review and revision.</p> <p>Collect samples at regular time intervals throughout month. Exception: GW systems serving no more than 4900 may collect all samples on one day if samples taken at different sites.</p>				