

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

July 30-31, 2008

*Location:*  
St. Gregory Hotel  
2033 M Street, NW  
Washington, DC 20009

**Draft Meeting Summary**

**Meeting Objectives/Desired Outcomes:**

- *Discuss and reach agreement on revisions to the Total Coliform Rule, including rule construct, monitoring provisions, system categories, trigger levels, investigation and corrective action, violations and public notification, etc;*
- *Discuss and reach agreement on priorities and coordination mechanisms for research and information collection concerning distribution systems; and*
- *Discuss ratification process for final agreement in principle.*

**I. Welcome, Introduction, Meeting Objectives and Agenda**

Crystal Rodgers-Jenkins, the Designated Federal Officer, opened the meeting and welcomed the members and meeting attendees to the eleventh meeting of the Total Coliform Rule / Distribution System Advisory Committee (TCRDSAC).<sup>1</sup>

Gail Bingham, the facilitator from RESOLVE, briefly reviewed the objectives of the meeting, the meeting agenda, and the meeting materials. She referred the Committee to the current version of the Agreement in Principle (AIP) in the meeting folder that reflects the Committee's discussions at the May and June plenary meetings and the July conference call.<sup>2</sup>

**II. May Meeting Summary**

The Advisory Committee reviewed suggested edits to the May meeting summary provided in their binders.<sup>3</sup> They approved the summary of the May meeting of the TCRDSAC.

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<sup>1</sup> Please see Attachment A for the Total Coliform Rule / Distribution System Federal Advisory Committee roster. Please see attachment B for a copy of the meeting agenda. Please see Attachment C for a list of the meeting attendees.

<sup>2</sup> Please see Attachment D for the draft AIP that was included in the Committee's binder.

<sup>3</sup> Please see Attachment E for a copy of the May TCRDSAC meeting summary.

### III. Discussion of the Agreement in Principle

Over the course of the two-day meeting, the Advisory Committee discussed each section of the draft AIP included in the meeting materials and agreed to substantive revisions for inclusion in the next version of the AIP, intended to address questions or concerns raised. The Committee also agreed to accept the existing language and proposed edits in many sections of the draft AIP. All of these agreements are subject to review of the AIP as a whole and are shown in ***bold italics*** throughout the summary. The Committee also made minor edits to the AIP for grammar and consistency. All of the edits, both substantive and editorial, are reflected in the attached new draft of the AIP.<sup>4</sup>

In addition to agreement on language for the new version of the AIP, the Committee also agreed to include in this meeting summary statements elaborating its intent concerning specific components of the AIP. All of these comments are captured in *italics* in the summary.

#### 1.0 Introduction

The Advisory Committee reviewed the language in Section 1 of the draft AIP.

***The Advisory Committee agreed to the existing language with some editorial changes in Section 1.0 of the draft AIP.***

#### 2.0 General Agreements

The Committee discussed Section 2.0 General Agreements. Some members expressed concern that bullet 8, which discusses continued stakeholder involvement during the rulemaking process, could result in re-opening discussions of the provisions in the AIP. They suggested changing item 8 so that it reads as follows:

The TCRDSAC recognizes that federal rulemaking procedures may be lengthy and have broad national impact. It is important to assure that stakeholders, including in particular the TCRDSAC member organizations, understand the underlying analyses and rule framework reflected in the proposed rule and preamble at the time the rule is proposed. The TCRDSAC believes that such understanding will allow them to be better representatives for the proposed rule when it is published, and better able to inform EPA's effort to propose a rule that "has the same substance and effect as the elements of the Agreement in Principle."

A member of the Committee noted that the AIP already includes 15 other references to ongoing meetings between EPA and stakeholders and suggested that EPA provide stakeholders with updates on the rulemaking process by holding a public meeting each year until the rule is published and/or reconvene the Committee before the end of its charter. The Committee agreed to continue the discussion of bullet 8 in Section 2.0.

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<sup>4</sup> Please see Attachment F for a copy of the draft Agreement in Principle reflecting revisions made during the course of the July TCRDSAC meeting.

*The Committee also agreed to delete the following phrase from bullet 5 in Section 2.0: “the best available peer reviewed science and supporting studies”*

### 3.0 Agreement in Principle on Revisions to the Total Coliform Rule

Members of the Committee suggested several edits and additions to the third paragraph of Section 3.0. They agreed to include the following language in the new version of the AIP:

*In concert with other rules promulgated by EPA under SDWA, the revised rule construct will better address the TCR objectives and enhance the multiple barrier approach to protecting public health, especially with respect to smaller groundwater systems. The RTCR [revised Total Coliform Rule] paradigm is designed to trigger systems with positive total coliform (TC)/E. coli (EC) monitoring results to assess the system and identify whether a sanitary defect(s) is (are) present and to correct such problems accordingly. This is an improvement over the current TCR framework in that it takes a more proactive approach to identifying and fixing problems that affect public health.*

*The Advisory Committee agreed to the existing language with some proposed editorial changes in the remainder of Section 3.0 of the draft AIP.*

### 3.1 Rule Construct

The Advisory Committee reviewed and discussed a handout outlining a variety of options for the definition of a sanitary defect.<sup>5</sup> Some members expressed the view that, because of potential liability issues, the definition should not be so broad as to include any vulnerability of any barrier for any type of contaminant. Other members stressed the importance of keeping the definition broad enough to include defects that create a public health concern, whether or not the concern is microbial in nature. The Committee agreed to the following revised definition of a sanitary defect:

*A defect that could provide 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.*

During the Committee’s discussion, there was recognition that the definition of sanitary defects should reflect situations that pose a credible link between the problem and adverse public health consequences. The above definition of a “sanitary defect” was intended to be broad enough to facilitate corrective action without absolute confirmation of cause and effect as such confirmation may be impossible or may significantly delay corrections that would address a sanitary defect that represents a potential threat to public health. Similarly, the language is not intended to be so open to interpretation that corrections are undertaken or required where the linkage between the defect and public health is tenuous.

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<sup>5</sup> A copy of the suggested definitions for sanitary defect is available from the Designated Federal Official.

*The Committee also agreed that it is their intent that nothing in the definition of sanitary defects precludes conducting an assessment of every element on the example checklists for Level 1 and Level 2 assessments.*<sup>6</sup>

***The Advisory Committee agreed to the existing language with some proposed editorial changes in the remainder of Section 3.1 of the draft AIP.***

### 3.2 Analytical Methods

Some members of the Committee raised the concern that in the future new analytical methods (e.g., non-culture based/PCR methods) could become available that might provide faster results but that also could produce positive results from non-viable fragments of organisms. These members provided the following language to elaborate the intent of the AIP. *Changes in analytical method performance that significantly change the specificity/selectivity of method or other performance characteristics, such as responsiveness to inactivated and injured organisms, will warrant re-evaluation of the RTCR regulatory requirements prior to their introduction as approved methods.*

***The Advisory Committee agreed to the existing language with some proposed editorial changes in Section 3.2 of the draft AIP.***

### 3.3 Transition to New Rule

At several times, the Committee discussed whether, on balance, the monitoring provisions in the RTCR were an improvement over the current TCR monitoring provisions. Generally, members characterized both the TCR and RTCR monitoring provisions as complex. Some members noted that transition to the RTCR would be greatly simplified and require significantly less resources if the monitoring provisions remained unchanged and were combined with recommended assessment and corrective action provisions in the RTCR. Other members viewed the RTCR as a whole package, with the monitoring provisions and the assessment and corrective action provisions together providing the incentives that are protective of public health. The Committee will continue this discussion at their next meeting.

### 3.4 Monitoring Frequencies (Baseline, Reduced and Criteria for Reduced Monitoring)

The Committee reviewed the proposed language for each of monitoring provisions for non-community water systems (NCWS) together with the equivalent provisions for community water systems (CWS) in order to keep the language for each as aligned as possible.

#### *3.4.a.2 and 3.4.c.2 Transition to RTCR*

The Advisory Committee reviewed and discussed the new paragraphs suggested for Sections 3.4.a.2 and 3.4.c.2 Transition to RTCR in the draft AIP. A member of the Committee explained that the proposed language ensures that after the compliance effective date of the RTCR, the primacy agencies will evaluate systems currently on reduced monitoring to determine whether or not their monitoring scheme is appropriate. The primacy agency will add this special RTCR monitoring evaluation to each sanitary survey it conducts after the compliance effective date for

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<sup>6</sup> Copies of the Level 1 and Level 2 example checklists are available from the Designated Federal Official.

as long as the systems remain on reduced monitoring. During the discussion, members made the following clarifying points about the proposed transition language:

- The monitoring evaluation by the primacy agency will not be based on or as detailed as the reduced monitoring criteria. Rather, this initial review will look at overall data to see if it is appropriate to “grandfather” the monitoring provisions is appropriate.
- Between the time when the RTCR is published and the compliance effective date (three years later), systems on monthly monitoring could petition the primacy agency to have their monitoring reduced.

***Following the discussion, the Advisory Committee agreed to the existing language with some proposed editorial changes in Sections 3.4.a.2 and 3.4.c.2 of the draft AIP.***

#### *3.4.a.3 and 3.4.c.3 Reduced Monitoring Requirements*

TCRDSAC members discussed the criteria for NCWS on quarterly monitoring to qualify for annual monitoring (Section 3.4.a.3) and CWS on monthly monitoring to qualify for quarterly monitoring (Section 3.4.c.3).

Clean Compliance History. Members of the Committee discussed whether the definition of a clean compliance history should include “no Level 1 triggers.” Some members expressed the view that including a Level 1 trigger in the definition would exclude too many systems from qualifying for reduced monitoring. They also commented that a Level 1 trigger would not be a violation. Other members, noting that only five percent of systems hit a Level 1 trigger in a given 12-month period, felt it was important to retain stricter criteria for qualifying for reduced monitoring. These members also noted that once a system had qualified for reduced monitoring, then it would take two Level 1 triggers in a rolling 12 months to lose reduced monitoring privileges.

***The Committee agreed to include Level 1 triggers in the definition of a clean compliance history.***

Cross Connection Control Program. The Committee discussed the two proposed options in the draft AIP for the cross connection control program requirement under the fourth bullet (“Meet one of the following requirements”) of the reduced monitoring requirements.

***The Committee agreed to include the language in the first option, “A cross connection control program, as approved by the primacy agency,” in the new version of the AIP.***

Disinfection Residual. The Committee discussed the two proposed options in the draft AIP for the disinfection residual requirement under the fourth bullet of the reduced monitoring requirements. The Committee expressed a preference for the more general language in option two, and agreed to clarify in the meeting summary that *this option includes maintaining disinfection residual throughout the distribution system.* The Committee agreed to the following language in the new draft of the AIP:

***The system must maintain continuous disinfection entering the distribution system and a residual in the distribution system in accordance with the criteria specified by the primacy agency.***

The Committee also agreed to include the following language from option one in the new version of the AIP:

***The system must maintain at least a 4-log inactivation of viruses each day of the month based on daily monitoring as specified in the GWR (with allowance for a 4-hour exception)***

During the discussion, a member of the Committee clarified that it is acceptable to use ultraviolet technology to reach 4-log inactivation of viruses only if a system has no distribution system.

***The Advisory Committee agreed to the existing language with some proposed editorial changes in the remainder of Sections 3.4.a.3 and 3.4.c.3 of the draft AIP.***

#### *3.4.a.4 Increased Monitoring Requirements and 3.4.c.4 Return to Baseline Monitoring Requirements*

The Committee discussed the increased monitoring requirements for NCWS (Section 3.4.a.4) and the return to baseline monitoring requirements for CWS (Section 3.4.c.4) that result from any of the events listed in these sections. In order to ensure more serious consequences than a monitoring violation for systems that consistently fail to take routine samples, the Committee agreed to the following language for the fourth bullet in each of these sections:

***System has two routine monitoring violations in a rolling 12-month period for systems on quarterly monitoring and one routine monitoring violation for systems on annual monitoring***

***The Advisory Committee also agreed to the existing language with some proposed editorial changes in the remainder of Sections 3.4.a.4 and 3.4.c.4 of the draft AIP.***

#### *3.4.a.5 Requirements for Returning to Baseline Quarterly or Reduced Annual Monitoring and 3.4.c.5 Requirements for Returning to Quarterly Monitoring*

A Committee member proposed that the requirements for returning to baseline or reduced monitoring following a period of time on increased monitoring be the same as the requirements for qualifying for reduced monitoring for NCWS and CWS (Sections 3.4.a.3 and 3.4.c.3 respectively) for simplicity of implementation. Based on discussion, the Committee agreed to:

- ***Match criteria language from 3.4.a.3 to that for 3.4.a.5***
- ***Delete Section 3.4.c.5.***

***The Advisory Committee also agreed to the existing language with some proposed editorial changes in the remainder of Section 3.4.a.5 of the draft AIP.***

### 3.5 Repeat Monitoring

The Advisory Committee discussed several aspects of the repeat monitoring provisions in the RTCR. The Committee began by reviewing the proposed language, in the last paragraph of this section, intended to avoid continuous rounds of repeat sampling. One member noted that primacy agencies usually advise systems to stop taking repeat samples after the first round and focus instead on fixing the problem. Another member stressed that the language in this paragraph also should take into consideration large systems, which might stop taking repeats in one part of the system but need to take repeat samples in other parts of the system if there is exceedance of a trigger. Based on this discussion, the Committee agreed to the following language for the last paragraph of Section 3.5:

***After a trigger is reached, additional rounds of repeat sampling are not required.***

***The Committee also agreed to delete the following phrase from the first sentence of the first paragraph following the list of principles: “only routine positive TC samples require a repeat sample”***

The Committee also discussed the new proposed language for a third bullet in the second paragraph of this section, which would allow very small NCWS (e.g., those with only one sampling tap) to take less than three repeat samples, with approval of the primacy agency. Some members argued that taking three repeat samples (as opposed to one) from the same tap would provide no new information. Another member, pointing to data that showed that 40 percent of systems with one service connection did not have positive results on all three repeat samples, expressed the view that taking three samples, or the volume equivalent to three samples, is necessary to better identify the problem.

***Based on this discussion, the Committee agreed to delete the proposed new third bullet, “Very Small non-community systems with limited distribution piping, especially those serving a single building, may have the number of repeat samples reduced with approval of the primacy agency.”***

*The Committee also agreed that it is their intent that one of the three repeat samples for very small ground water NCWS can be taken at the source and will count as a GWR sample.*

The Committee also agreed to add the following phrase to the end of the first paragraph after the list of principles:

***with possible exceptions allowed under Section 3.7 Sample Siting Plans.***

***The Advisory Committee agreed to the existing language with proposed editorial changes in the remainder of Section 3.5 of the draft AIP.***

### 3.6 Additional Routine Monitoring

***With one minor edit, the Committee also agreed to the existing language and proposed edits in the remainder of Section 3.6 of the draft AIP.***

### 3.7 Sample Siting Plans

Members of the Advisory Committee discussed and made revisions to the bulleted list of recommendations in Section 3.7. They deleted sentences in bullets c and d because they were redundant or covered in other sections, and moved a sentence in bullet e to the list of principles at the beginning of the section.

***With these and other minor edits, the Committee also agreed to the existing language and proposed edits in the remainder of Section 3.7 of the draft AIP.***

### 3.8 Assessments

#### *3.8.a Purpose*

The Committee discussed the example checklists for Level 1 and Level 2 assessments that were prepared earlier by the Assessment and Corrective Action subgroup.

***Members agreed that the AIP should include language describing the elements and level of scope and effort for the assessments, and to attach as appendices the example Level 1 and Level 2 assessment checklists. The appendices will be clearly labeled as “examples.”***

One member suggested that the elements and scope should take into account different system sizes and types. Other members noted that each state would develop specific checklists, based on the elements in the AIP, appropriate for the different systems they oversee. EPA will also develop guidance on the assessments.

Based on this discussion, a group of members developed the following language, and the Committee agreed to include it in Section 3.8.a of the AIP:

#### ***Minimum elements of both Level 1 and 2 assessments:***

- 1. Identify inadequacies in sample sites, sampling protocol, and sample processing,***
- 2. Identify atypical events that may affect distributed water quality or indicate that distributed water quality was impaired***
- 3. Changes in distribution system maintenance and operation that may affect distributed water quality including water storage***
- 4. Where appropriate (e.g., small groundwater systems) source and treatment considerations that bear on distributed water quality***
- 5. Review existing water quality monitoring data***

#### ***The RTCR should provide for:***

- 1. The primacy agency tailoring specific assessment elements to the size and type of system***
- 2. The PWSs tailoring their assessment activities based on the characteristics of the distribution system.***

***Working with stakeholders, EPA should develop guidance that reflects the above elements and principles and include example checklists and instructions for assessments at various system sizes and types.***

During the discussion of assessment checklists, one member expressed a preference for the more descriptive Level 2 assessment checklist, and suggested that this checklist be used for both Level 1 and Level 2 assessments. Another member responded that every primacy agency will revise the example checklists and will likely use the more detailed checklist to train operators to do both Level 1 and Level 2 assessments.

One member noted that there would be opportunities for the States and others to provide further input on the checklists: the States, as co-regulators, will participate in future modifications to the checklists; and the guidance EPA writes for the assessments will be put out for public comment. The AIP, with appendices, also will be available on EPA's website. Although it is not a requirement, it is EPA's practice to publish agreements in the Federal Register.

#### *3.8.b.2 Level 1 Assessment Timeframe*

Members of the Advisory Committee discussed the proposed 30 day timeframe from point of notification of a trigger event to the completion of a Level 1 assessment and corrective action (if needed) and submission of the Assessment Report. One member expressed the view that it should not take 30 days to complete the simple checklist for a Level 1 assessment. Another member responded that a shorter timeframe for Level 1 than for Level 2 assessments may make a Level 1 assessment appear more urgent than a Level 2 assessment, when the latter could be triggered by an acute MCL violation. Others also noted that larger, more complex systems would need 30 days to complete a Level 1 assessment. In order to convey its intent, the Committee agreed to add the following sentence to the beginning of Section 3.8.b.2:

***The PWS will complete a Level 1 assessment as soon as practicable after notification of their monitoring results.***

#### *3.8.b.3 Description of a Level 1 Assessment*

Members then discussed the following proposed sentence: "If the primacy agency deems the self-assessment insufficient, it will consult with the PWS and require appropriate additional assessment, if necessary." (This sentence was originally proposed for the previous section, Level 1 Assessment Timetable.) Some members argued that since failure to do assessment and corrective action is a violation, primacy agencies must have the ability to evaluate whether each was properly done and to consult with systems about any appropriate additional actions necessary to avoid the violation. Other members stressed that the Level 1 assessment is intended to be system driven and suggested that the system be told to redo the assessment if it is deemed insufficient. One member noted that systems that fail to do Level 1 assessment and corrective action are likely to trigger a Level 2 assessment. One member, while supporting the right of the primacy agency to review assessment reports, questioned the need for language to that effect in the AIP. Another member reminded the Committee that without specific language in the AIP, EPA would have no authority to act where it has primacy.

Based on this discussion, the Committee agreed to add the following sentence to the AIP at the end of the first paragraph of Section 3.8.b.3:

***If the primacy agency deems the self-assessment report insufficient, it will consult with the PWS.***

Some members expressed concern that because this sentence is less specific than a similar sentence for Level 2 assessments (see discussion in next section), the implication might be that the primacy agency can only consult with a PWS about an insufficient Level 1 assessment. As a result, the Committee agreed to the following:

*It is the intent of the Committee, as described in the second paragraph of Section 3.9, that there will be dialogue between the PWS and primacy agency if the Level 1 Assessment Report is deemed insufficient, and that, if necessary, the primacy agency will require the PWS to take additional action. The dialogue or consultation will include elements that are within the scope of a Level 1 assessment.*

With regard to the concept of a “reset” after a Level 1 trigger, the Committee discussed at what point the primacy agency will determine that the PWS identified and corrected the cause of the Level 1 exceedance. Based on the discussion, the Committee agreed to include in the next version of the AIP the following sentence at the end of the last paragraph in Section 3.8.b.2:

***Upon completion and submission of the Assessment Report by the PWS, the primacy agency will determine if there is a likely reason that the Level 1 samples were TC positive and establish that the system has corrected the problem.***

#### *3.8.c.3 Description of a Level 2 Assessment*

The Committee then discussed proposed language for Level 2 assessments, similar to the language discussed and agreed upon for the Level 1 Assessment. The Committee agreed to include the following sentence at the end of Section 3.8.c.3 in the new version of the AIP:

***If the primacy agency deems the Level 2 assessment report insufficient, it will consult with the PWS and, if necessary, provide assistance or require appropriate action.***

***With these and other minor edits, the Committee agreed to the existing language and proposed edits in the remainder of Section 3.8 of the draft AIP.***

#### 3.9 Corrective Action

The Advisory Committee discussed the language in the last paragraph of Section 3.9 Corrective Action. Members agreed to revise and expand this paragraph as follows:

***For corrections not completed by the time of submission of the assessment report, the system and primacy agency shall agree on a schedule to complete the***

*remaining corrective action(s). The system shall notify the primacy agency when it has completed each corrective action.*

***The Committee agreed to the existing language and proposed edits in the remainder of Section 3.9 of the draft AIP.***

### 3.10 Documentation (Recordkeeping)

*Members agreed that the intent of the Committee is that the language in this section does not preclude submission of Assessment Reports to the primacy agency.*

### 3.11 Violations and Public Notification Requirements

The Advisory Committee agreed to the following additions and edits to Section 3.11:

In the third bullet under principles:

- Replace “Unlike the current TCR, a confirmed TC-positive sample” with: ***“Two TC-positive samples (or greater than 5 percent as appropriate)”***

In 3.11.a, under Routine Monitoring and Reporting Violation:

- Change “all of the” to ***“every”***

In the Example RTCR Violations table:

- Add a third bullet under TT Violation: ***“Failure to correct sanitary defects according to agreed upon schedule.”***
- Rewrite the second bullet under routine monitoring violations consequences to read: ***“No less than monthly monitoring if PWS has monitoring violations in 2 of 4 quarters (for systems on quarterly monitoring), or misses its required annual sample.”***

***The Committee agreed to delete the appendix with examples of significant monitoring failures.***

***With these and other minor edits, the Committee agreed to the existing language and proposed edits in the remainder of Section 3.11 of the draft AIP.***

### 3.12 Operator Training and Certification

During the Advisory Committee’s discussion of operator training and certification, one member suggested that the Committee recommend a certification program for treatment plant operators and distribution system operators. Other members preferred to leave the language in this section unchanged. One member, acknowledging the importance of qualified system operators, suggested addressing this issue through other vehicles than the AIP. This member noted that EPA is working with the Association of State Drinking Administrators and in discussions with the National Rural Water Association about the proper training of system operators.

### 3.15 Primacy Provisions

The Advisory Committee reviewed and discussed proposed language in Section 3.15 Primacy Provisions, and suggested several changes and additions.

To ensure that EPA has authority to fully implement the RTCR where it has primacy, the Committee agreed to add the following bullet to the list of principles at the beginning of the section:

***The RTCR should be written to make sure that when EPA is the Direct Implementation authority, the Agency can fully implement all aspects of the rule.***

The Committee agreed to change bullet 1 on Sample Siting Plans to read as follows:

***Sample Siting Plans - primacy agencies would describe how they review and revise sample siting plans per 40 CFR 141.21(a).***

*The Committee also agreed that it is their intent that the state procedures for reviewing sample siting plans in the primacy applications be consistent with the provisions in Sections 3.5 (Repeat Monitoring), Section 3.6 (Additional Routine Monitoring), 3.7 (Sample Siting Plans) and other relevant sections of the RTCR.*

The Committee discussed bullet 5 of Section 3.15, which addresses the right of states to have requirements more stringent than federal requirements. Some members expressed concern that this provision would encourage states to keep some or all of the current TCR provisions rather than adopting the provisions in the RTCR. One member suggested adding language to encourage adoption of the RTCR approach. Others noted that from a federal perspective, states can adopt statutes that are stricter than federal statutes; some states, however, do not allow more stringent requirements.

Several members of the Committee suggested that the language in Section 3.15 be revised to refer to the authority granted states in the SDWA to have requirements more stringent than federal requirements. A few members agreed to develop proposed language for the Committee's further consideration.

The Committee will also consider whether the final language for this provision should be in Section 3.15 or earlier in the AIP, in Section 2.0.

### 3.16 Optimizing Distribution System Integrity

Committee discussed and suggested several edits to Section 3.16 Optimizing Distribution System Integrity. They agreed that the new version of the AIP should read as follows:

***The TCRDSAC encourages the development of national and regional distribution system optimization partnership(s) that focus on protecting the integrity of drinking water quality once it is delivered to the distribution system. The purpose of the partnership should be to inform and inspire proactive systems to implement best management practices that emphasize protection of public health. These partnerships, composed, for example, of representatives from utilities, communities, academia, and regulatory organizations could develop continuous improvement programs that encompass water distribution***

*optimization principles and practices for system design, operations, and maintenance. These partnerships will foster continuous review of distribution system issues and should define excellence in distribution system operation in terms of processes, systems, procedures, as well as measures, and encourage voluntary program participation of all drinking water utilities regardless of system size. The optimization partnership should encourage voluntary program participation of all drinking water utilities regardless of system size.*

*The TCRDSAC recommends that the optimization partnership develop language that recognizes best management practices and other measures for enhancing the integrity of distribution systems, or provide enhanced protection for the water in the distribution system and public health. These practices could include:*

- 1. Disinfectant residuals sufficient to afford protection in the distribution system*
- 2. Approved cross-connection control and backflow prevention programs, and*
- 3. Other practices that contribute to a multiple-barrier approach, such as frequent regular inspection of system components.*

During the discussion of Section 3.16, one member emphasized that there are other state run associations that also promote and support the goals of optimizing distribution system integrity. *The Committee agreed that it is their intent to promote best management practices for optimizing the design, operations, and maintenance of distribution systems wherever it happens.*

### 3.17 Other

The Advisory Committee discussed and made revisions to each of the subsections in Section 3.17 as indicated below.

#### *3.17.a Cross Connection Control Practices*

The Committee made several additions to the language in Section 3.17 and agreed to include the following language in the new version of the AIP:

*The TCRDSAC recommends that EPA and primacy agencies reference and compile existing requirements, guidance, and other information on cross connection control practices from EPA, states, and other relevant parties with the aim of having a single, complete resource library available to the public.*

#### *3.17.b Performance Measures*

The Committee discussed suggested revisions to Section 3.17.b and agreed to include the following in the new version of the AIP:

*The TCRDSAC recommends that EPA develop goals and performance measures for the RTCR in parallel with the rule development. The measures should be aimed at evaluating the rule's long-term effectiveness. The data for the measures should be based on improved collection and categorization of*

*compliance data from both state and national perspectives, per the examples given in Section 3.17e.*

***The TCRDSAC recommends that EPA conduct a review of the effectiveness of the RTCR using a stakeholder process. This review can be conducted in accordance with the Agency's existing Six Year Review process.***

#### *3.17.c Consolidation of Sanitary Survey Requirements*

The Committee discussed the proposed language for Section 3.17.c.

*The Committee agreed that since the suggested provision would affect other rules, it is more appropriate that EPA and the states discuss the issue as part of the Six Year Review process. Given the important role of sanitary surveys in determining monitoring requirements under the RTCR, the Committee agreed to include the following language in Section 3.17.c of the new version of the AIP:*

***The TCRDSAC recommends that EPA, in cooperation with states, develop minimum qualifications and a standardized training program for sanitary surveyors, and evaluate the need for certification.***

They also agreed to change the title of this section to "Sanitary Surveyors."

#### *3.17.d Release of RTCR Guidance and Training Materials*

The Committee reviewed the proposed language for Section 3.17.d. One member stated that it would not be possible for EPA to release guidance materials within 3 months of rule promulgation; however, it would be possible to begin now to develop and prioritize a schedule for the release of these materials. Based on this information, the Committee agreed to the following language for section 3.17.d:

***The TCRDSAC also recommends that EPA release guidance documents as expeditiously as possible, with the highest priority documents developed first. EPA will develop a plan which includes a list of the guidance manuals and schedule. The TCRDSAC recommends that EPA discuss the development plan with interested stakeholders.***

#### *3.17.e SDWIS Modifications*

The Advisory Committee discussed the timetable for upgrading SDWIS State and SDWIS Federal to accommodate the RTCR. One member stressed that it is important to begin this work as early as possible in the rulemaking process. Another noted that while the work to set the stage for the upgrade could begin immediately, it would take at least a year after rule promulgation to complete the process.

The Committee also discussed expanding the language in this section to provide more detail about the upgrade to SDWIS and to allow for stakeholder input into the process. Based on this discussion, the Committee agreed on the following language for Section 3.17.e:

*The TCRDSAC recommends within 18 months of final rule promulgation EPA release an upgrade to SDWIS State and SDWIS Fed to accommodate monitoring data, tracking, compliance determinations and reporting of all rule related requirements, as appropriate. This SDWIS upgrade release will occur in concert and consistent with the Trading Partner Agreement with states through ASDWA for the provision of contaminant monitoring and related meta data to EPA. This new upgrade shall have improved collection and categorization of compliance data from both state and national perspectives (e.g., different data elements for E. coli violations and Treatment Technique violations as shown in the violations table in Section 3.11. The TCRDSAC recommends that EPA engage stakeholders as part of the information requirements planning process.*

*With these and other minor edits, the Committee agreed to the existing language and proposed edits in the remainder of Section 3.17 of the draft AIP.*

4.0 Agreement in Principle on Research and Information Collection; 4.1 Research and Information Collection Partnership; and 4.2 Recommended Priorities for Research and Information Collection

The Advisory Committee discussed the research and information collection provisions of the draft AIP and made the following agreements related to the draft AIP:

*4.1.a Purpose and Governance*

The Committee agreed to change the language in the first sentence of this section to read:

***The TCRDSAC recommends that a Research and Information Collection Partnership (RP) be formed to inform and support the drinking water community in developing future national risk management decisions pertaining to drinking water distribution systems.***

*4.1.c Research and Information Collection Priorities*

The Committee discussed whether or not to add a paragraph in this section that would instruct the Research Partnership (RP) to develop draft performance measures (as described in Section 3.17.b Performance Measures) for the RTCR that would include an evaluation of the improved compliance data (as described in Section 3.17.e SDWIS Modifications). The Committee decided not to add the sentence to this section, but rather to include these concepts in the relevant subsections of Section 3.17 of the draft AIP.

The Committee agreed that the focus in the research and information section of the AIP should be to evaluate on-going research on monitoring methods, sampling methodologies, relationships between indicators and pathogens, etc., as stated in the last paragraph of this section, and to use this information to optimize its research and information collection agenda. One member suggested that as SDWIS is updated and more data is collected on *E. coli* occurrence, the information could help the RP target its efforts to better understand public health risk. Another member noted that it would 2015 at the earliest before this type of information from the RTCR would be available; the RP may have completed its work by then.

*4.2.c Approach to Identifying Research and Information Collection Needs*

***The Committee agreed to reinsert, following the second paragraph of this section, the two bullets with more detailed descriptions of the cross-cutting issues for Public Health assessment and Fate and Transport.***

*4.2.d Specific Priorities*

The Committee agreed to add the following phrase at the end of the first sentence in this section:

***and that this grouping be used to prioritize analytical framework development.***

***With these changes, other minor edits, and deletions to reduce redundancy, the Committee agreed to the existing language and proposed edits in the remainder of Sections 4.0, 4.1, and 4.2 of the draft AIP.***

**V. Public Comment**

No members of the public offered comment at this meeting.

**VII. Next Steps**

The facilitators will revise the AIP and distribute the new version to TCRDSAC members following the meeting.

The Advisory Committee will meet via conference call on September 3, 2008 at 1 PM Eastern. The Committee also will meet in person on September 18-19, 2008 in Washington, D.C.

*NOTE: This document was prepared by the facilitators for consideration by the Total Coliform Rule Distribution System Advisory Committee and does not constitute a product of the 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.*

## **Attachments**

Attachment A – TCRDSAC roster\*

Attachment B – Meeting agenda\*

Attachment C – List of meeting attendees

Attachment D – Draft Agreement in Principle in meeting folder for the TCRDSAC\*

Attachment E – May TCRDSAC meeting summary\*

Attachment F – New Draft Agreement in Principle for the TCRDSAC based on discussions at  
June meeting

\* The meeting presentation and other documents may be found online at  
[http://www.epa.gov/OGWDW/disinfection/tcr/regulation\\_revisions\\_tcrdsac.html](http://www.epa.gov/OGWDW/disinfection/tcr/regulation_revisions_tcrdsac.html).

*U.S. Environmental Protection Agency*  
**Total Coliform Rule / Distribution System**  
**Advisory Committee Meeting**  
**July 30-31, 2008**

**Meeting Attendees**

Karl Anderson, U.S. EPA  
Ali Arvanaghi, U.S. EPA  
Sarah Bahrman, U.S. EPA  
David Baird, National Rural Water Association\*  
Pamela Barr, U.S. EPA\*  
Jeremy Bauer, U.S. EPA  
Gail Bingham, RESOLVE  
Eric Bissonette, U.S. EPA  
Manja Blazer, IDEXX  
Erica Brown, Association of Metropolitan Water Agencies\*  
Joan Brunkard, Centers for Disease Control and Prevention  
Gary Burlingame, Philadelphia Water Department  
Jimmy Chen, U.S. EPA  
James Cherry, City of Virginia Beach Public Utilities  
Sean Conley, U.S. EPA  
Laura Cummings, PVWC  
Joanne Dea, U.S. EPA  
Cynthia Dougherty, U.S. EPA\*  
Patti Fauver, Environmental Council of States\*  
Michael Finn, U.S. EPA  
Kathy Grant, RESOLVE  
Tom Grubbs, U.S. EPA  
Yu-Ting Guilaran, U.S. EPA  
Trish Hall, U.S. EPA  
Christine Maloni Hoover, National Association of State Utility Consumer Advocates\*  
Chuck Job, U.S. EPA  
Dan Kroll, HACH Homeland Security Technologies  
Mark LeChevallier, National Association of Water Companies\*  
Debbie Lee, RESOLVE  
Clint Lemmons, U.S. EPA  
Frank Letkiewicz, The Cadmus Group, Inc.  
Audrey Levine, U.S. EPA  
Maria Lopez-Carbo, U.S. EPA  
Gary Lynch, National Association of Water Companies\*  
Erica Martinson, Water Policy Report  
Harvey Minnigh, Rural Community Assistance Partnership\*  
Ed Moriarty, U.S. EPA  
Russell Navratil, County of Henrico, VA  
John Neuberger, Council of State and Territorial Epidemiologists\*

Eva Nieminski, Utah Department of Environmental Quality  
Darrell Osterhoudt, Association of State Drinking Water Administrators\*  
Jim Purzycki, American Backflow Prevention Association  
Graciela Ramirez-Toro, CECIA-IAUPR  
Stig Regli, U.S. EPA  
J. Kevin Reilly, U.S. EPA  
Alan Roberson, American Water Works Association\*  
Crystal Rodgers-Jenkins, U.S. EPA  
Ken Rosenfeld, National League of Cities\*  
Kenneth Rotert, U.S. EPA  
Sharon Roy, Centers for Disease Control and Prevention  
Rick Sakaji, East Bay Municipal Utility District  
Tom Schaeffer, Association of Metropolitan Water Agencies  
John Scheltens, AWWA  
Nicole Shao, U.S. EPA  
Jerry Smith, Association of State Drinking Water Administrators\*  
Tim Soward, IntelliTech  
Vanessa Speight, Malcolm Pirnie  
David Spenard, National Association of State Utility Consumer Advocates\*  
Scott Summers, University of Colorado at Boulder  
Jim Taft, Association of State Drinking Water Administrators  
Lynn Thorp, Clean Water Action\*  
Lesley Vasquez-Coriano, U.S. EPA  
Steve Via, American Water Works Association  
Bob Vincent, National Environmental Health Association\*  
David Visintainer, Association of Metropolitan Water Agencies\*  
Paul Whittemore, National Rural Water Association\*  
Mae Wu, Natural Resources Defense Council\*  
Yvonne Yuen, U.S. EPA