

**Microbiology Expert Committee (MEC)  
Meeting Summary**

**December 8, 2015**

1. Roll Call and Minutes:

Robin Cook, Chair, called the meeting to order at 1:36pm EST by teleconference. Attendance is recorded in Attachment A – there were 6 members present. Associate Member present: Carl Kircher, Barbara Sullivan (Phenova), Daniel King (Phenova).

The November meeting minutes were reviewed. A motion was made by Patsy to approve the November 10, 2015 minutes as written. The motion was seconded by Elizabeth. The vote will be taken by email since a quorum was not present.

2. Interim Standard Status

The vote has been completed and the results were distributed by email to the committee. There was one negative vote and comment and 3 affirmatives with comment.

The committee will look at the comments and determine whether any are persuasive. Even though there is a negative vote, if it is not persuasive, the Standard can still move on to a Final Standard. Robin can also talk to the commenter and hopefully clarify the issue. The commenter can always withdraw their comment.

Comment #1: Affirmative with Comment

1.7.5.2

If the sample received by a lab was disinfected using a non-halogenated (no chlorine or bromine), no procedure is outlined to test residuals of the alternate disinfectant (say hydrogen peroxide). Some disinfectants (UV light) do not leave any residuals. The section only specifies the use of sodium thiosulfate when chlorine is known to be the disinfectant.

Sec. 1.7.5.2 (d) states that the disinfectant residual must be checked in the field and the actual concentration documented with sample submission. This may not be possible for non-halogenated disinfectants.

If the general term "Disinfectant" is used in the standard, then specific criteria for checking residuals for each of the anticipated or most widely used disinfectants needs to be included in the standard. Exceptions need to be made for disinfectants that leave no residuals.

Robin noted that UV and Ozone don't have any residual. Sodium thiosulfate is used for chlorine, but it is also the neutralizing agent for bromine as well. Robin does not see an issue.

Deb sent an email regarding hydrogen peroxide that Patsy summarized: Hydrogen peroxide breaks down in water to hydrogen with no residual. She also commented that there is no residual with Ozone. This can be a problem because there can be regrowth when there is no residual. Robin confirmed that she found the same information in the literature. Bromine is sometimes used in cooling towers and spas.

Dwayne asked if there is any other reducing agent used? No one knew of any and there is nothing in the test methods.

c) is not checking the system. The efficacy of the neutralizer is being checked.

Elizabeth noted they do a lot of reuse water and most use UV. Robin noted that when drinking water is discussed, there will always be some sort of additional disinfection. You will not see Ozone or UV alone.

If there is no residual, there isn't anything to test.

Making the change suggested is too proscriptive and makes the Standard less usable. The committee intentionally made this section simpler.

It was determined to be a non-persuasive comment.

#### Comment #2: Affirmative with Comment

1.7.5.2 b., c.                      The word "chlorine" has been removed but the word "disinfectant" has not been inserted in its place.

Robin opened the Interim Standard on screen for the committee to review.

UV and Ozone don't have any residual.

#### Comment #3: Negative with Comment

1.7.5.2                              The section is still written for chlorinated samples. I would not understand how this section would apply if the PWS disinfected the samples with bromine or ozone. This section needs more clarification.

See notes for Comment #1 too. They are applicable. There is not residual and sodium thiosulfate is used for bromine too.

#### Comment #4: Affirmative with Comment

1.7.5.2.b If you are going to take out references for chlorine and replace with the generic term "disinfectant", should you remove the specific reference to chlorine's neutralizer "Sufficient sodium thiosulfate" and replace with a generic term as well? Such as "Sufficient (and appropriate) disinfectant neutralizer" or something to that effect?

Discussion:

Robin is not aware of anything other than sodium thiosulfate that will work with the published analytical method. In addition, Carl noted that Table 2 of 40 CFR Part 136 talks about a percent of sodium thiosulfate.

The committee tried to make Section 1.7.5.2 as clear and useful as possible. If the committee does not think the comments are persuasive, Robin will talk to the commenters to understand their issues and ensure the current text covers the comments.

There is a huge growth of accredited wastewater laboratories so there is a growth in recycled water and beach monitoring. Some use other disinfectants. Our Standard has always focused on Drinking Water and the committee needs to make sure the other matrices are considered too.

Robin asked Carl, Dwayne and Mary if they would give a lab a finding that only used UV – where there is no residual chlorine. Do they need to use the sodium thiosulfate anyway because of how things are written? Carl would want definitive proof that there is no residual. Something that is documented. Robin does not think this section applies if something like Ozone or UV is used. Carl stated he would probably agree with Robin.

Section 1.7.5.2 is not applicable to systems that do not use chlorine or some disinfectant with a residual.

Carl would need someone to convince him that Ozone does not leave some residual. He felt sodium thiosulfate would take care of this residual too. There was discussion above that Ozone does not leave a residual. Carl disagrees. At 25 degrees Celsius, Ozone is soluble in water at 9 mg/L. He thinks this disinfectant residual needs to be removed. He thinks the Interim Standard is fine as written and the commenter that stated you didn't need to remove it was incorrect. Robin clarified the commenter's concern.

Robin went back to the Standard to emphasize the language states: Samples from known chlorinated sources ... and all drinking water samples shall be checked. a,b,c and d are the exceptions. She thinks what is written is clear and there is a misunderstanding on the commenter's part.

Carl noted that he does not think the comments improve the Standard. With the exception of the last comment, there is no language that has been recommended.

It is not possible to put every example in the Standard. Technology continues and there will be changes in the future.

Dwayne thinks a response should be written to highlight that the requirement is in the paragraph and the listings below are exceptions. An option might be to add halogenated instead of chlorine, but others did not think this change improves the Standard.

The committee in general considers all the comments non-persuasive. All agreed that there was no real need to change the Standard at this time and it should be left as it is.

Robin will contact the commenters about the comments and see if a conversation would provide any clarification. She will prepare a DRAFT response and use this as a starting point for these conversations.

- Any neutralizer that is used needs to be OK by the method.
- Any disinfection processes that don't leave a residual – this section does not apply to them unless it is drinking water.

Robin suggested that Comment 1 could be ruled persuasive and a note can be added about the disinfection procedure that leaves no residual. Others did not feel the note is needed. They can't measure something that is not there. Robin noted that the community is over thinking this and that is why the comments came in. Dwayne and Patsy don't think a note should be added. It will cause confusion and the note would need to restate that drinking water must be checked.

Robin asked that people think about what would be a good response to the comments and she will get some input from the commenters and hopefully clarify their issues so they can see the Standard is appropriately written. She will prepare a DRAFT response and this will be further discussed at the next meeting.

### 3. Best Lab Practices – Advocacy

The Advocacy Committee has been working on the update to a very old document regarding good lab practices that was originally published by EPA back in the late '70s. The microbiology chapter has been passed along to this committee to do a high level review. The Advocacy Committee wants to be sure there are no conflicts with the Microbiology Standard and that it does not create any new requirements. If there is something that really is a problem, they want to know about it. The Microbiology Committee is only being asked to review the document – not re-write or do major edits to it. Robin distributed the document by email to the committee members.

Robin had comments in 3.1.3 in the qualifications of personnel. The Standard does have minimum qualifications for Technical Directors and Quality Manager and these should be pointed out.

She also had comments on 3.1.7. The statement is not true if it is not a lab using ISO.

Others had not spent much time looking at the document. Patsy read through it, but she doesn't understand what it is being used for. It is a guidance document. Patsy is concerned that there can be too many guidance documents. There is the Standard and Small Lab Handbook already. Robin does not know how the document will be distributed – useful information or being sold?

Robin will send out an email to committee members and collect any comments through 12-21-15. She will pass all comments along to the Advocacy Committee. Editorial comments are fine.

#### 4. Action Items

A summary of action items can be found in Attachment B. The action items were reviewed and updated.

#### 5. New Business

- None.

#### 6. Next Meeting and Close

The next meeting will be held January 12, 2016 at 1:30pm Eastern by teleconference. The agenda will include a final discussion on the comments and setting an agenda for Tulsa.

A summary of action items and backburner/reminder items can be found in Attachment B and C.

Robin adjourned the meeting at 2:25 pm Eastern.

**Attachment A  
Participants  
Microbiology Expert Committee (MEC)**

<b>Members</b>	<b>Affiliation</b>	<b>Balance</b>	<b>Contact Information</b>	
Robin Cook (Chair) <b>Present</b>	City of Daytona Beach EML	Lab	(386)671-8885	<a href="mailto:cookr@codb.us">cookr@codb.us</a>
Patsy Root (Vice-chair) <b>Present</b>	IDEXX Laboratories, Inc	Other	(207)556-8947	<a href="mailto:patsy-root@idexx.com">patsy-root@idexx.com</a>
Karla Ziegelmann- Fjeld  <b>Present</b>	Microbiologics, Inc	Other		<a href="mailto:kfjeld@microbiologics.com">kfjeld@microbiologics.com</a>
Donna Ruokonen  <b>Absent</b>	Microbac Laboratories, Inc	Lab	(219)769-8378 Ext 110	<a href="mailto:druokonen@microbac.com">druokonen@microbac.com</a>
Colin Fricker  <b>Absent</b>	Analytical Services, Inc	Lab		<a href="mailto:colinfricker@aol.com">colinfricker@aol.com</a>
Deb Waller  <b>Absent</b>	NJ DEP	AB	(609)984-7732	<a href="mailto:debra.waller@dep.nj.gov">debra.waller@dep.nj.gov</a>
Dwayne Burkholder  <b>Present</b>	Pennsylvania DEP	AB	(717)346-8213	<a href="mailto:dburkholde@pa.gov">dburkholde@pa.gov</a>
Mary Robinson  <b>Present</b>	Indiana State DOH	AB	(317)921-5523	<a href="mailto:mrobinson@isdh.in.gov">mrobinson@isdh.in.gov</a>
Elizabeth Turner  <b>Present</b>	North Texas Municipal Water District	Lab	(972)442-5405 Ext 535	<a href="mailto:eturner@ntmwd.com">eturner@ntmwd.com</a>
Po Chang  <b>Absent</b>		Other		<a href="mailto:Dr.PoChang@yahoo.com">Dr.PoChang@yahoo.com</a>
Gary Yakub  <b>Absent</b>	Environmental Standards, Inc.	Other	(610)935-5577	<a href="mailto:gyakub@envstd.com">gyakub@envstd.com</a>
Ilona Taunton (Program Administrator) <b>Present - Recorded</b>	The NELAC Institute	n/a	(828)712-9242	<a href="mailto:Ilona.taunton@nelac-institute.org">Ilona.taunton@nelac-institute.org</a>

**Attachment B**

**Action Items – MEC**

	<b>Action Item</b>	<b>Who</b>	<b>Expected Completion</b>	<b>Actual Completion</b>
1	Review Method Codes and send comments to Robin for Dan Hickman.	Deb	TBD	
4	Review Handbook and Method Codes before next meeting.	ALL	5/7/13	Handbook Complete.
12	Research possible effects of using bromine and whether it needs to somehow be included in the standard. Does not look like it.	Deb	November 2013 Meeting	
19	Provide EPA interpretation on temperature readings to Ilona. She will have it posted on the website.	Robin	1/31/14	
55	Ask Carl Kircher to prepare a table to list positive and negative organisms for specific tests.	Robin	12/31/15	
56	Prepare Draft or outline of assigned Handbook section. Email to committee.	All	12/7/15	
57	Prepare comments to Best Lab Practices document. Send email to committee.	All	12/7/15	

**Attachment C**

**Backburner / Reminders – MEC**

	<b>Item</b>	<b>Meeting Reference</b>	<b>Comments</b>
1	Update charter in October 2016.	n/a	