

**Compilation of Member Comments on the Drinking Water Committee's
Draft Report on the Total Coliform Rule
SAB Meeting of November 9-10, 2009**

1. Dr. LD McMullen:

I believe that the original charge questions to the SAB DWC were adequately addressed in the draft report.

I think the committee did excellent work and provided the Agency with not only a valuable review but also additional advice that will help the Agency with the development of the new rule. I have the following comments to help make the report a little easier to follow.

- a) The paragraph that starts with line 33 on the first page of the letter to the administrator is almost a “cut and paste” of the second paragraph of the Executive Summary. It seems to me that the administrator letter should be modified to generalize rather than be a copy. The same issue occurs with the first paragraph on page 15 of the Executive Summary and last paragraph on page 19 of the charge questions. The Executive Summary could be modified to generalize rather than copy.
- b) I'm not sure what the value to the last paragraph on page 15. I think the intent was to say that the proposed rule change should not be applied to other parts of the world with out careful consideration. Since we are commenting to the Agency, I don't think this is needed.
- c) I had a little problem in understanding the subdivisions used for each of the charge questions. Statistical analysis is not one of my strengths so I maybe commenting on something that is clear to others. It seemed to me that some of the material in the first part of the response to the first charge question was also in the subdivision comments. To help the reader it would seem to make sense to have an introduction to the subdivisions to tell the reader what will be discussed in the following sections and the rationale for the subdivisions.
- d) I think that we may want to have a consistent format on how bullets are used. On page 22 we use dots, on page 26 we use numbers and parentheses, on page 39 we use numbers and periods and on page 42 we use letters and periods.
- e) On page 42 it seemed that we changed style in the report. To be consistent with the rest of the report we may want to use paragraphs rather than bullets.

In addition here are a few additional suggestions.

- a) page 1 line 40 add Agreement in Principal before AIP
- b) page 1 line 45 add Economic Analysis before EA
- c) page 1 line 45 add revised Total Coliform Rule before rTCR
- d) page 13 line 19 can we have a better reference for the white papers

- e) page 15 line 18 remove one of the “on”s
- f) page 20 line 20 can we have an example
- g) page 20 line 23 what are we doing further sensitivity analysis on
- h) page 21 line 12 deficient in what analysis
- i) page 21 line 14 an example would help
- j) page 21 line 15 an example would help
- k) page 24 line 23 an example would help
- l) page 29 line 1 why did the committee pick 50%
- m) page 30 line 28 an example would help
- n) page 37 line 9 a reference where this worked would help
- o) page 37 line 18 a reference for this statement

I believe that the conclusions drawn and the recommendations made are supported by the body of the report.

2. Jill Lipoti:

- a) the original charge questions to the SAB Standing or Ad Hoc Committee/Panel were adequately addressed in the draft report;

Yes.

- b) the draft report is clear and logical; and

Yes

- c) the conclusions drawn, and/or recommendations made, are supported by information in the body of the draft SAB report.

Yes.

Technical corrections:

Page 1, line 45, rTCR is not a defined term. Only TCR has been defined.

Page 3, line 9, MCLG/MCL is used but the acronym is not defined.

Page 3, line 14, sentence ends with "of distributed". What was meant?

Page 7, add "DS", "HPC", and "PCR" to the list of acronyms

Page 12, line 3, phrase "more focused" should be set off with commas before and after.

Page 14, line 3 and line 16, the acronym "MCL/MCLG" is used interchangeably with "MCLG/MCL" throughout the document. This should be corrected to be the same throughout the document. There are numerous examples * do a word search.

Page 18, line 4, What does "mostly" mean? The rest of the paragraph does not provide any information where the recommendations are inappropriate * only where there is concern about being "properly executed".

Page 18, line 8, remove "that"

Page 22, line 21 and line 29, the phrase "The reader is left to guess" sounds pejorative, and does not really add to the review. I suggest

eliminating those two sentences because the rest of the text makes the point.

Page 40, line 6, spell out PCR the first time it is used.

Page 41, line 5, omit "please"

Page 42, line 9, define "DS"

3. Dr. Duncan patten

General Comment: I find it interesting that the Panel did not have the Revised Total Coliform Rule (rTCR) but only an Agreement in Principle (AIP) which apparently would be the backbone of the rTCR. This lack of sufficient information seems to have created some problems for the panel as pointed out below. One wonders why the panel was asked to review a document that the OW could not provide. Shouldn't OW have waited, or was OW hoping to get comments on the AIP to improve the rTCR? Am I missing something?

a) the original charge questions to the SAB Standing or Ad Hoc Committee/Panel were adequately addressed in the draft report.

Most of the charge questions could be addressed but there appears to have been insufficient background to determine whether proposed statistical analyses were reasonable (would having the rTCR in hand have improved the background needed to address this question?)

The other three charge questions appear to have been adequately addressed.

b) the draft report is clear and logical;

For a non-E. coli scientist, the report comes across as clear and logical.

c) the conclusions drawn, and/or recommendations made, are supported by information in the body of the draft SAB report.

The panel has addressed some difficult issues and with the limited input materials they had available, they provided some excellent recommendations. But one concern might be that if they had the rTCR to review, would the recommendations be the same.

4. Dr. Otto Doering:

a) Were the original charge questions to the SAB Standing or Ad Hoc Committee/Panel adequately addressed in the draft report?

Yes

b) Is the draft report is clear and logical?

Yes

c) Are the conclusions drawn, and/or recommendations made, supported by information in the body of the draft SAB report.

Yes

The suggestions for improving the analysis (pp. 21-25) are excellent. I also appreciate the recommended cautions for moving forward with rTCR (Pp. 40-41) - the notion of 'will it make a difference'.

5. Dr. Meryl Karol:

In response to the charge questions:

- a) *The questions were adequately addressed in the draft report*
- b) *The draft report is clear and logical*

In particular, the response to question 1 is well stated, the summary of Alternatives and suggestions (p.39) is excellent, as is the response to Question 2 (p. 28-29).

By comparison, the paragraph **in the cover letter**, that responds to question 4 (p.3, para 2) could be improved. Since it is a major point, the statement, “*TC is **not** an adequate measure of health risk*”, should be placed earlier in the paragraph.

- c) *The conclusions drawn, and/or recommendations made, are supported by information in the body of the draft SAB report.*

- d) *Technical comments*

p.12, para 1, lines 3-5, the doublenegative leads to confusion.

p.12, para 1, last sentence is unclear as written.

p. 31, last para, needs revision. The numerous misplaced adverbs and modifying phrases makes comprehension difficult.

p. 32, para 3, remove the introductory phrases and adverbs (ie, In addition, correct the usage of “that/which”.

p.34, lines 13-15, revise for clarity as follows:

Until additional data are available to confirm model output, The EA model should be considered **as to being validated only** for establishing a reference baseline. ~~but no more until additional data are available to confirm model output~~

p. 40, para 1, reorganize for clarity as follows:

The Agency should continue its long-term research efforts to develop tests to identify specific disease-causing organisms, particularly pathogenic strains of *E. coli* and other pathogenic bacteria, to enable public water systems to eliminate these disease-causing organisms from their water systems. This would require a long-term research project(s) which should commence now with

high priority. ~~It is important to take advantage of the latest techniques in molecular biology, such as PCR, which have exquisite sensitivity and specificity, to advance the problem of identification of pathogenic bacteria in the water systems.~~ One could visualize first moving to pathogenic strains of *E. coli* by culture methods and biochemical methods, and later by PCR methodology, which is very rapid and very specific. The PCR detection of pathogens fits within the rubric of other recommendations made by the DWC to the EPA concerning the monitoring for, and the rapid detection of, pathogens. This is yet one more example of how moving along to this form of monitoring would be helpful and protective of public health. The DWC recognizes that this form of monitoring acts to address multiple threats to public health, and has the potential to provide timely and specific information. ~~It is important to take advantage of the latest techniques in molecular biology, such as PCR, which have exquisite sensitivity and specificity, to advance the problem of identification of pathogenic bacteria in the water systems.~~ This should be done carefully and with extensive validation of molecular biology methodology against classical culture and microbiology methodology to determine whether adoption of these methodologies would actually advance water sanitation. In addition, the Agency still has to balance maintaining a broad bacterial screen vs. moving to screens for specific pathogenic organisms.

p.41, para 2, revise for clarity as follows:

~~Where possible, please be concise in writing~~ **The rTCR, should be written** to make it clear and easy to comply with for the convenience of the PWS. In addition, the DWC strongly recommends placing all information related to aspects of the rTCR on one website ~~and document, accessible on the web,~~ with links to supporting materials. The DWC believes that development of a similar book embodying all the rules contained within the rTCR would be very valuable to the water quality community.

6. Dr. James Sanders:

Were the original charge questions to the SAB Standing or Ad Hoc Committee/Panel adequately addressed in the draft report?

Yes. Each of the four charge questions was addressed.

Was the draft report clear and logical?

While the report makes the desired points and recommendations, at times sentences, and even sections, are difficult to understand. There are cryptic passages, and awkward sentence structure, that made it difficult for this

reviewer to follow the thread of the discussion. Having been a party to many of these "many authored" reports, I am sympathetic. It is difficult to balance different writing styles. To a very limited extent, I have made a few suggestions to help clarify the letter to the Administrator and the Executive Summary, since these sections often stand alone. I do not believe that they can do so as written. I have attached a Word copy of the draft report, with suggested track changes to these two sections. I recommend that one or a very small group of the authors carefully revisit the entire report, and work to improve sentence structure and overall clarity. [See also Dr. Sanders markup of the document in Track Changes]

Were the conclusions drawn, and/or recommendations made, supported by information in the body of the draft SAB report?

Yes.

7. Dr. Nancy Kim:

I'll list some of my comments/concerns and you should feel free handle them how you see fit and you can give me some feedback at the meeting. I also identified some typos that I will give you at the meeting.

a) In the executive summary, third paragraph, a statement is made that the text of the rTCR was not available to the committee... The executive summary, fifth paragraph, states that the Committee was unable to ascertain whether the analysis was reasonable solely by reading the materials provided. With these two statements, some people may question the ability of the committee to review the draft supporting analysis adequately. The body of the report gives information about the presentations and discussion with EPA staff and how that added to the committee's ability to complete its review. Not sure if anything should be added to the executive summary or not.

b) I had English problems with the 6th paragraph in the letter to Lisa Jackson. Not sure if they are important enough to change the letter. Here is how I would suggest rewriting the second sentence of that paragraph

The Committee recommends that the analysis and discussion in the EA should include identifying and summarizing all the variables with known distributions, thus better informing policy makers.

Another comment on this paragraph - Is a statement needed to confirm the Committee's opinion that using the EA model is okay, even though it has not been validated?

c) Seventh paragraph of the letter to Lisa Jackson. I would modify slightly a phrase from the executive summary and add it to the first sentence. Here is a rewrite. I added it because I thought it was useful to point out why EPA needed a more robust database, but the reason is obvious when reading the full report.

To improve the vigor of its analyses, the Agency will need a database that is far more robust...

d) Minor - Some abbreviations are not spelled out when first used in the letter or the executive summary. I'll give you those at the meeting.

e) I have other minor English changes/clarifications that I'll give you at the meeting.

November 6, 2009