

U.S. Environmental Protection Agency
Science Advisory Board
Drinking Water Committee (DWC)
Advisory on Contaminant Candidate List (CCL 3)

- Date and Time:** August 13, 2008 12:30 p.m. – 3:30 p.m. (EDT)
- Purpose:** To Discuss the Committee’s Draft Report on EPA’s Draft Third Drinking Water Contaminant Candidate List (CCL 3)
- Location:** Teleconference
- Committee Members:** Dr. Joan B. Rose, Chair
Dr. Mark Borhardt
Dr. Penelope Fenner-Crisp
Dr. Joseph Landolph
Dr. Desmond F. Lawler
Dr. Christine Owen
Dr. Richard Sakaji
Dr. Gary Saylor
Dr. David Sedlak

Summary of Meeting:

Introductions, Review Agenda, and Purpose of Meeting

Dr. Resha Putzrath, Designated Federal Officer (DFO), convened the meeting and called the role of the Drinking Water Committee. With the acquiesce of the DWC, in lieu of asking other attendees to introduce themselves, a list of people who requested call-in information is appended to the end of these minutes. Dr. Joan Rose, Chair, welcomed the participants and reviewed the agenda.

Presentations by the Agency

Mr. Eric Burneson, Chief of the Target Analysis Branch of EPA’s Office of Ground Water and Drinking Water, thanked the members of the Committee for their time and effort and said that EPA was looking forward to receipt of the final report. He said that they hoped to publish the final CCL 3 during summer 2009. Having thanked the Committee for the opportunity to make comments, he said that they would like clarification of four areas in the draft report. As sent by email during the meeting, his comments follow.

1. (page 2 line 11-13) (Also pg. 9 Line 21-23 and pg. 16 Line 43-44) The Committee recommends that “EPA should evaluate whether pesticides that were about to be cancelled completely should be on the list for additional SDWA regulation.” ***Could you please clarify what you mean by “pesticides that were about to be cancelled completely”?***

2. (pg. 15 Line 41-42) The report states, “In general, given the small numbers of pathogens, greater details from the data sets could be used as well as endemic disease rates.” *If there is a particular source of information on endemic disease rates that the committee has in mind here we think that it would be beneficial for you to identify it or to list it as an example. We are aware of estimates of foodborne illness by the CDC (Paul Mead through the National Center for Infectious Diseases) There is also a database kept by CDC on the total cases of ‘notifiable diseases’ (e.g., Summary of Notifiable Diseases, 2006).*
3. (pg. 17 line 1-4) the report states that, “The absence of data on the occurrence of pharmaceuticals in surface waters was also noted, and it was thought that use of the data from the U.S. Geological Survey (USGS) or any of the numerous studies in the peer-reviewed literature would have included these chemicals.” *Please note that EPA used occurrence information from the USGS Toxics Substances Hydrology program’s National Reconnaissance of Emerging Contaminants (NREC) and other sources in the CCL 3 process. The NREC database included ambient water concentration data for pharmaceuticals and personal care products (i.e., includes many of the PPCPs reported in Kolpin et al. 2002). (Occurrence information for pharmaceuticals used in the CCL 3 process is outlined in the CCL 3 FR Notice pg. 9652 (section IV A. Pharmaceuticals)). Perhaps the committee is referring to more recent publications or USGS studies.*
4. (pg. 17 Line 23-25) In the section of the Report titled “The Future: Emerging Issues and Data Needs” the Committee states, “There are also some clear categories of contaminants that need special attention. These may be on the PCCL or in the universe. These include ...algal toxins.” Cyanotoxins are included on the Draft CCL 3 (These include Anatoxin-a, Microcystin-LR, and Cylindrospermopsin). *Could you please elaborate on what you think needs to be done in the future with regard to algal toxins?*

Public Comments

The written comments of the two people providing public comments are available on the same web page as these minutes. The first speaker was Thomas Mohr, Director and Past President of the Groundwater Resources Association of California, who stated that he was speaking as a private citizen. His comments have not been vetted by any group. He addressed only one chemical, 1,4-dioxane that is persistent and mobile, doesn’t sorb to organics, and doesn’t biodegrade. He stated that it has a non-linear dose-response function, that PBPK modeling had been performed. It is an underappreciated contaminant that resists conventional treatment for chlorinated organics; it has substantial potential to appear in drinking water. Colorado and many other states have advisory levels for this compound in drinking water.

During the question period, one Committee member asked if it is a mutagenic carcinogen. Mr. Mohr replied that, as he is a hydrogeologist, he doesn’t know, but will send information to the Committee. There is some controversy, but by inhalation exposure rats got nasal carcinomas. Another member asked if it is still used as a solvent stabilizer for membrane manufacturing. An EPA scientist stated that it may be, but they are re-examining its use. It has also been used for manufacturing detergents and plastics and occurs in acetylation wastes. A Committee member asked EPA what it means to be

listed on the CCL but not regulated. EPA replied that the goal is to heighten awareness of its possible existence, e.g., if allowing re-injection of water after treatment, that this chemical has not been removed. This chemical has to be analyzed by a different method. There is no removals with activated carbon and it resists air stripping. EPA's IRIS program is reviewing 1,4-dioxane.

The second speaker was Olga V. Naidenko, PhD, Senior Scientist, for the Environmental Working Group. Dr. Naidenko said that she was grateful for the opportunity to provide comments and supports the new approach for developing the CCL 3. She had three points. First, EPA should move beyond listing to regulation – so far CCL has not led to regulation, e.g., MTBE or perchlorate in CCL 1 and CCL 2. Second, EPA should establish regulatory standards, e.g., for PFOA and other PFCs. Third, EPA should establish regulatory standards for pharmaceuticals; only nitroglycerin is on the draft CCL 3. EWG wants health standards that protect vulnerable populations, especially pregnant women and children. She thanked the Committee for their attention and would be happy to respond to questions.

One Committee member expressed concerns about PFCs, in particular, whether there was a way to group chemicals on the CCL, for example, when they occur together. Would it make more sense to look at some groups of chemicals together, or do they occur separately and therefore should they be reviewed separately for regulations. Dr. Naidenko said that the question is difficult to answer. PFOA is in ground water in several locations. Other PFCs likely to act in the same way, and one chemical might be substituted for another, especially if those chemicals have not been regulated. C8s are now preferred, instead of C7 or C6, but there is just one carbon difference. They are likely to have the same ecological effects, but their health effects have not been studied. The Committee member suggested that this would be an argument for regulating as group of chemicals rather than separately. Another member queried the information available on pharmaceuticals and their potential human health effects at low levels. Dr. Naidenko said that such information was not available, but that the Committee should also be concerned about potential cumulative effects. Another member mentioned that this is also true for most other chemicals, e.g., there are no data for low levels of exposure and risk assessments have to extrapolate the potential effects at these levels. Therefore, pharmaceuticals are not unique and this is not an excuse for keeping them off the CCL when other chemicals also based on high doses in animals. Pharmaceuticals are effective in humans, but EPA doesn't have access to FDA data files.

Committee Member's Comments

Dr. Rose thanked all of the Committee members that provided written comments. She stated that the draft was basically in good shape, and that members would help with future drafts and the few clarifications. She opened the discussion to the Committee.

One Committee member noted that the current draft, which covers issues of pathogens with regard to occurrence relative to disease, received no comments from EPA. He suggested that the document would be less confusing if there were subheadings to mark the recurrent switching between chemicals and pathogens.

Another member noted that the issue of "discovering" chemicals with new analytical methods, as mentioned in the public comments, is not unusual. 1,4-Dioxane

has been in drinking water, just newly detected. This issue might be worth mentioning in the report.

A member mentioned that the draft report and the public comments demonstrate the need for experts, not just algorithms, to get the right contaminants. The draft report is not criticizing EPA's use of experts, just the transparency of the process. Perhaps this issue should be a focus of the letter.

It was suggested that we might change the wording to make page 2, lines 31-38 with stronger recommendations. The draft CCL 3 list is too large, and doesn't fulfill the function of a CCL. The size creates uncertainty for utilities, especially when some states are setting levels for these chemicals. EPA should consider state actions, since not all state have resources to regulate on their own. Perhaps chemicals that states are regulating, could be one criterion for selecting chemicals for the CCL.

Members reiterated the comment made by Dr. Naidenko: It is not sufficient to list, but important to also regulate, these contaminants, especially if they cause concern among drinking water providers. Both the length and content of the list is an issue. Nobody is concerned about germanium, but the Committee received two comments on PFOA. This indicates it should be regulated. Taking some of compounds off CCL list (while remaining on PCCL) would allow EPA to focus on ones that need regulation. A large list presents a "Catch 22" situation. If there is enough information, the contaminant should go into regulatory determination. Why is the contaminant on the CCL if it needs more investigation? We should focus on those that should be considered as serious actors, e.g., page 17 and nitrosamines. Another member stated that this discussion missed the point; we need to understand occurrence and health effects. The CCL is list of chemicals on which we don't have information. If we have all of this information, the contaminant shouldn't be on a CCL, it should be in the regulation hopper. Although it is not part of charge questions, how CCL plugs into the regulation process should be part of the discussion. The Committee obtained this information from a discussion with EPA at the previous meeting. The cover letter should state that Committee concludes that the draft CCL 3 is very long list, and there needs to be some prioritizing for various purposes. We need to articulate that very strongly.

Another important issue for the letter is on the second page. The apparent inability of EPA to make regulations results in states regulating on their own. The system should be able to deal with this issue; that says that something is wrong with the system that needs to be fixed. EPA representatives said that they did ask states for nominations and that data prepared by states came into the process. However, whether states were regulating the chemical didn't affect outcome of the CCL process. It was suggested that some members draft a new paragraph and let everyone review it. The list may not be too long. The real question is: what should be done with the contaminants on the list? How will EPA set priorities? This may be where the Committee should offer some suggestions. We need to capture this discussion in the letter.

The public comments reminded a member that CCL list will have ramifications for source waters, waste waters, and the water cycle. We need to look at whole water cycle. The draft CCL 3 is just looking at drinking water; we need to look upstream. Though it is not part of the current charge, we need to consider the issue from the Agency's standpoint. Why not regulate the contaminants from their source, e.g., waste

waters? In part this is the relationship between SDWA and CWA. It was suggested that the member who made these comments look at that section and consider revisions.

Another member suggested that the report is redundant, e.g., pesticides about to be cancelled pesticides are mentioned repeatedly. These should be edited.

At the request of EPA, a member clarified the comment “about to be cancelled” pesticides. One suggestion was that the draft list should be taken to the section of EPA responsible for special review and re-registration and ask for the status of the chemicals on the list. This would identify cancellation procedures has been started but has not been completed. The discussion should include an evaluation of occurrence data because of persistence. This part of the report will be revised.

Page 15, lines 4-8 introduces the concept of considering chemicals in groups. We should include similar sources as well as mechanisms of action. In light of the public comment, we might use PFCs as example here. THMs are well known, but need other examples that are not just looking backward. Another example would be the chlors and their degradation products. A member also suggested nitrosamines be treated as a group. Another member commented that nitrosamines should not be treated as a class as some have different toxicities and chemistries. PFCs are a good example, because of the idea that companies might substitute for regulated to unregulated. Another member mentioned that the sources and treatability differ for various nitrosamines. It was suggested that nitrosamines could be a group by priority, but not necessarily by regulatory approach. The first member stated that, for health effects, nitrosamines can be grouped together. Another member stated that they should be considered together, but not lumped together. For purposes of regulating in drinking water, they should be grouped together only if occur together. Some members were tasked with drafting a paragraph on this issue. They suggested that grouping chemicals is a sufficiently important issue to be elevated into the cover letter.

It was suggested to edit the section on toxins. The issue is whether their occurrence is unique due to algae blooms.

Given the number of comments on the pharmaceutical issue, several members mentioned that the CCL 3 should indicate why the chemicals did not get through the screening process from the PCCL to the CCL. It is important to have this explanation in a public document. The Committee wants to emphasize that CCL 3 is still an evolutionary process – it is good, and like any process could be improved. The Committee said that the process should continue to evolve, without interference from outside sources deciding which specific chemicals should be regulated under the CCL process. The Committee concluded that process is doing its job, and we should let it continue with the expected continuing improvements. A member mentioned that this statement may not be strong enough. EPA is doing its job. There is no indication that these chemicals, i.e., pharmaceuticals, are a problem more than other chemicals. Other groups, such as FDA and the National Academies are addressing this issue, and these are appropriate venues. The CCL should remain a science-based approach. The process will need to be improved. Pharmaceuticals are obviously an area of public and utility interest. EPA should stay engaged, but the CCL is not the only mechanism for EPA to stay involved with emerging concerns. The Committee concludes there are more appropriate avenues that should be used. CCL should keep to a science based approach.

Concluding Remarks

Dr. Rose thanked EPA and the public for their comments. She mentioned that the quality review of this document would be in October; therefore, edits and comments should be in by September 2. A concurrence vote will precede the quality review. The meeting was adjourned by Dr. Putzrath.

List of Public Attendees

Name	Affiliation
Gregory Dolan Vice President	Methanol Institute 4100 N. Fairfax Drive, Suite 740 Arlington, VA 22203
Dr. Audrey D. Levine National Program Director for Drinking Water Research	USEPA-ORD Washington, DC
Mary Dwyer Water Regulatory Officer	Lansing Board of Water and Light
Raanan (Ron) A. Bloom, Ph.D. Center for Drug Evaluation and Research	Food and Drug Administration
Steve Via Government Affairs	American Water Works Association 1300 Eye Street NW, Suite 701W Washington, DC 20005
Jennifer Beck, MPH Environmental Health Program Manager	Association of Public Health Laboratories 8515 Georgia Avenue, Suite 700 Silver Spring, MD 20910
Carla Glaser Section Chief, Distribution Science and Planning	Water Quality/Bureau of Water Supply NYC DEP
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Laura Cummings	Passaic Valley Water Commission

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Thomas Mohr Director and Past President	Groundwater Resources Association of California
John Herrmann	Policy Navigation Group www.policynavigation.com
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Teresa Cagnolatti Government Affairs Specialist	Underwriters Laboratories, Inc. 1850 M Street, NW, Suite 1000 Washington, DC 20036
Liz Buckley Assistant Editor	Pesticide & Toxic Chemical News Agra Informa 2200 Clarendon Blvd., Suite 1401 Arlington, VA 22201
Erica Martinson Associate Editor	Inside EPA's Water Policy Report
Linda Aller	Bennet & Williams
Ciara O'Connell	
Shane Snyder	Southern Nevada Water Authority Las Vegas, Nevada
Daniel J. Caldwell, Ph.D., DABT [JJCUS]	Principal, Environmental Toxicology

Respectfully Submitted:

/s/

Dr. Resha M. Putzrath
Designated Federal Officer

Certified as True:

/s/

Dr. Joan B. Rose, Chair
Drinking Water Committee