

**Drinking Water Quality Institute
July 14, 2008 - Meeting Minutes
NJ Environmental Infrastructure Trust Building
Princeton Pike, Lawrenceville, NJ**

MEMBERS PRESENT: Perry Cohn, Laura Cummings, Barker Hamill, Judith Klotz, Jean Matteo, Leslie McGeorge, David Pringle, Gloria Post, Mark Robson, Carol Storms

Non-members in attendance: From NJDEP(DWS)– Michele Putnam, Sandra Krietzman, Linda Bonnette & Kristin Hansen; (DSRT) Eileen Murphy; (Radon Program) Jenny Goodman; from USGS - Zoltan Szabo; from McCabe and Associates Mike McCabe

1. Call to Order and Administrative Business

Chair M. Robson opened the meeting at 9:50 AM. M. Robson welcomed S. Krietzman back to the DWQI.

2. Minutes

The minutes from the September 14, 2007 meeting were reviewed. A motion was made, seconded, and passed unanimously to approve the minutes with editorial corrections.

3. DWQI Members Appointment Status

K. Hansen provided a brief summary of the DWQI members' appointment status. She informed the Institute that the Governor's Office is requiring her to complete forms to move their appointments forward. K. Hansen mentioned she might need to reach out to the members in order to complete the forms.

4. Perchlorate Rule Status

S. Krietzman provided a brief status report of the Perchlorate Rule. It is currently in the NJDEP Office of Legal Affairs and has not yet been forwarded to the Governor's Office. B. Hamill informed the members that NJDEP anticipates forwarding it to the Governor's Office in August and it will be published in the New Jersey Register late September. L. McGeorge reminded the Institute that the proposed rule proposes an MCL of 5ppb for perchlorate.

5. Contaminant Candidate List 3

G. Post reported that NJDEP provided comments on the CCL3 to EPA which included a recommendation to develop an MCL for perchlorate since there is a sufficient amount of data for standard development for the contaminant. The comments are posted on DSRT's website.

6. Safe Drinking Water Act

S. Krietzman informed the Institute that the SDWA regulations must be readopted by November 9, 2009. NJDEP anticipates proposing changes to MCLs, some construction revisions, NCWS and CWS requirement changes, and increases in permit fees. There are also many issues that NJDEP is reviewing to address in the upcoming re adoption. These include:

- Reviewing the TMF process

- Adding a section on homeland security and/or operational requirements
- Incorporating the Ground Water Rule requirements
- Developing and including new MCLs.
- Changes in penalties
- Compliance revisions
- Increases in fees.
- Reevaluating the responsibilities of the counties.

NJDEP anticipates setting up internal groups to address these issues and also meeting with the public in “stakeholder” like meetings. L. Cummings offered that they could host the one to be held in North Jersey.

S. Krietzman stated they anticipate launching this issue to the Commissioner in late September/beginning of October. The projected proposal date is sometime next summer. B. Hamill mentioned the Division of Water Supply recently gained a new staff member, Branden Johnson, who will be responsible for putting the DWQI recommendation document together. M. Putnam mentioned the Division is not sure if radon will be included in the SDWA readoption or will be proposed separately.

7. Subcommittee Status:

Health Effects: G. Post provided the Health Effects Subcommittee update. The Health Effects Subcommittee separated the 2A and 2B contaminants under DWQI’s review into two groups: ones with existing MCLs, and ones with a health based MCL but no MCL due to testing or treatment limitations. The Health Effects Subcommittee has completed its review of the first group except it would like to re-review 1,1,1- Trichloroethane since new information has recently become available. It is anticipated that the health based MCL for this contaminant will either remain the same or go up. The only contaminants the Subcommittee is still reviewing are MEK and 2,4,6-Trichlorophenol. The information gathered and proposed health based MCL will be discussed at the next Subcommittee meeting scheduled for August 26, 2008. Since the last full DWQI meeting, P. Cohn performed an extensive review of benzene based on human occupational data and a health based MCL of .1ppb was recommended. Ethylene glycol was reviewed using newer studies and therefore, the health based MCL increased from 290 ppb to 10,000 ppb.

P. Cohn reviewed Dacthal, which was not addressed previously except in health guidance. The DWQI recommended that this chemical be reviewed because it had been found in private wells and other waters of the state. The recommended health based MCL is 28ppb.

1,2,3-Trichloropropane, which is found in both public and private wells, was also reviewed. There is no federal MCL for 1,2,3-Trichloropropane; the NJDEP has been using 25 ppt as a PQL to evaluate drinking water sources with 1,2,3-Trichloropropane based on the method detection limit of USEPA Method 504.1. 1,2,3-Trichloropropane was referred to Testing Subcommittee because the recommended PQL likely will be above the new health based MCL. G. Post mentioned we may need to refer this contaminant to an outside expert for more review. G. Post provided an updated table providing a summary of the health effects information.

Testing: B. Hamill provided the Testing subcommittee's update on the behalf of Steve Jenniss. The Health Effects Subcommittee referred two lists of contaminants to the Testing Subcommittee in two memos dated December 2005 and September 2006 for PQL review. The Testing Subcommittee has met twice since the last full DWQI meeting in September 2007. The Subcommittee is in the process of drafting the Testing Subcommittee Recommendation Document which lists recommendations regarding PQL's for each of the contaminants in the referral memos. B. Hamill noted there are a few changes that need to be made to the contaminant status sheet that was provided at the beginning of the meeting.

PCBs and chlordane were not reevaluated since no new data has become available. The Division of Water Supply will conduct a PCB study, which will be done by the end of October. There are new PCBs analytical methods, available, which may provide additional data for standard development.

B. Hamill briefly discussed n-Hexane and Formaldehyde. To analyze n-Hexane there is only one VOC method available, method 524.2. Formaldehyde has its own method and sampling will probably be required of those systems that use ozonation for disinfection. The Testing Subcommittee also looked at the PQLs for all of the VOCs. The Subcommittee looked at the MDL data from the past compliance period (3 year period) and calculated a median MDL for each contaminant. The median was then multiplied by 5 and the result became the PQL. B. Hamill stated the Subcommittee also discussed and decided to round PQLs to 1 significant figure.

Treatment: B. Hamill provided a brief update for the Treatment Subcommittee. The Treatment Subcommittee and NJDEP developed a contract with an outside vendor to evaluate treatment options and capabilities for the referred contaminants. Black and Veatch was awarded the contract and provided the NJDEP with a rough draft document in March. DSRT provided NJDEP staff and the Treatment Subcommittee with a copy of the document for their review. Comments were provided to Black and Veatch and NJDEP anticipates receiving an updated version within the next week. In the previous draft, Black and Veatch identified methods to treat for the contaminants but not their capabilities. They are having trouble locating treatment options for ethylene glycol.

Radon: J. Klotz reported the Radon Subcommittee met twice since the last DWQI meeting: December 2007 and July 2008. In September 2007, the Subcommittee reported to the DWQI that it decided to recommend a MCL for radon at either 800 or 1000pCi/L. When the Subcommittee met in December, it voted on an MCL of 800pCi/L rather than 1000 pCi/L for radon because:

- Lives saved at 800 (195 over 70 years) are much greater than at 1000 (142)
- The difference in cost per life saved is small (\$6,920)
- Thus the ratio of health benefit to cost of mitigation is highest at 800

The Subcommittee reviewed the cancer risk of ingestion and inhalation at levels of 300, 500, 800, and 1000 pCi/L. Even at those levels, the cancer risk is higher than other chemicals with existing MCLs. Scenarios for treatment and costs per lives saved were also reviewed.

According to the estimates, there is not a significant difference in the cost of life saved between 800 and 1000. The Subcommittee also considered the relative source contribution. The Relative Source Contribution of radon from water to the background level of radon in outdoor air suggests an 800 pCi/L standard.

Since each 10,000 pCi/L of Rn in groundwater results in approximately 1 pCi/L in air, and outdoor air has about 0.4 pCi/L; 0.4 pCi/L in air corresponds to about 4000 pCi/L in water. Twenty percent of 4000 pCi/L is 800 pCi/L.

NJDEP developed a draft Radon Recommendation Support document. The Subcommittee provided comments at the July 2nd meeting which include:

- Review and possible modification of cost estimates given recent increases in treatment costs due to fuel, materials, etc.
- The MCL would be established for points of entry but most current data from the state is from distribution samples, so we need to review existing national data on the relationship of radon concentrations at points of entry to concentrations in distribution samples
- It has yet to be decided whether the MCL would be phased-in based on pre-remediation radon level, or size, of the water system.

The next Radon Subcommittee meeting is scheduled for September 17, 2008.

B. Hamill stated the Subcommittee is recommending the 800pCi/L not be applied to private wells until the issue of radon in private wells is investigated further. J. Goodman mentioned that based on the experience of the Bureau of Environmental Radiation, carbon is an acceptable treatment alternative in the home if the concentration in the drinking water is less than 4000 pCi/L.

L. McGeorge asked Z. Szabo if he has data showing the relationship of POE and distribution system data, because this is an issue the Subcommittee is currently dealing with and would like to address. Z. Szabo stated that based on his experience, radon is generally higher in the distribution system in Iowa and southern New Jersey, with fewer data elsewhere.

8. Contaminant Status Sheet

K. Hansen provided a brief overview of the DWQI contaminant status sheet, that she developed to track the status of the Subcommittee's work. Chromium was added to the spreadsheet at E. Murphy's request because the NJDEP Chromium Workgroup is currently evaluating a new National Toxicology Program oral cancer study for hexavalent chromium in drinking water. If the risk assessment based on this new study is accepted by the Department, the same risk assessment could be used as the basis for the revision of the MCL for chromium. The results of the risk assessment may indicate a need to lower the chromium MCL in the future.

9. Unregulated Contaminant Studies

E. Murphy briefly discussed the unregulated contaminant studies being conducted within the NJDEP. Black and Veatch has provided a review of treatment of unregulated contaminants in ground water and surface water. There are currently two demonstration projects occurring to better understand how treatment addresses unregulated contaminants. These studies are being

conducted at Fairlawn Water Department and Merchantville-Pennsauken Water Commission, which are known to have unregulated contaminants from previous studies. Each project needs approvals and permits and in order to go to bid for the construction. We anticipate construction starting this fall. L. McGeorge asked if we anticipate a lot of media attention. E. Murphy stated a press release would be issued once the construction begins.

L. McGeorge also mentioned the National Rivers and Streams Survey, which includes testing of ambient water at selected sites for personal products and pharmaceuticals. This survey will take approximately 2 years and is being conducted throughout the country. New Jersey has at least one site, which is the Delaware River.

10. Next meeting

M. Robson with the assistance of the other members provided K. Hansen with a list of possible meeting dates in October 2008 and January 2009 for the next DWQI meeting. The next DWQI meetings have been scheduled for October 21, 2008 at 1:00 PM and January 27, 2009 at 1:00 PM.

11. Meeting Adjournment

The meeting was adjourned at 12:25 p.m.

Minutes prepared by:

Kristin Hansen and revised by Branden Johnson
Bureau of Safe Drinking Water Technical Assistance
Water Supply Operations
July 21, 2008
Revised October 21, 2008 - DWQI members