Drinking Water Quality Institute
December 1st, 2006 - Meeting Minutes
NJ Environmental Infrastructure Trust
Lawrenceville, NJ

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

MEMBERS ABSENT: Russell Ford; Steve Jenniss; Ann Marie Fournier; Eugene Golub

Non-members in attendance: From NJDEP(BSDW) – Diane Pupa, Karen Fell, & Jonathan Meyers, (DSRT) Eileen Murphy, Sue Shannon & Lee Lippincott, (NJGS) Steve Spayd; from USGS - Zoltan Szabo; from Garden State Labs - Harvey Klein; from Black & Veatch – John Dyksen

1. Call to Order and Administrative Business

Chair M. Robson opened the meeting at 1:10 p.m. It was agreed that John Dyksen who was speaking on the topic of unregulated contaminants should be first on the agenda since he had to leave early.

E. Murphy began with a brief introduction of unregulated contaminants and noted that the last presentation to the DWQI on unregulated organic chemicals was September 2003. She provided an overview of why DEP wanted to investigate treatment options for these compounds. The main points she stressed were that several previous research studies by DEP and USGS indicate that hundreds of unregulated organics (e.g. flame retardants, pharmaceuticals, antibiotics, etc.) are appearing in raw and finished drinking water nation-wide, and also in NJ as well (copies of the DEP study to be provided). Since their health effects are uncertain and their detection is questionable, it is often difficult to know a.) how to treat/remove these unregulated organics from drinking water and b.) to know at what level to treat down to. The traditional approach of treating "chemical-by-chemical" is not considered a viable option for this suite of chemicals. Therefore, Black and Veatch was hired by DEP to conduct a through literature review on how to best treat these organic chemicals in surface and ground water sources of drinking water. The information gleaned from this investigation will be field tested on two community water systems (Fairlawn in Northern NJ & Merchantville-Pennsauken in Southern NJ) within the next year or two.

J. Dyksen summarized two reports (attached) prepared by Black & Veatch that outline occurrence of these unregulated organic chemicals, treatment options & evaluation, and the costs associated with removing them in surface water and ground water drinking water sources in NJ. Black & Veatch concluded that no one treatment process removes all chemicals and that a treatment "train" is usually the best way to remove "most" of the chemicals although that also depends on the raw water characteristics. The reports suggest that since there is likely to be a variety of processes needed, water systems should maximize efficiency of their existing treatment systems (if present) first, then install other treatments (e.g. GAC, air stripping, ozone-hydrogen peroxide, & UV-hydrogen peroxide) as needed. He ended with suggesting collaborating with other organizations

such as EPA-Ohio, AWWARF, other utilities, etc. (for potential funding options) on more research into this topic.

2. Meeting Minutes

The minutes from the September 15th, 2006 meeting were reviewed. A motion was made, seconded, and passed unanimously to approve the minutes.

The minutes from the May 5th, 2006 meeting were reviewed. A comment was made regarding the Radon Section and it was agreed that the minutes would be revised by BSDW. A motion was then made, seconded, and passed unanimously to approve the minutes.

3. Status of Subcommittee Work to Date

a. Health Effects Subcommittee

Chair D. Pringle reported that the subcommittee had not met since the last meeting in September; however, a subgroup did meet to discuss technical issues. P. Cohn provided a summary of that technical meeting on Nov. 29th to discuss California's benzene exposure assessment studies. He explained that it is not appropriate to use EPA's IRIS database because it suggests "a range" for the cancer slope for benzene. The most stringent HBMCL using the EPA range would be 0.6 ppb and some epi-studies suggest the HBMCL could be as low as 0.15. Further work is needed before a final subcommittee recommendation can be provided.

P. Cohn also provided a brief update on a new perchlorate study based on the CDC National Health and Nutritional Examination Study (NHANES) from the 2001-2002 period. His interim analyses of the CDC raw data appears to indicate that the HBMCL, which is based primarily on the risk to women of reproductive age and pregnant women, will not be changed. Further analysis will be conducted.

b. Testing Subcommittee

B. Hamill summarized a recent subcommittee meeting by stating that only a few loose ends remain then formaldehyde, n-hexane and PCB's will be finished. DEP-BSDW purchased a copy of EPA's ICR database CD and the formaldehyde concentrations found in NJ are similar to those nation-wide for CWS that ozonate. The subcommittee has a few remaining questions on two methods for analyzing formaldehyde and anticipates to resolve the questions by next meeting. The committee's work on n-hexane is basically done and the committee will be recommending that n-hexane be regulated since both the PQL and MDL are well below the HBMCL of 33 ppb. He also summarized a BSDW PCB mini-study where approximately 11 CWS will be analyzed for PCB aroclors. This project should be completed by Jan. 07. Lastly, the subcommittee also formally referred 5 VOC's (1,3-dichlorobenzene, 1,1-dichloroethane, 1,4-dichlorobenzene, 1,2,4-trichlorobenzene, and 1,1-dichloroethylene) to the Treatment Subcommittee for their review.

B. Hamill also raised two issues that developed out of the last Testing Subcommittee meeting on November 29th, 2006: 1.) a rounding issue of significant figures when establishing PQLs, MDL's and/or MCL's and 2.) applying a safety factor of 5 to the MDL to set the PQL. He stated that the rounding issue of significant figures would be referred to DEP's Standards Consistency Committee for their input on how DEP as a Department handles such matters when setting soil

standards, cleanup criteria, etc. The safety factor issue would eventually be resolved when the NJQL rule gets promulgated. The NJQL data will likely be collected in the Spring of '07 and analyzed sometime later that year.

c. Treatment Subcommittee

Chair P. LaPierre stated that the Subcommittee just received the two Black and Veatch reports (one on ground water treatment and one on surface water treatment) and that time is needed to review & approve those documents. The subcommittee will be scheduling a conference call soon to finalize the review.

d. Radon Ad-Hoc Subcommittee

J. Klotz stated that the Subcommittee met on November 13th, 2006 and that DEP's Radon Program presented a variety of risks associated with radon concentrations, and that BSDW provided data on the number of points-of-entries, system sizes and costs associated with treatment. She stated that the committee is evaluating the idea of using a 2-tiered approach in regulating radon: one as an "action level (AL)", the other as an MCL. Those systems exceeding the AL might be required to contribute financially to a fund set aside for radon education and (air) mitigation purposes, while systems exceeding the MCL would be required to treat the water. The committee is still exploring ideas and no final decisions on any approach have been made to date.

4. Other Business

The following 2007 meeting dates were selected: March 2nd, June 1st, September 14th and December 7th. All meetings will be scheduled for 1:00 PM – 3:00 PM. A suggestion was made to have a meeting at the Eco-Complex in Burlington County, and another suggestion was made to possibly invite DEP Commissioner Lisa Jackson to a meeting this year as was done last year.

5. Meeting Adjournment

The meeting was adjourned at 3:30 p.m.

Minutes prepared by
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