

**Drinking Water Quality Institute
Environmental Infrastructure Trust
March 31st, 2006 - Meeting Minutes
Lawrenceville, NJ**

MEMBERS PRESENT: Mark Robson, Leslie McGeorge, Perry Cohn, Russell Ford, Paul LaPierre, Carol Storms, Eileen Murphy, Barker Hamill, Jean Matteo, Steve Jenniss, Laura Cummings, Judith Klotz, and Ann Kruger (for Ella Filippone for Eugene Golub)

MEMBERS ABSENT: Ann Marie Fournier, David Pringle

Non-members in attendance: From NJDEP - Michele Putnam, Suzanne Shannon, Gloria Post, Diane Pupa, Karen Fell, Drew Sites. From USGS: Zoltan Szabo. From Garden State Labs - Harvey Klein. From Black & Veatch Corp.-Kevin Dixon. Other parties: Leo Kruger

1. Call to Order and Administrative Business

Chair M. Robson opened the meeting at 1:20 p.m. M. Robson introduced & welcomed two newly appointed members to the Institute: Laura Cummings (Passaic Valley Water Commission) & Judith Klotz (UMDNJ).

2. Minutes of the December 16th, 2005, DWQI meeting

The minutes from the Dec. 16th, 2005 meeting were reviewed and one change was suggested to include the phrase "*most of*" the same parameters into the following statement: "Since the DEP is close to proposing an MCL of 5 ppb for Public Water Systems (PWS), and PWTA tests *for most of* the same parameters as PWSs, the MCL would also be applicable to private wells."

A motion was made, seconded, and passed unanimously to revise & approve the minutes.

3. Perchlorate

B. Hamill provided a rule update stating that the perchlorate rule proposal has been drafted and is currently undergoing internal DEP legal review. DEP hopes to have the rule proposed and finalized by the end of 2006.

In addition, D. Sites from DEP's-Site Remediation Program provided some updates about a short term study his group is conducting with L. Lippincott from DEP's Division of Science, Research & Technology and NJ Institute of Technology on various media to better understand treating perchlorate, esp. point of entry options. The study to evaluate treatment media for perchlorate removal began in November 2005. Results have shown that a nitrate resin appears to be the most effective media having treated 60,000 bed volumes of water from 95 ppb down to <1ppb. Testing is continuing because the resin is continuing to operate without

breakthrough. It is calculated that treating perchlorate from an initial concentration of 95ppb, and if treating down to <1pbb, the resin would last approximately 5 years if used in a POET. Based on the current data it is calculated that a home with a perchlorate concentration of 20 ppb (assuming 100 gallons of water/person/day & 5 persons /household) the unit would last at least 20 years.

A second phase of the study is planned to conduct a side-by-side evaluation of commercially available nitrate/perchlorate resins.

4. Subcommittee Membership

Chair, M. Robson described the purpose of all three subcommittees (for the newest members) and reviewed a handout of current subcommittee members. Several of the new DWQI members volunteered to be part of one or more subcommittees. R. Ford and L. Cummings will be on the treatment subcommittee, J. Klotz will be on the health effects subcommittee and radon ad-hoc committee.

5. Subcommittee Work Update

Testing Subcommittee- Chair, S. Jenniss discussed the subcommittee's work on re-evaluating PQL's as they pertain to the list of A-280 chemicals currently under review. These chemicals in particular currently under consideration are divided into three categories: a.) formaldehyde & hexane, b.) PCB's and chlordane, and c.) PCE, 1,2 DCA and Carbon Tetrachloride. The subcommittee is evaluating any new test methods, data reporting, BSDW occurrence data, etc. The subcommittee has completed several of these tasks, but a few remain outstanding and should be completed by the next meeting on May 5th.

Steve also summarized the significance of OQA's NJQL draft rule proposal currently undergoing legal review at DEP.

Health Effects Subcommittee- L. McGeorge provided an update, in lieu of D. Pringle. She discussed the review of the health based levels for the list of A280 contaminants. The review process involved literature reviews and various database analyses. She summarized that of the 29 A-280 chemicals under review, to date 17 of them did not have a change in the health based MCL; 5 of them never had an MCL due to various limitations (analytical or treatability), and the remaining 9 have may warrant a health based MCL change and therefore, may result in an overall MCL change(s).

There are several documents written and in need of subcommittee comments and should be finalized by the next meeting May 5th.

Treatment Subcommittee- Chair, P. LaPierre provided a summary of the unregulated organic chemicals-treatment project. Black and Veatch Consulting, who was hired to perform a literature review of various treatment options, submitted a draft (partial) document for review by the subcommittee, who in turn did provide comments on March 29th. Black and Veatch

will consider those comments and continue to research the numerous issues and provide a more in depth document in the near future.

6. Radon in Drinking Water

B. Hamill provided an overview of the DAG's opinion regarding DEP's statutory authority to set an MCL for radon under NJ's Safe Drinking Water Act (SDWA). DEP does have the authority to regulate radon, although that process is not described in the law like it is for organic chemicals. He outlined some occurrence data provided by BSDW which indicate more focused radon sampling is necessary to better understand the number of points of entry (POE's) that may require treatment if radon is regulated. This in turn will help identify treatment costs to the industry if a rule is promulgated.

R. Ford commented that for a system such as Ridgewood Water Dept., since they have an existing air stripper for VOC contamination, any radon in the system will also be treated by the stripper, therefore, POEs with existing strippers should not be included in the BSDW' s sampling plan.

At the request of B. Hamill, K. Dixon (Black and Veatch) provided a summary of comments by AWWA when he served as Chair of the Radon Technology Work Group, that the proposed MCL of 300 pCi/L was too low, and that the AWWA recommended a higher MCL (within the same risk range of 2-3 per 10K).

He also summarized a study by Bob Raucher & Megan Harrod to determine what a reasonable MCL for radon might be, and suggested that EPA base risk on non-smokers rather than smokers. He agreed to provide a copy of the study to all members.

7. Future Meeting Dates

The next meeting is scheduled for May 5th at 1:00 at NJDEP-with Commissioner Lisa Jackson. The additional dates of Sept. 15th, and Dec. 1st were slated for future meetings at the NJEIT.

8. DWQI-Draft Workplan

M. Robson discussed and reviewed the draft workplan with the members. There was overall agreement of the plan with the exception of a few minor revisions/suggestions, which will be incorporated into the final draft for the May 5th meeting.

P. Cohn discussed his rationale for asking the DWQI to review the federal MCL for radium, which is 5 pCi/L for the combined activity of the radium-226 and radium-228 isotopes. Radium is a naturally occurring radioactive element, found especially in the shallow aquifers of southern New Jersey. The estimated lifetime cancer risk associated with that MCL is approximately 2 incident cancers per 10,000 people. Since the human risk from radium is

well characterized and there is strong evidence for that the risk estimate, it is reasonable to consider reducing this risk.

9. Recent drinking water developments not on Agenda:

Fluoride:

P.Cohn, G. Post and J. Klotz discussed recent developments with regard to fluoride (in the form of a NAS webcast and CDC conference call). The NAS was asked by USEPA to review the fluoride MCL, which applies to fluoride present naturally or due to being discharged as a pollutant. The current MCL is 4 mg/L to protect from adverse effects, with a secondary standard of 2 mg/L to protect from mottling of the teeth, which is considered by EPA to be a cosmetic effect. (The concentration of fluoride intentionally added to water supplies to prevent tooth decay is lower, 0.7-1.2 mg/L). NAS concluded that above 4 mg/L, 10% of children develop severe enamel fluorosis, which causes pitting and weakening of the teeth and can increase tooth decay. The majority of the NAS committee also felt that fluoride at this level is likely to increase the risk of bone cancer, but this was not unanimous. Between 2 and 4 mg/L, there is some incidence of severe enamel fluorosis, and below 2 mg/L, this condition essentially does not occur. P. Cohn and J. Klotz also discussed the fact that the NRC concluded that the evidence as to whether fluoride increases cancer risk is inconclusive at this time. A Ph.D. thesis written by a Harvard student involving epidemiological studies on this issue is expected to be published in the near future, and may shed more light on the issue. Evaluating fluoride would be a major task for the NJDWQI, and would not be undertaken until the rest of the items on the Workplan are complete.

New Proposed Massachusetts Perchlorate MCL:

B. Hamill stated that Massachusetts just proposed a new rule for a perchlorate MCL of 2ppb, even though Massachusetts was originally considering 1ppb. The change in the proposed MCL occurred because Massachusetts factored in perchlorate that might form from disinfecting agents.

10. Meeting Adjournment

The meeting was adjourned at 3:20 p.m.

Minutes prepared by

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