Drinking Water Quality Institute
May 7, 2010 Meeting Minutes
New Jersey Environmental Infrastructure Trust Building
Princeton Pike, Lawrenceville, NJ

Members Present: Steve Jenniss (Acting Chair), Dan Caldwell, Perry Cohn, Judith Klotz, Sandy Krietzman, Paul La Pierre, Leslie McGeorge, Gloria Post, Sheng-Lu Soong, Carol Storms

Non-members Present: Linda Bonnette, Branden Johnson, Eileen Murphy (NJDEP-Division of Water Supply); Judy Louis (NJDEP-Office of Science); Zoltan Szabo (US Geological Survey); David Brogan (New Jersey Business and Industry Association); Chrissy Buteas (Capital Impact Group); Tracy Carluccio (Delaware Riverkeeper Network); Tony Russo (Chemistry Council of New Jersey); Bill Wolfe (New Jersey Public Employees for Environmental Responsibility)

1. Call to Order, Welcome and Introductions—S. Jenniss
Acting Chairman Jenniss called the meeting to order at 1:05 PM. He noted the resignation of Dr. Mark Robson, Chair of the DWQI.

L. McGeorge conveyed a message from the NJDEP Commissioner, Bob Martin, who expressed his support for the work of the DWQI. The Commissioner wished the DWQI to know that every DEP decision will be based on a thoughtful review of all available science. Commissioner Martin appreciates the work of all of the DWQI members, including those who resigned or were replaced by new appointees in the last few months, and he is formulating thank-you letters to all five people.

As part of the reorganization of NJDEP, the Office of Science will report to the new Deputy Commissioner, Irene Kropp and she will be involved with NJDEP standards development; she will meet with the NJDEP's Standards Consistency Committee. A new position of Assistant Commissioner for Water Resource Management has been established with John Plonski appointed to this position. Mr. Plonski will oversee the four major NJDEP water programs - Water Supply, Water Monitoring and Standards, Water Quality, and New Jersey Geological Survey.

2. Minutes from February 1, 2010—S. Jenniss
Draft minutes were reviewed by the DWQI and were approved, contingent on a correction suggested by C. Storms (implemented by B. Johnson).

3. Subcommittee Summaries—Subcommittee Chairpersons
Health Effects: L. McGeorge reported that the subcommittee had not met since DWQI's February 2010 meeting, but NJDEP and NJDHSS continued to gather information for risk assessments on the parameters on the DWQI HE subcommittee workplan, including tertiary butyl alcohol, radium, and PFOA.

Testing: S. Jenniss reported that the subcommittee had met twice since DWQI's February meeting. NJDEP reviewed NJDHSS laboratory-analyzed data from 2009 to determine the occurrence of n-hexane and tertiary butyl alcohol (TBA) in drinking water. The NJDHSS

laboratory had added n-hexane and TBA as analytes to the existing VOC method some years ago. There were no detections of n-hexane and TBA in 180 samples analyzed, but more data are being reviewed at the request of the Testing Subcommittee. S. Krietzman clarified that n-hexane was listed in the original New Jersey legislation, which was why the DWQI established a recommended MCL. TBA was added to the list of chemicals for potential drinking water standard development, in part because of occurrence data supplied by the Site Remediation Program. Currently used drinking water VOC methods do not detect 2,4,6-trichlorophenol. S. Jenniss noted that the subcommittee is still at the method research stage (e.g., looking at other states' approaches) for hexavalent chromium.

Treatment: P. LaPierre said that the subcommittee had not met since the full DWQI's February 2010 meeting, but had earlier recommended that a contract with the New Jersey Commission on Advanced Technology (NJCAT) be pursued to conduct a literature review on chromium treatment, and possibly PFOA treatment. DEP's Office of Science and Rutgers University researchers are preparing a proposal to investigate the effects of chlorination and ozonation on conversion of trivalent to hexavalent chromium, and chromium contributions to drinking water from potential natural sources or distribution pipes. The existing federal MCL for total chromium (100 ppb) is based on the noncarcinogenic toxicity of hexavalent chromium, assuming 100% conversion, but the extent of the conversion has not been demonstrated. Standard methods for hexavalent chromium testing cannot currently achieve low detection limits due to matrix effects and other interference; research methods would be used in the proposed study to detect low levels. P. LaPierre noted the subcommittee will coordinate with the Ad Hoc Radon Subcommittee with regard to discussing private well treatment for radon.

4. DEP Review of USEPA Six-Year Review of Existing Federal MCLs, and Related Issues—G. Post, S. Krietzman

G. Post reviewed USEPA's request for comments on its second "Six-Year Review" of its MCLs and treatment techniques, with USEPA recommending possible reduction of MCLs for tetrachloroethylene (PCE) and trichloroethylene (TCE), and revised treatment techniques for acrylamide and epichlorohydrin. New Jersey MCLs are currently lower than the federal MCLs for PCE and TCE. Practical Quantitation Limit (PQL) studies conducted by NJDEP (L. McGeorge is an author on one of the papers) and/or DWQI were cited in the Review as part of the technical basis for the two MCL revisions being considered. The USEPA document also states that the NJDEP risk assessment for oral carcinogenicity of hexavalent chromium is being considered in USEPA's risk assessment work for this chemical. G. Post has drafted comments on the USEPA Six-Year Review, which are being considered for submission by NJDEP managers.

In summary, 19 contaminants have both USEPA MCLs and NJ MCLs; the technical bases (risk assessment and PQL) are in close agreement. USEPA considers occurrence and exposure data to determine if there will be a meaningful increase in public health protection from reducing an MCL or significant cost savings from increasing an MCL. Thus, for a number of chemicals for which USEPA acknowledged that current analytical methods support reduction of the PQL and the resulting MCL, a reduction in the MCL was not recommended by USEPA with the rationale that it would not result in a meaningful increase in public health protection. The DWQI, under the state's drinking water statute, has not considered these factors in determining its MCL recommendations, although occurrence is considered in the initial decision as to whether to

develop an initial MCL recommendation. C. Storms noted that USEPA is also looking for comments on synthetic organic chemical (SOC) monitoring, noncommunity water system monitoring, chromium, nitrite, a possible selenium MCL, the impact of climate change, and a possible reduction in nitrate monitoring. She also noted that the water industry supports achieving lower monomer levels with regard to the proposed changes for epichlorohydrin and acrylamide identified by USEPA's Six-Year Review. L. McGeorge noted that the DWQI's current workplan includes an examination of nitrate's health effects.

S. Krietzman reviewed USEPA's recently released "New Drinking Water Strategy," which entails 1) consideration of regulating contaminants in groups of related chemicals; 2) development of treatment technology; 3) use of the Federal Insecticide, Fungicide and Rodenticide Act and Toxic Substances Control Act authorities to aid in collecting information on contaminants; and 4) cooperation with states in gathering occurrence data. As for the consideration of drinking water contaminants as groups, S. Krietzman noted this approach has been already considered by NJDEP for several years.

G. Post distributed an updated version of her 2010 Society of Toxicology Annual Meeting poster on "Risk Assessment Basis for New and Updated New Jersey Drinking Water Health-Based Maximum Contaminant Level Recommendations". [Ed. Note: document will be posted on the DWQI website.]

5. Update on Contaminants with Regional Requirements in Private Well Testing Act (PWTA)

J. Louis and Z. Szabo summarized gross alpha, arsenic and mercury occurrence data. Twelve southern counties are required by PWTA regulations to test for gross alpha; elevated gross alpha is likely caused by radium in southern New Jersey. In northern New Jersey, however, a gross alpha test is not a good measure of radium because radium and uranium vary in the groundwater depending on the levels of dissolved oxygen and alkalinity. Available data indicate that nearly 4% of Piedmont private wells and nearly 2.5% of Highland private wells potentially exceed the public water MCLs for gross alpha. Because different treatment methods are used for radium (cation exchange) and uranium (anion exchange), any expansion of gross alpha testing to the northern counties would be insufficient to identify the treatment method needed to address a homeowner's gross alpha problem. However, the test for arsenic required in the 12 northern counties uses a method that also identifies uranium, so requiring both gross alpha and uranium in northern PWTA tests would be feasible from an analytical standpoint. In addition this would give homeowners the information they need to add treatment to their potable water sources.

C. Storms observed that USEPA has begun reviewing its Radionuclide Rule, based on questions arising about testing methods, among other issues.

Arsenic testing is currently required in 12 northern New Jersey counties. In southern New Jersey, the primary source of arsenic in drinking water is glauconite-bearing formations in three aquifers underlying Burlington, Camden, Gloucester, Monmouth and Salem counties. Available data suggest potential exceedances of the arsenic MCL in 1% of private wells. Because the method

for required mercury tests in 10 southern counties also identifies arsenic levels, extending the arsenic requirement to these five counties would be feasible from an analytical standpoint.

There have been no detections of mercury in northern New Jersey from NJGS or USGS data. PWTA data show only 1% detection and no exceedances in a separate small private-well study. Three water systems that monitored for mercury in 2000-2002 produced a single unconfirmed detection each. Overall, there were insufficient data to support extending mercury testing under PWTA into northern New Jersey.

6. Review of Status of Perchlorate MCL Recommendation and Proposed Rule

S. Krietzman reviewed the status of the perchlorate rule: proposed March 16, 2009; a public hearing held April 13, 2009; stakeholder meeting March 10, 2010; and responses drafted. The Commissioner decided not to proceed with the rule at this time; the rule was allowed to expire on March 16, 2010. The Commissioner has consulted with the USEPA, and is considering further action. J. Klotz stated that historically the NJDEP has not relied on USEPA regulatory action, and in fact the USEPA and other states often follow New Jersey's lead in setting maximum contaminant levels. S. Jenniss asked that the DWQI be notified if they can provide any further information or help to the Commissioner.

G. Post summarized the perchlorate technical issues by noting that the current USEPA Health Reference Level and the MCL recommended by the DWQI and proposed by NJDEP use the same toxicological basis (Reference Dose), but differ in their exposure assumptions, with USEPA considering only adults (pregnant women) and NJDEP considering both adults and infants. Consideration of infant exposures results in a more stringent drinking water concentration than for adults, if all other relevant factors are equal, because infants drink more on a body weight basis than do adults. USEPA announced in August 2009 that they would reconsider their current Health Reference Level, based on reconsideration of their earlier decision not to consider exposure of infants; in this notice USEPA also stated that they are not asking the National Academy of Sciences for further advice on perchlorate and that they are not reconsidering the toxicological basis (Reference Dose) for their perchlorate risk assessment. G. Post reminded the DWQI that research published after the DWQI recommendation and NJDEP's proposal of the MCL has shown dietary exposure of infants to perchlorate through powdered formula, an exposure route which was previously unknown. If the recommended MCL were to have taken exposure through powdered formula into account, it would have been lower than the current DWQI recommendation of 5 micrograms per liter.

7. Public Comment

B. Wolfe of New Jersey Public Employees for Environmental Responsibility: He stated that his organization tries to support sound science, without political and economic considerations, in environmental policy-making. He was pleased at the DWQI's history of leadership and soundness of its science in recommending drinking water standards. He asked for clarification regarding whether the letter from the DWQI to the NJDEP Commissioner on the perchlorate MCL rule mentioned in the DWQI's February minutes had been sent. [Ed. Note: It was not]. He urged the DWQI to clarify the basis of its decisions in light of recent remarks by the NJDEP Commissioner suggesting to B. Wolfe that the NJDEP Commissioner did not understand either DWQI practice or the relevant law, citing testimony by the Commissioner before a legislative

committee. B. Wolfe added that the status of the DWQI's March 2009 MCL recommendations needed to be clarified, as these recommendations were not included in the Red Tape Review Group's deliberations. [Ed. Note: These recommendations have not yet been proposed as regulations by DEP, so were not reviewed by the Red Tape Review Group.] Governor Christie's Executive Order 2, in B. Wolfe's view, constrains the Commissioner's discretion with regard to rules, in that B. Wolfe views the NJ Safe Drinking Water Act (NJSDWA) as authorizing explicit standards more stringent (and for more chemicals) than the drinking water standards adopted by the federal government. He mentioned that a current bill, AB486, would prohibit such stricter standards unless authorized by statute. He also raised concerns about effects of cost-benefit-analysis on DWQI recommendations. Finally, B. Wolfe noted that DEP Science Advisory Board appointments were going to be announced shortly and the relationship between the SAB and the DWQI and the Commissioner's regulatory discretion needed to be clarified.

T. Carluccio of the Delaware Riverkeeper (DR): She noted that her organization had submitted a letter when NJDEP first announced its intention to form the SAB under the previous administration supporting the continuation of the NJDEP's Division of Science, Research and Technology (now the Office of Science). The DR supported DWQI's excellent quality of work compared to other states in the Delaware watershed, especially with arsenic in the Private Well Testing Act program and on PFOA. The DR had hoped that the new Commissioner would act on perchlorate, and endorsed B. Wolfe's suggestion that the DWQI consider sending the Commissioner a letter on perchlorate. She stated that the DWQI works behind the scenes on sound science and the public does not realize this. Finally, she asked if there would be an opportunity for DWQI or public input on the comments that DEP might submit on USEPA's Six-Year Review. S. Krietzman stated that anyone can comment directly on the USEPA Six-Year Review itself, and that comments submitted by NJDEP will be posted on USEPA's online docket as well as on NJDEP's website [Ed. Note: Those comments are posted on the NJDEP Division of Water Supply website, under "What's New"]. She said that at times NJDEP has shared draft comments on USEPA publications with the DWQI.

8. Next Meeting

The next meeting was tentatively scheduled for September 10, with DWQI members asked to send their availability to B. Johnson. The meeting date will be posted in the DWQI website.

9. Adjournment

Acting Chairman S. Jenniss brought the meeting to a close at 3:25 P.M.

Minutes by B. Johnson 5-7-10.