

Minutes of the June 16, 2015 Meeting  
Small Water Systems Technical Assistance Center Advisory Board (TAC)

A regular meeting of the TAC Board was called to order by Tom Fridirici, Department liaison to the Board at approximately 9:00 AM in Susquehanna Conference Rooms A&B in the Southcentral Regional office of DEP. Chairperson Serena A. DiMagno was in attendance and assumed responsibility for the meeting immediately after the opening remarks and housekeeping. The purpose of the meeting was to gather stakeholder input specific to the distribution disinfection residual requirements in the proposed Revised Total Coliform Rule (RTCR). This was the fifth meeting of the Board in 2015.

**The following Board members were present:**

Stan Brown, Pennsylvania Public Utilities Commission (PUC)  
Serena DiMagno, Water Works Operators Association of Pennsylvania (WWOAP)  
E. Lee Koch, Pennsylvania Municipal Authorities Association (PMAA)  
Mary Roland, State Board for Certification of Sewage Treatment Plant & Waterworks Operators (SBCSTPWWO)  
Mike Sienkiewicz, Pennsylvania Manufactured Housing Association (PMHA)  
Dan Standish, American Water Works Association, Pennsylvania Section (AWWA)

**The following Alternate members were present:**

Chip Bilger, WWOAP  
Jennifer Case, PMAA  
Lisa Daniels, Pennsylvania Department of Environmental Protection (DEP)  
Ashley Everette, Office of Consumer Advocate (OCA)  
Christine Caldara Piatos, Center for Rural Pennsylvania (CRP)  
James Steele, Pennsylvania Builders Association (PBA)

**The following Organizations were not represented:**

Pennsylvania Department of Community and Economic Development (DCED)  
Pennsylvania Infrastructure Investment Authority (PIIA)  
Pennsylvania Rural Water Association (PRWA)  
Pennsylvania State Association of Township Supervisors (PSATS)  
County Commissioners Association of Pennsylvania (CCAP)  
Pennsylvania Association of Conservation Districts, Inc. (PACD)  
Rural Utilities Service/Rural Development (RUS)  
Pennsylvania Association of Realtors (PAR)  
RCAP  
League of Women Voters, Pennsylvania

**DEP staff present at the meeting:**

Tom Fridirici, Bureau of Safe Drinking Water  
Dawn Hissner, Bureau of Safe Drinking Water  
Jeff Allgyer, Bureau of Safe Drinking Water  
Joanne Nardone, Bureau of Safe Drinking Water  
Deb Rotz, Bureau of Safe Drinking Water

Justin Blashaw, Bureau of Safe Drinking Water  
Bryce Beard, Bureau of Safe Drinking Water  
Laura Edinger, DEP Policy Office  
Hayley Jeffords, DEP Policy Office

**Non-Members present at the meeting:**

Frank Medora, Aqua Pennsylvania  
Charles Hertz, Aqua America  
Colleen Arnold, Aqua America  
David Lewis, Columbia Water Company  
Donna Wingle, Lehigh County Authority  
Tony Bellitto, North Penn Water Authority  
John Holden, City of Lancaster  
Rita Kopanski, Philadelphia Water Department  
Dennis O'Connor, Philadelphia Water Department  
Christine Swailes, United Water  
Mary Neutz, United Water

Sharon Fillman, Chester Water Authority  
Anita Martin, Chester Water Authority  
Matt Walborn, Western Berks Water Authority  
Douglas Crawshaw, The York Water Company  
Dave Runkle, Borough of Carlisle  
Barbara Loner, WMWA  
Christina Kistler, MJ Reider Associates  
Jennifer Clancy, Corona Environmental  
Tim Bartrand, Corona Environmental  
Barry Spiegel, HACH Company  
Cary Jackson, PhD, HACH Company

**General Advisory Board business:**

The draft minutes from the May 18, 2015 TAC board meeting were presented for discussion. There were no revisions; Lee Koch (PMAA) made a motion to approve the minutes as presented; Mike Sienkiewicz (PMHA) seconded the motion. The motion passed by a unanimous vote with 1 abstention (Dan Standish, AWWA, because he was not present at the May 18<sup>th</sup> meeting).

**Summary of other States' Disinfection Requirements** – Lisa Daniels, DEP Bureau of Safe Drinking Water

Lisa presented a table that summarizes the minimum disinfectant residual requirements of the 23 other states that have specified a minimum number.

- The TAC members requested that the states that have mandatory disinfection be identified with an asterisk. The table will be revised as requested.
- Washington DC is not included, but EPA Region 3 (that has direct implementation for DC) requires a 0.1 ppm residual in the distribution system (through guidance).
- It was also noted that Arkansas and New York have mandatory disinfection. *[UPDATE: upon further investigation, DEP determined that Arkansas and New York have not specified a minimum disinfectant residual number; although New York does have mandatory disinfection through regulation.]*

Discussion of the public notice (PN) requirements for failure to meet the minimum residual:

- The federal regulations require a Tier 2 PN for failure to maintain the minimum residual in 95% of the monthly measurements for 2 consecutive months.
- DEP will consider revising the regulation to be more consistent with the federal PN requirements.
- Question as to whether DEP has to mandate PN (some other states may not). Answer is that all states with primacy must enact regulations (that identify violations) that are at least as stringent as the federal regulations. States must identify violations but there may be some discretion as to the level of enforcement used.

Questions regarding the 0.20 mg/L being proposed by DEP:

- Why is DEP proposing 2 decimal places (0.20) when most other states are only using 1 (0.2)?  
Answer: DEP met with representatives from HACH to discuss their methodology and equipment for field measurements of residual chlorine. The 0.02 (or 0.03) mg/L is a method detection limit (MDL) which is a calculated value, not a true detection limit and it is not achievable in a field setting. The practical quantitation limit (PQL) is derived by multiplying the MDL by a confidence factor (3.18) and results in a 0.1 mg/L value that is achievable under the best circumstances in a lab setting, using lab grade water. The actual detection limit in a field setting is something above 0.1 mg/L, and may be closer to 0.2 mg/L depending on the interferences present in the water sample (manganese, organic chloramines). Using 0.2 mg/L as the minimum number (instead of 0.20) would mean that water systems would be in compliance at 0.15 mg/L (due to rounding), which does not guarantee that a true disinfectant residual is present. Additionally, HACH confirmed that the test reagent (powder pillows) allows for some differences in how the meniscus line in the sample vial is measured and will still measure a residual to 2 decimal places. DEP believes that water systems should operate at 0.20 to ensure they are measuring a true disinfectant residual.
- HACH confirmed that the MDL is derived statistically, not actually measured. The confidence factor (3.18) used to derive the PQL value comes from EPA and is based on a 95% confidence interval.
- Comments from the Board:
  - Setting the new residual or required minimum residual is not required by regulation.
  - Cannot support two significant figures –instrument detection limits, method detection limits, analytical limits, practical quantitation limits, reporting levels...will continue to dispute second significant figure; the sample cell is not class A volumetric glassware which is how you get to significant figures and get precision and validity and reproducible data. Just because an instrument prints out five decimal places doesn't mean that we should record to five decimal places. It doesn't make the data appear more valid.
  - Must be aware of regulations for the consecutive systems – many systems have contracts to provide water that meets regulations.
  - The HPC option has been removed, but it is still valid as an indicator of water quality. If HPCs are good enough for the nitrification control plan as a biological indicator, HPCs should be kept as an option to support the biological integrity of the water if we run into low residuals.

#### **Discussion of Pre-Draft Revised Disinfectant Residual Requirements Rule – TAC Board**

Revisions have been made to the Annex A language based on comments from the recent meetings. This Annex A also includes language related to primacy requirements for other rules.

Several questions were asked and answered regarding the entry point residual of 0.20 mg/L, the number of days to repair an analyzer, monitoring frequencies and compliance determinations, monitoring locations, reporting requirements, public notification, and monitoring/reporting of log inactivation.

The following comments were noted:

- Comment that systems using strip charts cannot read to 2 decimal places.
- Comments regarding small systems: "A small system does not serve a population of 10,000; [it] does not serve a population of 33,000. A small system serves a population 3,300 and below. So, let's not forget that as we're making these comments and we're looking at this regulation."

## General TAC Business – Serena DiMugno, Chairperson, TAC Board

Letters to member organizations:

- TAC has received a letter from the Pennsylvania Association of Conservation Districts in response to the letter saying that they had not had a member or an alternate attending for three consecutive TAC Board meetings. The letter was sent to Secretary Quiqley with a copy to TAC saying that they are submitting the names of two individuals, Daniel Farnhem as the member, and Mr. Dennis Beck as the alternate. They are interested in retaining their seat on the TAC Board. Does the Board wish to submit any comments to the Secretary? [No Comments were suggested.]
- TAC is also sending a letter out today to the Pennsylvania Association of Realtors - essentially it's the same letter that was sent to the Conservation Districts, saying that they have not attended and asking whether they intend to have a member and an alternate.
- The same letter also went to the Rural Utilities Rural Development Association.

Other correspondence:

- Serena noted that she received a letter that was actually emailed from North Wales Water Authority. *[NOTE: Letter attached as separate document – Attachment #1.]*
- Serena also received a copy of a letter from the Public Water Suppliers Group. Most board members acknowledged that they had also received this letter via email. *[NOTE: Letter attached as separate document – Attachment #2.]*

A motion was made by E. Lee Koch and seconded by Mary Roland:

“The TAC Board recommends that PA DEP move forward with the RTCR to maintain primacy

The TAC Board should not recommend moving forward with Chapter 109 revisions, all Annex A revisions presented to TAC since June 18, 2014. PA DEP has shifted the rationale for changing chlorine residual requirements from control of *Legionella* and other non-coliform pathogens - to RTCR requirements, although, not required in the federal RTCR, - to retaining state primacy, - to the validity of minimum detectable chlorine residual and minimum acceptable distribution system chlorine residuals.

Because of the Department's shifting regulatory rationales, varying minimum distribution chlorine residuals, and varying associated chlorine residual compliance requirements, the TAC Board cannot or should not endorse moving forward with Chapter 109 revisions, Annex A. The TAC Board makes these recommendations based upon the water suppliers' information, as well as industry expert information, presented at May 18<sup>th</sup> and May 26<sup>th</sup> TAC Board meetings, duly noted in the minutes of these meetings. The financial, operational, and customer impacts on water utilities in Pennsylvania were clearly noted in the water industry presentations and those of other expert presenters.

Finally, the TAC Board does recommend that since a national committee of experts has completed a distribution system disinfectant residual evaluation the findings of which will soon be provided to EPA that PA DEP will wait to address minimum chlorine residuals in the distribution system until these findings are made public and EPA has reviewed them to develop a national approach to disinfectant residuals in the distribution system. It is premature for Pennsylvania Department of Environmental Protection to adopt such significant regulatory changes to distribution minimum chlorine residuals before conducting specific research based on Pennsylvania data. Furthermore, the unintended consequences such as potential violations including increased disinfection byproducts, increased lead and copper, as well as other potential

consequences needed to be studied before moving forward with increased minimum chlorine residuals. The TAC Board recommends that a broadened stakeholder and science-based input be included in the TAC Board review prior to any proposed revisions to Chapter 109, and that a consensus driven process be used in the development of the regulatory revisions to Chapter 109.”

- Lisa commented that the motion is largely based on the letter from the Water Supply Group and there are a few points that should be clarified so everyone has the correct information before folks vote on the motion:
  - Regarding the pre-draft residual numbers that are being discussed today and the number that DEP started with: DEP never proposed a 0.5 mg/ L residual in the distribution system. The 0.5 number was the original proposal for the entry point. We just want to clarify that - it’s E on the second page of that letter.
  - The number we started with for distribution systems was a 0.3 mg/L.

The motion was voted down by a vote of 6 to 5 and was recorded as follows:

Organization	Vote	Organization	Vote	Organization	Vote
DEP	No	WVOAP	Yes	OCA	No
PRWA	No	PMHA	Yes	CRP	No
PMAA	Yes	PUC	No	PBA	No
AWWA	Yes	SBCSTPWWO	Yes		

The discussion will continue at the June 30, 215 meeting.

**Public Comments**

Several comments were made from the public.

- Corona Environmental Consulting provided a document relating to the science of measuring disinfectant residuals. This document will be posted to the TAC website under the June 16, 2015 meeting documents.
- United Water provided a spreadsheet that summarizes the different regulation language proposals. This document will be posted to the TAC website under the June 16, 2015 meeting documents.
- There was discussion regarding the disinfectant residual and HPC data reported to the Department, where the measurements are taken, the equipment used to measure chlorine residuals, and how it relates to coliform violations.
- There was discussion regarding the national committee formed by AWWA to discuss distribution disinfection issues, the need for PA to address this issue now because the current regulation is problematic.
- There was discussion on the need to properly train operators on measuring disinfectant residuals in the field.

Dan Standish made a motion to adjourn; James Steele seconded. The motion carried, and the meeting ended at 12:20 pm.

Attachments