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2015 NOV 10 PM 2: 51

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Oral Testimony before the EQB on 11/5/15 regarding PA's proposed implementation of the RTCR  
(Revised Total Coliform Rule)

This testimony is an abridged version of the written comments that The York Water Company will be submitting prior to December 1, 2015. The testimony will focus on Alternative Sampling Locations. The proposed legislation discounting SOPs for deriving alternative sample locations seems to provide the Pennsylvania Department of Environmental Protection (PADEP) with minimal benefit, will limit public water systems in properly implementing the intent of the Federal RTCR, and will consume resources (time, money, and effort) needlessly with little or no return.

The Federal RTCR aims to increase public health protection through the reduction of sanitary defects that could provide potential pathways of entry for fecal contamination into the distribution system of could indicate a failure or imminent failure of a barrier that is already in place.

Section 109.701 (a)(5)(i)(D) is being added to clarify that repeat Coliform monitoring locations must be included in sample siting plans. The TAC noted that identifying specific addresses for check samples is unworkable for some water systems.

Our comments follow.

An SOP (standard operating procedure) should be accepted for determination of repeat monitoring locations.

The Department and the utility do not benefit by identifying these locations and in fact can inhibit utilities from correctly identifying potential pathways or failures. By identifying these locations in advance presumes knowledge of all of the water systems' potential operational conditions in advance of any potential Coliform positive event. Additionally, it limits the utility's capability to assess conditions in real-time, using technology (water system modeling) to factor variables that impact the systems' flow dynamics. For a simplified example of why an SOP and alternate locations are important to correctly identify the appropriate resample locations, please consider the attached sketch of a sample location near a "T" intersection with a pump at one end, a large customer at the far end, and water storage tank on the third leg. The sample location is near the intersection on the leg leading to the tank. If the pump is running to feed the customer and fill the tank the upstream will be on the pump side, the downstream will be on the tank side. However, when the pump is off, the tank will supply the water to the customer and therefore the upstream will be on the tank-leg but the downstream will be on the customer side of the sample location. Now let's shift our mental picture to how the majority of distribution systems are laid-out. The majority of the pipes follow streets and there are multiple intersections, multiple tanks, different sized piping, pumps moving water into and out of multiple areas, regulators and pressure zone boundaries, and other conditions that change on regular basis that will in many cases confound the desire to pre-identify the up/downstream locations. The point is that the "T" intersection is meant to be an overly simplified example with minimal variables to demonstrate that pre-selecting locations and

then limiting ourselves to those locations inhibits accurate and correct assessment of any potential contamination. Considering the objective is to find-and-fix any potential root cause(s) of contamination, the Department should make provisions to encourage the use of technology and advanced modeling techniques to aid the utilities in meeting the intent of the Federal RTCR.

Secondly, identifying up/downstream locations will take time and money that will not be of benefit to the utility nor to the Department. I make this statement based on a few factors. I am required to submit results from 120 compliance coliform samples per month. One might assume that 50 different locations would be part of the sampling plan. The PADEP's proposed version of the RTCR will now require that I develop and pre-evaluate a minimum of 500 more sample locations. That is 5-up and 5-downstream locations for each sampling location, and much of this development and evaluation will have to take place during off-hours while customers are home or during hours where a supervisor might grant a utility worker access, and accurately respond to their questions. This will take considerable time and cost significant amount of money to accomplish. Additionally, the day after this list is developed it is nearly worthless as our utility has no control over the actual conditions at these additional locations. The reason that this is significant is that there are many critical factors involved in selecting a sample location. Any potential sample point that has any of the following cannot be used as a reliable sampling location: automatic faucets, no separated hot/cold valves, a softener, a filter or any appurtenance, etc... So, the day after I've identified all 500 (or more) locations and pre-evaluate them, the home owner or business may change one of the above conditions or change fixtures making that an unusable sample location. So with that in mind, I know that every likely sample location must be re-evaluated in the heat-of-the-moment during a total coliform positive event, regardless of whether it was pre-vetted or not.

The solution is to encourage water systems to develop an SOP as part of their plan for selection of conditionally appropriate up/downstream repeat sample locations. This will enable the utility and the Department to more effectively protect public health via the "find-and-fix" approach referenced in the Federal RTCR. Not providing this flexibility will impede utilities, forcing them to fit a square peg into a round hole, and will cost money with little or no return on that investment.

#### EQB Questions:

- 1) Why alternative repeat monitoring locations should be allowed is covered in the above text.
- 2) How a PWS would demonstrate alternative or SOP driven up/downstream locations are representative of the flow conditions at the time of sample collection is also covered in the attached text.
- 3) SOPs should be permitted and is covered in the above text.
- 4) Alternative repeat monitoring locations should not have to be submitted under the signature of a certified operator as many systems will retain local professional assistance or have in-house experts on their distribution system(s) that the certified operator may not have any knowledge or expertise in.
- 5) Alternative repeat monitoring locations should not have to be submitted under the seal of a professional engineer as this would pose an unnecessary financial burden on many financially strained systems that do not typically retain the services of professional engineers.
- 6) Alternative locations should be made available to systems of all sizes based upon the text above – particularly reference how complicated the simplified "T" intersection example can be.

"T" intersection example:

