

EPA Public Drinking Water Stage 2 Stakeholder Meeting September 26, 2006

9:00 – 9:30 **Arrival and Sign in**

9:30 – 10:00 **Presentations on Overview of Package, Topics, Meeting Flow**

Introduction of presenters (Rule Project Manager: Marlo Wanielista Berg and Rule Team Member Alicia Diehl), Agency staff, and stakeholder meeting attendees.

Marlo Wanielista Berg addressed:

- Housekeeping issues
- Stakeholder Meeting Ground Rules
- Meeting Goals
- Roles and Responsibilities
- TCEQ Mission
- Today's Schedule

Alicia Diehl addressed:

- Evolution of the EPA
- Safe Drinking Water Act (SDWA)
- EPA Rule making process for Drinking Water
- Federal Regulatory Negotiation (RegNeg) Process
- Elements of SDWA included the root's of today's rules
- Texas' History on Public Drinking Water Rules
- TCEQ new rules will not be more stringent than federal rules
- This rule package's time frame: This is the first step: the first stakeholder's meeting on this rule package. July 2007 is the anticipated public comment period. Dates are tentative at the present time. The proposal rule package will go before the Commission in late June 2007.
- Drinking Water Advisory Work Group (DWA WG)—ongoing participation of stakeholders with the public drinking water program
- The "Universe of Texas" making up the Drinking Water Stakeholders—shared common goal of having quality drinking water available to the users.

10:00 – 12:00 **Presentations on the scope and mission of subgroups**

Marlo Wanielista Berg addressed:

- Long Term 2 Enhanced Surface Water Treatment Rule (LT2)
- Purpose of LT2

- Surface Water
 - Source of most large water systems in United States
 - Vulnerable to microbial contamination
- Disinfection and Filtration
- Filtration Avoidance Criteria does not apply in Texas
- Understanding “Log”—a measure of how much you are removing from the water. With more log removal you have less contaminants in the water. Also a measure of how many organisms you are inactivating. With more log removal you have fewer organisms in the water that can cause harm.
- Three Log Removal Examples
- Microbial contamination vs. DBP formation—a delicate balance
- M-DBP History
- Summarized the Surface Water Treatment Rules, the changes over time, and the things that will not change
- What is *Cryptosporidium* (*Crypto*)? What are the health effects? What is its efficacy?
- What did EPA look at for LT2’s benefits and costs?
 - Established the value of a statistical life (VSL) at \$5.6 million
 - Looked at willingness to pay to avoid non-fatal cases.
- LT2 Overview and Process
 - Stakeholder Question: *Does chlorine count to move you into this rule? Would you be subject to this rule if you purchase treated water from another public water system and then just add chlorine?* Answer: No, you would only be subject to this rule if you get water out of the lake, stream or ground water under the influence (GUI) source and have a surface water plant to treat it to provide drinking water.
- LT2 Applicability and Schedules
 - Combined Distribution Systems (CDSs)
 - CDS requirements apply to the wholesale system only
 - Any water system that provides water to another water system on a regular basis is called a wholesale system in LT2
 - Largest system is not necessarily the wholesaler
 - No requirements apply to purchased systems without a plant to treat water from a surface water or ground water under the influence (GUI) source
 - If wholesale system is placed on the schedule of a larger system in its CDS, the system must monitor on the larger system’s schedule and must meet the monitoring requirements based on larger system’s population.
 - Schedule 1: Applies to systems serving 100,000 or more, or a wholesale system in a combined distribution system contains a system serving $\geq 100,000$ people.
 - Monitoring: *Crypto* monitoring is currently ongoing
 - Implement: April 1, 2012

- Schedule 2: Applies to systems serving 50,000-99,999, or a wholesale system in a combined distribution system contains a system serving 50,000-99,000 people.
 - Monitoring: *Crypto* monitoring begins April 1, 2007
 - Implement: October 1, 2012
 - Schedule 3: Applies to systems servings 10,000 to 49,999 people, or a wholesale system in a combined distribution system contains a system serving 10,000 to 49,999
 - Monitoring: *Crypto* Monitoring begins in April 1, 2008
 - Implement: October 1, 2013
 - Schedule 4: Applies to systems servings fewer than 10,000 and not a wholesale system (either not connected to anyone or it's an end-of-chain system)
 - Perform a first screen with *E. Coli*. If *E. Coli* levels are high enough then *Crypto* monitoring must be completed.
 - If *Crypto* monitoring is triggered, systems have the flexibility in *Crypto* frequencies: 24 samples over 1 to 2 years.
 - Monitoring: Sampling must begin in October 2008
 - Implement: October 1, 2014
 - If you are the end of the line, sell to no one, your schedule is based on your population only.
 - Who you provide water to will affect what your schedule # is.
 - If no treatment plant, just a distribution system, then you are not subject to LT2
- Source Water Monitoring
 - Initial round of surface water monitoring is based on the local system size and whether that system is in a combined distribution system
 - Toolbox Options
 - Source water protection and management
 - Prefiltration options
 - Treatment performance
 - Additional filtration
 - Inactivation (using chlorine dioxide, ozone, or ultraviolet light)
 - Stakeholder Question: *What do you do with your timing if you have existing SWTP that is past your 6 yr period but there is a change in their water quality?* Answer: EPA has not extended the sampling period past the second round of sampling, but they may in future regulations.
 - Stakeholder Question: *How do you plan for a plant 13 years in advance?* Answer: It is covered by our current rules. Requirements for a brand new plant will be based on the number of people it will be serving when it is built. We will discuss this issue at a future stakeholder meeting.
 - Stakeholder Question: *What do you do with monitoring?* Answer: This will be discussed in detail during our upcoming LT2 all day stakeholder meeting.
 - Stakeholder Question: *Grandfathered monitoring: when does the time frame start?* Answer: It goes from the EPA's schedule.

10:35-10:45 **Break**

Alicia Diehl discussed:
Disinfection Byproducts (DBPs)

- Chlorine disinfection is recognized as one of the most important public health improvements
- Disinfection byproducts are unfortunate byproducts of disinfection and are potentially harmful
- History of Detection: Increased incidence of bladder cancer in chlorinating systems was identified in the 1970s.
- Chlorination disinfection byproducts and identification of chlorination DBPs
- Chlorination DBPs increase in the distribution system (the longer the more)
 - Any chemical reaction increases in its rapidity and is impacted by temperature
 - DBPs can impact customers farther from the treatment plant more than customers closer to the treatment plant.
- General Health Effects from Exposure to Drinking Water
- History of DBP Rules:
 - Total Trihalomethane (THM) Rule adopted in November 1979
 - Stage 1 Disinfection Byproducts Rule (DBP1)
 - Extended to systems for all sized with disinfectant
 - Required total organic carbon (TOC) removal for surface water treatment plants
 - Now we have DBP2.
 - Adopted January 4, 2006 with the primary purpose to reduce peaks of THM and Haloacetic Acids (HAA) in the distribution system while maintaining microbial protection
- DBP2 Health Effects Studies with various results
 - Some areas of concern with specific cancer end points. When you group all the cancers together it is an associated *risk*.
 - Current reproductive and developmental health effects do not support a conclusion at this time as to whether exposure to chlorinate drinking water or disinfection byproducts causes adverse developmental or reproductive health effect, but do support a potential health concern.
- Overall Health Effects provide the basis for regulation—*The combined health data indicates a need for public health protection beyond that provided by the Stage 1 DBP.*
- Conceptual Elements to Curtail THM/HAA Peaks
- Best Available Technology (BAT) for DBP2
 - EPA is required to identify control strategies and evaluate potential costs as a function of system size and as a function of water source. Chloramination is identified as BAT for consecutive systems.
- Costs and Benefits of DBP2 – Economic analysis looked at the range of alternatives.
 - Established the value of a statistical life (VSL) at \$5.6 million
 - Looked at willingness to pay to avoid non-fatal cases.
 - Costs of DBP2 to individual households
 - The preferred alternative: annual cost \$79 and annual benefit \$1,531

- Intent of DBP2 – reduce the exposure of customers in areas of the distribution system with relatively high disinfection byproducts (finding the ‘hot spots’)
- Early monitoring to determine the distribution water quality
- EPA applies the same regulatory schedules to the entire combined distribution system (CDS) group
- Same group sizes as LT2, but CDS includes all interconnected systems (regardless of whether they treat water or resell treated water)
- Pick the new DPB2 number of sites based on the population and water type
- Group 1’s IDSE plan is due by 10/1/06
- The four ways to comply with the IDSE requirements
 - Very small system (VSS) is less than 500, including true wholesalers (based on TCEQ #s from most recent survey)
 - Low level (40/30) waiver
 - Do Standard Initial Distribution System Evaluation (IDSE) sampling
 - The frequency of sampling is NOT based on the combined distribution system. It is system specific and is based on population served and the type of water. (Note: *This is very different from LT2 rule*)
 - Sampling during a 1 year period
 - Surface water systems: scheduled for 4 per year or 6 per year
 - Only 1 sample will occur, regardless of your sample size
 - Groundwater systems get a break: less risk, less organic compounds in the water.
 - System Specific Study
 - The rule does include grandfather samples
- IDSE Results will NOT be used from compliance. Current DBP1 sample site results will be used for compliance. New IDSE sample site results will NOT be used for compliance. TCEQ will approve and track each specific IDSE and DBP1 compliance sample site.
- IDSE Sample Report lists results and sets DBP2 sites and establishes a new number of sites. Some systems may experience an increase in monitoring burden and some will experience a decrease in monitoring burden.
- Review of DBP2 Sites
 - Some systems will not have to do IDSE to set DBP2 sites because of very small systems or the 40/30 waiver however they will need to still pick new sites and must follow the same protocol by which IDSE sites were selected and must submit proposed sites to TCEQ for approval.
- Locational Running Annual Average (LRAA) Compliance
- Operational Evaluation Level (OEL) Compliance
 - If PWS exceeds OEL at any site that system must evaluate distribution operations

- Is the result of two times the current quarter results, plus the results from the two previous quarters, divided by four
 - This drives the Operational Evaluation Report
- Operational Evaluation(OE) Performance
 - Must describe plans to change things to fix things
 - Plans to minimize future exceedences
- LRAA and OEL Compliance Schedules
 - Group 1: April 1, 2012
 - Group 2: October 1, 2012
 - Group 3 and 4: October 1, 2013
 - While these dates are so far out in the future if a source is added in the next 6 years it will change how things look. There is planning time built into this rule
- Stakeholder Question: *On locational sampling, will the state coordinate the sampling contract through the contractors?* Answer: Yes that is our intent to control the sample quality. There has been a long standing agreement between the State of Texas and the stakeholders on this issue. We want it to remain business as usual. The sample cost estimate has come out. A letter will go out in January 2007 to Group 1 systems that must monitor in 2007 that will contain the cost estimate for the IDSE sampling. Currently the cost is \$314 a pair.
- Stakeholder Question: *Does a water system have to submit the IDSE sample site plan to both TCEQ and EPA?* Answer: The plan comes to TCEQ because we have interim primacy for this rule. We don't have primary enforcement authority until EPA approves both rules. We talked about who was going to implement various pieces. Texas will do it for DPB2 and EPA will do it for LT2 for systems that must do Crypto monitoring. It will be more efficient for EPA to work with those systems larger than 10,000 than the state.
- Stakeholder Question: *With the 40/30 waiver do you continue sampling forever?* Answer: Yes. DBP sampling is not expected to end. The DBP1 monitoring will be continued until DBP2 monitoring starts. For example, the City of Austin we originally established 12 sample sites, under DBP1. They are now on reduced sampling, with one sample site per plant. The 40/30 waiver is only for the IDSE time period. In 2012 the City of Austin will have to start monitoring at the number of sites identified in DBP2, which is 12 again. Reduced monitoring will be available and we will talk about it more later, after the IDSE period is over, and we are preparing for compliance monitoring under DBP2. The rule proposal will contain all of the federal elements, including number of sample IDSE and DBP2 for long term monitoring after the compliance dates hit.
- Stakeholder Question: *On OEL will you develop guidance or a template?* Answer: Yes, we will have to develop a meaningful template for small systems to implement in clear language within the next six years. Yes there will be federal guidance on this but we understand our customers' need for clear, direct instructions; hopefully our template will be 1-4 pages compared with the 140 page federal manual.
- Stakeholder Question: *Have you reviewed the packages sent to you yet?* Answer: Yes, and we are sending out acknowledgments on the receipt of waivers for small systems.
- Stakeholder Question: *If we haven't gotten the letter should we assume that it's approved?* Answer: No. We are sending out the 40/30 acknowledgments. We will send a letter that will explicitly grant approval. The system should keep a copy of the approval letter with their Monitoring Plan.

- Stakeholder Question: *When is Very Small System certification due?* Answer: Depends on the CDS schedule. Contact TCEQ if you think you have a system that should be included in the VSS.
- Stakeholder Question: *What if system missed the VSS certification deadline, do they have to do the sampling?* Answer: We will look at this on a case by case basis.

12:00 – 1:30 **Lunch on Your Own**

1:30 – 1:45 **General Breakout Discussion Sessions**

- A. Public Notice (PN) / (Consumer Confidence Report (CCR)
- B. Chlorine Dioxide

2:50 – 3:00 **Break**

3:00 – 3:30 **Present Findings from Breakout Groups**

Public Notice (PN) / Consumer Confidence Report (CCR)

PN:

- Consistency of reporting days 1 business day versus 24 hrs
- Keep agency phone lines available 24/7 or allow email notification so systems can meet 24 hr requirement
- Delivery: There are some programs that require notarized docs. TCEQ/OPRR/WSD/PDW doesn't require notarized documents.
- Can TCEQ accept email with certification delivery?

CCR:

- Chain system, CVSSs
- Current implementation of CCR
- Are templates guidelines or suggestions?
- Combine information in a range to save space, or if combined, would this be more confusing to the consumers?
- combining information together is important
- Templates: Get the up earlier on TCEQ web site so systems can get directly off the web site
- CCR does support flexibility in how data is supported. One table or many tables and is *crypto* in a chart?

Cryptosporidium:

- If system has performed any monitoring for *Cryptosporidium* which indicates that *Crypto* may be present in the source water or the finished water, the report must include:
 - Summary of the monitoring results
 - Explanation of the significance of the results
- Discuss what is significant
 - What added treatment? No.
 - What costs? No.
 - What health effects? Yes, if pertinent.
 - When applicable if you perform the test? Most recent calendar year.
- If you put the *Crypto* data into the CCR can this disclosure be separated from the "what's in your water" portion since it could scare your customers? Case by case.

Chlorine Dioxide

- Different analytical methods available approved by EPA and not part of our rules
 - *Lissamine Green B (LGB) for chlorine dioxide*

- *DPD/Glycine for chlorine dioxide*
 - *Lissamine Green B with Horseradish Peroxidase for chlorite*
- LGB reportedly gives good results
- DPD/Glycine is subject to interferences which give high readings
- *Horseradish Peroxidase* gives accurate results but is hard to prepare...this is a problem that the local system must solve if they choose to use the test.
- Should we open the door to *Lissamine Green B* and *Horseradish Peroxidase*? Yes put these two options in the rules.
- Draft some language to allow DPD/Glycine in certain conditions
 - Applying a chlorine dioxide dose less than the maximum allowable residual level... validation testing isn't needed if you haven't exposed the public
 - There is nothing wrong with using *DPD/Glycine when dioxide dose exceeds MRDL* as long as the utility validates the results with amperometric titration or LGB.
 - Because there is additional monitoring/recording w/ additional work TCEQ would have to amend the Chlorine Dioxide MOR.

3:30 – 4:00

Wrap up and adjourn