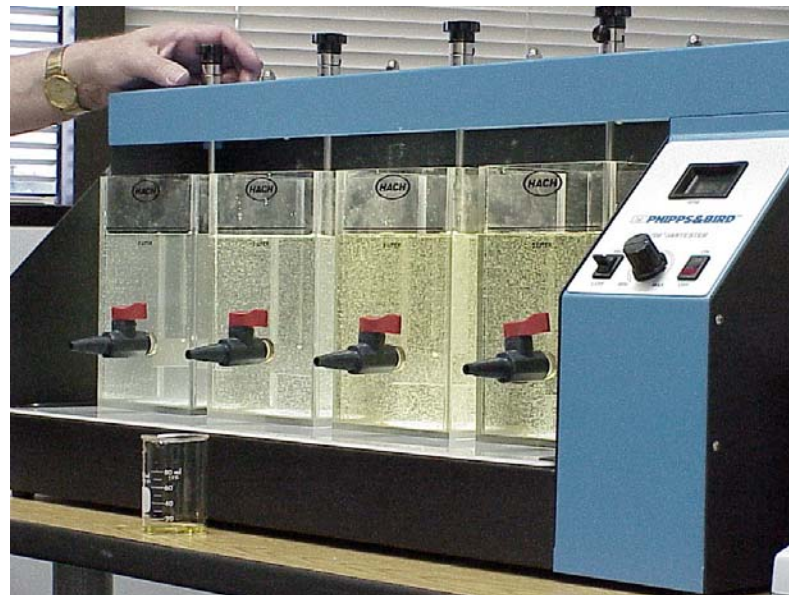


Proposed Rulemaking Stage 2 Disinfectants and Disinfection Byproducts Rule (Stage 2 DBPR)



August 19, 2008

Background

- *The Safe Drinking Water Act* required EPA to promulgate the Stage 2 DBPR
- *The federal Stage 2 DBPR* was promulgated on January 4, 2006
- Stage 2 DBPR augments the Stage 1 DBPR
- Proposed amendments incorporate the federal Stage 2 DBPR and are no more stringent than the federal rule.
- DEP must incorporate the provisions of the federal Stage 2 DBPR into the Pennsylvania Safe Drinking Water Regulations to retain primacy

Purpose of Stage 2 DBPR

- Reduce disease incidence associated with the DBPs
- Reduce the level of exposure from DBPs without undermining the control of microbial pathogens

Benefits

- Improve public health by increasing level of protection from exposure to DBP's
- Reduction in health risks associated with disinfection practices, such as bladder cancer and kidney damage
- Reduced reproductive and developmental risks
- Reduced risks of cancers other than bladder cancer
- Improved water quality
- Non-health related benefits include avoiding costs associated with cancer treatment

Applicability of Stage 2 DBPR

- Applies to community water systems (CWSs) and nontransient noncommunity water systems (NTNCWSs) that:
 - Add a primary or residual disinfectant other than ultra violet (UV) or
 - Deliver water that has been treated with a disinfectant other than UV
- 2,042 CWSs & 600 NTNCWSs

Key Provisions of Stage 2 DBPR

- Identifying the higher risk sample locations through the Initial Distribution System Evaluation (IDSE)
- Reducing exposure and lowering DBP peaks in distribution systems by using a new method to determine MCL compliance - - locational running annual average (LRAA)
- Defining operational evaluation levels
- Population-based monitoring

IDSE

- Initial Distribution System Evaluation
 - Designed to find locations in distribution system that exhibit the highest TTHM and HAA5 levels
 - These sites will be the new compliance sites
- Applicability
 - NTNCWS ($\geq 10,000$) and all CWS
 - add or provide water that has a chemical disinfectant

IDSE OPTIONS

Four Options available for IDSE are:

- **VSS Waiver**
 - Systems serving <500 people
 - TTHM & HAA5 samples taken under Stage 2 DBPR
- **40/30 Certification**
 - TTHM results < 0.040 mg/L
 - HAA5 results < 0.030 mg/L
- **Standard Monitoring**
 - Monitoring plan, monitoring & report submittal
- **System Specific Study**
 - Based on existing monitoring results or modeling

Implementation Timeline

Sch.	Systems Serving:	Submit 40/30 Certification, SM, SSS Plan, or receive VSS Waiver by:	Complete SM or SSS By:	Submit IDSE Report (only systems conducting SM or SSS) by:
1	≥ 100,000	Oct. 1, 2006	Sept. 30, 2008	Jan. 1, 2009
2	50,000–99,999	Apr. 1, 2007	Mar. 31, 2009	July 1, 2009
3	10,000–49,999	Oct. 1, 2007	Sept. 30, 2009	Jan. 1, 2010
4	< 10,000	Apr. 1, 2008	Mar. 31, 2010	July 1, 2010

Schedule for systems in a combined distribution system is based on that of the largest system in the combined distribution system

Compliance Schedule

- Applies to:

Systems that are not part of a combined distribution system

Systems that serve the largest population in a CDS

System size	Stage 2 DBPR Compliance Monitoring must start by:
≥100,000	April 1, 2012
50,000-99,999	October 1, 2012
10,000-49,000	October 1, 2013
≤10,000	October 1, 2013 (if no cryptosporidium monitoring required under LT2SWTR) October 1, 2014 (if cryptosporidium monitoring is required under LT2SWTR)

Monitoring Plans

- Must be developed no later than date of initial Stage 2 monitoring and kept on file for DEP and public review.
- All public water systems must submit plan to DEP prior to initial monitoring unless IDSE report contains all monitoring plan elements.
- Monitoring Elements:
 - Monitoring locations
 - Monitoring dates
 - Compliance calculation procedures

Operational Evaluation Level (OEL)

- An Operational Evaluation Level Exceedance exists if either of the following at any monitoring location occurs:

$$\frac{\text{TTHM results from previous 2 qtrs} + 2X \text{ current qtrly TTHM result}}{4} > 0.080 \text{ mg/L}$$

$$\frac{\text{HAA5 results from previous 2 qtrs} + 2X \text{ current qtrly HAA5 result}}{4} > 0.060 \text{ mg}$$

- If a PWS exceeds the OEL, the water supplier must:
 - Conduct an operational evaluation (OE)
 - Submit a written report of evaluation to the State ≤ 90 days after notification of results
 - Make the report available to the public upon request

Compliance Strategy

- Workgroup concept of Regulatory Development
- Training
 - DEP provided
 - Ongoing through industry associations
- Technical Assistance
- Monitoring calendars
- Update/create new guidance documents

Compliance Costs of Proposed Amendments

- Estimated compliance costs to Pa. Regulated Community could approach \$3.4 million including:
 - Non-treatment costs of rule implementation
 - Initial Distribution System Evaluation
 - Stage 2 DBPR Monitoring Plans
 - Treatment modifications
 - Additional routine monitoring
 - Reporting and record keeping
 - Operational Evaluations

Public Outreach

- The proposed Stage 2 DBPR amendments to Chapter 109 were submitted for comments to the Technical Assistance Center (TAC) for small water systems on November 13, 2007.
- The TAC Board approved the proposed Stage 2 DBPR in a letter dated December 12, 2007.
- The proposal was presented to DEP Regional Managers, Technical Chiefs and Supervisors.
- DEP and EPA notified all affected systems in Pennsylvania about the upcoming Stage 2 DBPR.

Next Steps

- Creating a monitoring plan template
- Continuing to assist PWSs with standard monitoring
- Transition from EPA to DEP
 - EPA training on IDSE standard monitoring plan and IDSE report review
 - DEP will review IDSE reports due in 2009.
- DEP provide presentations at conferences, etc., on monitoring plan template