



Facts About....

STAGE 2 DISINFECTANTS AND DISINFECTON BYPRODUCTS RULE (STAGE 2 DBPR)

Purpose

The Stage 2 Disinfection Byproducts Rule (Stage 2DBPR) which complements Stage1 DBPR focuses on monitoring and reducing concentration of total trihalomethanes (TTHMs) and haloacetic acids (HAA5) through out the distribution system. Disinfectants commonly used in drinking water treatment can react with naturally occurring materials in water to form byproducts which may cause health risks. This regulation will reduce DBP exposure and related potential health risks, and provide more equitable public health protection.

Systems Impacted

ALL Community Water systems (CWSs) and Nontransient–Noncommunity Water Systems (NTNCs) that add a primary or residual disinfectant other than ultra violet (UV) light, or deliver water that has been treated with a primary or residual disinfectant other than UV.

The Stage 1 DBPR monitoring for TTHMs and HAA5s are discontinued when the Stage 2 monitoring begins.

Compliance Monitoring

The MCL for TTHM is 80 micrograms per liter ($\mu\text{g/L}$) and for HAA5 is 60 $\mu\text{g/L}$. Compliance with the maximum contaminant levels for TTHM and HAA5 will be calculated for each monitoring location in the distribution system. This approach, referred to as the locational running annual average (LRAA), differs from Stage 1 requirements, which determine compliance by calculating the running annual average of samples from all monitoring locations across the system.

Compliance Schedule for Stage 2 DBPR TTHM and HAA5 Monitoring

Water system monitoring schedules are being updated to reflect the new requirements

Compliance Schedule for Stage 2 DBPR TTHM and HAA5 Monitoring Requirement	Compliance dates by PWS size (retail populations served)				
	CWSs and NTNCWSs serving at least 100,000	CWSs and NTNCWSs serving 50,000-99,999	CWSs and NTNCWSs serving 10,000- 49,999	CWSs serving <10,000	NTNCWSs serving <10,000
Begin Stage 2 Compliance (Subpart V) Monitoring	April 1, 2012	October 1, 2012	October 1, 2013	October 1, 2013 (October 1, 2014 if <i>Crypto- sporidium</i> monitoring is required under LT2ESWTR.)	October 1, 2013 (October 1, 2014 if <i>Crypto- sporidium</i> monitoring is required under LT2ESWTR.)
Wholesale and consecutive systems that are part of a combined distribution system must comply based on the schedule required of the largest system in the combined distribution system.					

Rule Requirements

- The LRAA is calculated by averaging the results of all the samples collected at a single site within a quarter and then averaging the quarterly averages for the last four quarters at that same site. **Each** monitoring site must be in compliance with the MCL for both TTHM and HAA5.
- If a water system intends to sample at more than the required number of Stage 2 sites, then all of the sites should each have a calculated LRAA and should be considered for compliance determinations.
- The Stage 2 DBPR also requires each system to determine if they have exceeded an operational evaluation level (OEL), which is identified using their compliance monitoring results. The operational evaluation level provides an early warning of possible future MCL violations, which allows the system to take proactive steps to remain in compliance. A system that exceeds an operational evaluation level is required to review their operational practices and submit a written report to the State within 90 days after the PWS was notified of the analytical result. The report should identify actions that may be taken to mitigate future high DBP levels, particularly those that may jeopardize their compliance with the DBP MCLs.
- The OEL is calculated using results for the most recent three quarters of compliance monitoring. The individual site result of the current quarter is multiplied by two and added to the results of the two previous quarters for the same site. The sum is then divided by four. An OEL will be calculated every quarter beginning the third quarter following the start of compliance monitoring for each sample location.
- If the OEL exceeds either the TTHM or HAA5 MCL an operation evaluation must be conducted to determine the possible cause(s) for the exceedance. A report must be submitted to the State **within 90 days** of notification of the results that caused the OEL exceedance. The OEL exceedance is not a violation of the rule; but if the required evaluation and subsequent report are not completed a monitoring and reporting violation will be issued.
- The operation evaluation must include an examination of storage tank operations, excess storage capacity, flushing, source changes, source water quality changes, and treatment changes or problems that may contribute to DBP formation. The evaluation must also include an examination of steps that could be considered to minimize future exceedances. If a system knows what caused the exceedance, they may request the State to allow a limited scope evaluation. Supporting documentation for conclusions drawn from the evaluation will need to be included with the report.

Training

If you are implementing the Stage 2 DBPR and are interested in training, please visit the EPA's microbial and disinfection byproducts training site at <http://water.epa.gov/lawsregs/rulesregs/sdwa/mdbp/training.cfm> for a list of trainings, webcasts, and other training opportunities available.

For More Information

Call the Safe Drinking Water Hotline at 1-800-426-4791.