

Compliance Determination and MCL Violations

Compliance with the TTHM and HAA5 MCLs for Stage 2 DBPR is based on your monitoring results at each monitoring location.

If you monitor once per quarter:

- Compliance is based on the LRAA of monitoring results, calculated quarterly (see example on the next page).
- You must make compliance calculations beginning with the end of the fourth quarter of monitoring and continue calculations after each quarter.
- If you fail to complete four consecutive quarters of monitoring, you must calculate compliance with the MCL based on the average of the available data from the most recent four quarters.
- If you take more than one sample per quarter at a monitoring location, you must average all samples taken in the quarter at that location to determine a quarterly average to be used in the LRAA calculation.
- If the LRAA at any location exceeds the MCL, you are in violation.
- Failure to monitor will be treated as a monitoring violation for the entire period covered by a locational running annual average compliance calculation for the Stage 2 MCLs.

If you monitor once per year:

- Compliance is based on the value of the yearly samples at each location.
- You must make compliance calculations beginning with the first compliance sample taken after the compliance date.
- If any sample exceeds the MCL, you are not immediately in violation. You must begin increase monitoring immediately (monitor quarterly at each location).
- If any sample exceeds the MCL and you are on reduced monitoring, you must begin increased monitoring immediately (monitor quarterly at each location).
- Failure to monitor will be treated as a monitoring violation for the entire period covered by a locational running annual average compliance calculation for the Stage 2 MCLs.

NOTE: Some States require you to submit your analytical results and the State will calculate compliance for you.

Examples of Calculating Compliance

Example Compliance Calculation for Systems Monitoring Quarterly

Date	TTHM result mg/L	LRAA for TTHM	TTHM MCL Violation?	HAA5 Result mg/L	LRAA for HAA5	HAA5 MCL Violation?
8/15/2013	0.096	$(0.096+0+0+0)/4 = 0.024$ mg/L	No	0.044	$(0.044+0+0+0)/4 = 0.011$ mg/L	No
11/14/2013	0.072	$(0.096+0.072+0+0)/4 = 0.042$ mg/L	No	0.020	$(0.044+0.020+0+0)/4 = 0.016$ mg/L	No
2/15/2014	0.060	$(0.096+0.072+0.060+0)/4 = 0.057$ mg/L	No	0.024	$(0.044+0.020+0.024+0)/4 = 0.022$ mg/L	No
5/12/2014	0.088	$(0.096+0.072+0.060+0.088)/4 = 0.079$ mg/L	No	0.030	$(0.044+0.020+0.024+0.030)/4 = 0.030$ mg/L	No
8/16/2014	0.120	$(0.072+0.060+0.088+0.120)/4 = 0.085$ mg/L	Yes	0.050	$(0.020+0.024+0.030+0.050)/4 = 0.031$ mg/L	No
11/12/2014	0.060	$(0.060+0.088+0.120+0.060)/4 = 0.082$ mg/L	Yes	0.024	$(0.024+0.030+0.050+0.024)/4 = 0.032$ mg/L	No
2/15/2015	0.048	$(0.088+0.120+0.060+0.048)/4 = 0.079$ mg/L	No	0.012	$(0.030+0.050+0.024+0.012)/4 = 0.029$ mg/L	No

What if I use Chlorine Dioxide or Ozone?

If you use chlorine dioxide as your disinfectant, your requirements under the Stage 1 DBPR have not changed.

If you use ozone, you will now qualify for reduced bromate monitoring based on finished water bromate levels instead of source water bromide levels. Systems with a bromate running annual average less than or equal to 0.0025 mg/L (based on monthly monitoring) qualify for reduced bromate monitoring. The effective date for this change is March 31, 2009. In order to meet this deadline, you will need to start monitoring for bromate using the new method by March 2008. All other requirements remain the same as under the Stage 1 DBPR.

For more information, see the *Small System Requirements for the Stage 1 DBPR: Small Entity Compliance Guide*.

Bromide (Br⁻) occurs naturally in some source waters. Higher levels of bromide may be caused by brine or salt water intrusion. Bromide is a precursor to bromate (along with other brominated DBPs).

Bromate (BrO₃⁻) is a disinfection byproduct that is present in some finished water and forms when ozone reacts with bromide during treatment.