

**Environmental Protection Agency**

**§ 141.544**

**§ 141.536 My system has developed an inactivation ratio; what must we do now?**

Each log inactivation serves as a data point in your disinfection profile. Your system will have obtained 52 measurements (one for every week of the year). This will allow your system and the State the opportunity to evaluate how microbial inactivation varied over the course of the year by looking at all 52 measurements (your Disinfection Profile). Your system must retain the Disinfection Profile data in graphic form, such as a spreadsheet, which must be available for review by the State as part of a sanitary survey. Your system must use this data to calculate a benchmark if you are considering changes to disinfection practices.

**DISINFECTION BENCHMARK**

**§ 141.540 Who has to develop a disinfection benchmark?**

If you are a subpart H system required to develop a disinfection profile under §§141.530 through 141.536, your system must develop a Disinfection Benchmark if you decide to make a significant change to your disinfection practice. Your system must consult with the State for approval before you can implement a significant disinfection practice change.

**§ 141.541 What are significant changes to disinfection practice?**

Significant changes to disinfection practice include:

- (a) Changes to the point of disinfection;

- (b) Changes to the disinfectant(s) used in the treatment plant;
- (c) Changes to the disinfection process; or
- (d) Any other modification identified by the State.

**§ 141.542 What must my system do if we are considering a significant change to disinfection practices?**

If your system is considering a significant change to its disinfection practice, your system must calculate a disinfection benchmark(s) as described in §§141.543 and 141.544 and provide the benchmark(s) to your State. Your system may only make a significant disinfection practice change after consulting with the State for approval. Your system must submit the following information to the State as part of the consultation and approval process:

- (a) A description of the proposed change;
- (b) The disinfection profile for *Giardia lamblia* (and, if necessary, viruses) and disinfection benchmark;
- (c) An analysis of how the proposed change will affect the current levels of disinfection; and
- (d) Any additional information requested by the State.

**§ 141.543 How is the disinfection benchmark calculated?**

If your system is making a significant change to its disinfection practice, it must calculate a disinfection benchmark using the procedure specified in the following table.

To calculate a disinfection benchmark your system must perform the following steps

Step 1: Using the data your system collected to develop the Disinfection Profile, determine the average *Giardia lamblia* inactivation for each calendar month by dividing the sum of all *Giardia lamblia* inactivations for that month by the number of values calculated for that month.

Step 2: Determine the lowest monthly average value out of the twelve values. This value becomes the disinfection benchmark.

**§ 141.544 What if my system uses chloramines, ozone, or chlorine dioxide for primary disinfection?**

If your system uses chloramines, ozone or chlorine dioxide for primary disinfection your system must calculate the disinfection benchmark from the data your system collected for viruses to develop the disinfection

profile in addition to the *Giardia lamblia* disinfection benchmark calculated under §141.543. This viral benchmark must be calculated in the same manner used to calculate the *Giardia lamblia* disinfection benchmark in §141.543.