Section 2. Minimum and Maximum Disinfectant Levels

What are the disinfectant residual levels?

Maintenance of acceptable disinfection residual levels in the distribution system of the public water system is required, to protect consumer health. Minimum disinfectant residual levels were established to guard against the potential of subsequent microbial contamination after treatment. [30 TAC 290.110(b)]

In the 2000 DBP1 rules, EPA noted that there may be increased risks of cancer to people who drink water with very high levels of free or total chlorine. Therefore, EPA adopted an upper limit to the concentration of disinfectant a distribution system should have, based on all of the sample results. These upper limits are referred to as the MRDLs. [30 TAC 290.110(b)(5)].

Table 1 provides the minimum and maximum disinfectant residual level concentrations for free or total chlorine as measured in milligrams per liter (mg/L).

Table 1. Minimum and Maximum Disinfectant Residual Levels

Type of Disinfectant	Minimum Level	Maximum Level
Free chlorine	0.2 mg/L	4.0 mg/L
Total chlorine (also called chloramines)	0.5 mg/L	4.0 mg/L

How do I determine compliance with <u>minimum</u> disinfectant residual levels?

On a monthly basis, you will review the data for the distribution system's samples taken that month and the previous month. If more than 5.0% of the samples in both months are below the minimum, your system has committed a nonacute treatment technique violation, and you must notify your customers as described in the following section, "Public Notification."

How do I determine compliance with <u>maximum</u> disinfectant residual levels?

Review that the running annual average (RAA) (average of last 12 months) for all the distribution system's samples is at or below 4.0 mg/L. If it is, your PWS is compliant with this rule. If the RAA is over the MRDL of 4.0 mg/L the PWS has committed a nonacute treatment technique violation, and you must notify your customers as described in the following section, "Public Notification."