**Section 604.705 Chlorination Equipment**

a) Procedure for Submitting Plans and Specifications − Design documents for chlorination must be prepared and submitted in accordance with 35 Ill. Adm. Code 602.

b) Chlorination equipment must:

1) be large enough to satisfy the immediate chlorine demand and give a measurable residual of at least 2.0 mg/L of total chlorine under all operating conditions after contact;

2) be capable of feeding chlorine to the water being treated at a dosage rate of at least 5.0 mg/L, except when the water has a high chlorine demand. Factors in determining chlorine demand are:

A) pH;

B) water temperature;

C) contact time;

D) presence in the water of substances having chlorine demand such as hydrogen sulfide, iron, manganese and nitrogenous compounds including ammonia; and

E) supplemental treatment such as aeration that reduces chlorine demand;

3) be provided in duplicate when operating conditions do not allow repair of the chlorinator during off-pumping periods;

4) be provided in duplicate, installed and operational, at community water supplies treating surface water, groundwater under the direct influence of surface water, and groundwater with a history of total coliform positive results; and

5) include spare parts for emergency repairs consisting of at least the commonly expendable parts such as glassware, fittings, hose clamps, and gaskets.