

Recommended Standards for Wastewater Facilities

1997 Edition



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Great Lakes-Upper Mississippi River Board of
State and Provincial Public Health and Environmental Managers

located or vented outside. Provision shall be made for adequate protection from light and extreme temperatures. Tanks shall be located where leakage will not cause corrosion or damage to other equipment. A means of secondary containment shall be provided to contain spills and facilitate cleanup. Due to deterioration of hypochlorite solutions over time, it is recommended that containers not be sized to hold more than one month's needs. At larger facilities and locations where delivery is not a problem, it may be desirable to limit on-site storage to one week. Refer to Section 57.

102.35 Dry Hypochlorite Compounds

Dry hypochlorite compounds should be kept in tightly closed containers and stored in a cool, dry location. Some means of dust control should be considered, depending on the size of the facility and the quantity of compound used. Refer to Section 57.

102.4 Equipment

102.41 Scales

Scales for weighing cylinders and containers shall be provided at all plants using chlorine gas. At large plants, scales of the indicating and recording type are recommended. At least a platform scale shall be provided. Scales shall be of corrosion-resistant material.

102.42 Evaporators

Where manifolding of several cylinders or ton containers will be required to evaporate sufficient chlorine, consideration should be given to the installation of evaporators to produce the quantity of gas required.

102.43 Mixing

The disinfectant shall be positively mixed as rapidly as possible, with a complete mix being effected in 3 seconds. This may be accomplished by either the use of turbulent flow regime or a mechanical flash mixer.

102.44 Contact Period and Tank

For a chlorination system, a minimum contact period of 15 minutes at design peak hourly flow or maximum rate of pumpage shall be provided after thorough mixing. For evaluation of existing chlorine contact tanks, field tracer studies should be done to assure adequate contact time.

The chlorine contact tank shall be constructed so as to reduce short-circuiting of flow to a practical minimum. Tanks not provided with continuous mixing shall be provided with "over-and-under" or "end-around" baffling to minimize short-circuiting.