

**ORANGE COUNTY DEPARTMENT OF HEALTH
124 Main Street, Goshen, NY 10924**

Application for Approval of a Chlorinator Installation
(Use for Non-Community Water Supplies (NCWS) using single ground water source only)

FACILITY _____	OWNER _____
ADDRESS _____	ADDRESS _____
PHONE # (_____) _____	PHONE # (_____) _____
ENGINEER OR PLUMBER (IF APPLICABLE) _____	
PHONE # (_____) _____	
ADDRESS _____	

IS WATER SYSTEM METERED? _____ IF YES, MAXIMUM DAILY FLOW _____ gpd
WELL PUMPING RATE _____ gpm
OF FAUCETS _____ MAX # USED SIMULTANEOUSLY _____
OF TOILETS _____ MAX # USED SIMULTANEOUSLY _____
OF SHOWERS _____ MAX # USED SIMULTANEOUSLY _____
OTHER FIXTURES _____

OWNER'S SIGNATURE _____ DATE _____

A properly functioning chlorinator system introduces chlorine into the water in such a way that all the water has a uniform concentration of chlorine. The chlorine should then be given the appropriate amount of "CT" (disinfection 'C'oncentration multiplied by 'T'ime) based on the Ground Water Rule (GWR).

Compared to the flow after the pressure tank, the flow from the well will be relatively uniform. The chlorine injection point should therefore be prior to any pressure tanks. A raw water sampling tap must be installed before (i.e. upstream from) the chlorine injection point. The injection point and the raw water tap must be separated by a check valve (see diagram on reverse for a proper depiction of plumbing order). The chlorinator must be a positive displacement type equipped with an anti-siphon device or a peristaltic type metering pump. The chlorinator and well pump must be wired together to operate simultaneously unless a flow paced configuration is being utilized.

Contact tanks must be installed after the injection point. Tank configuration is important when determining Baffling Factor (see diagram below) and calculating "CT". If a pressure tank is used to provide contact time, only one third of the baffled volume of the tank will be considered. Pressure tanks on tees (i.e. a single inlet and outlet) will not provide any "CT". Tanks should be sized to provide 6 mg/l*min of "CT". Please note the equation on page 2 when calculating "CT".

Fill out the diagram on page 2. If a configuration other than that shown is proposed, attach an appropriate sketch. If a peak flow of less than the well pumping rate is to be considered, include an appropriate explanation. This must include a description of conditions under which peak flows will occur.

Please note that this application may not be applicable for complex systems that may require engineered plans for review and approval.

Baffling Factor based on tank configurations:

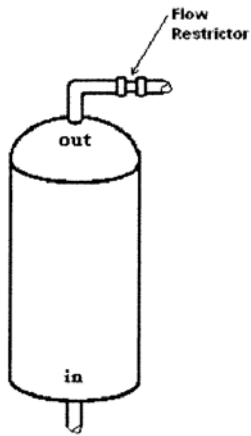


Fig 1.1 - Tank configuration receiving 0.1 Baffling Factor

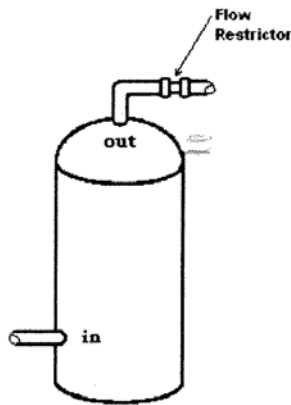


Fig 1.2 - Tank configuration receiving 0.3 Baffling Factor

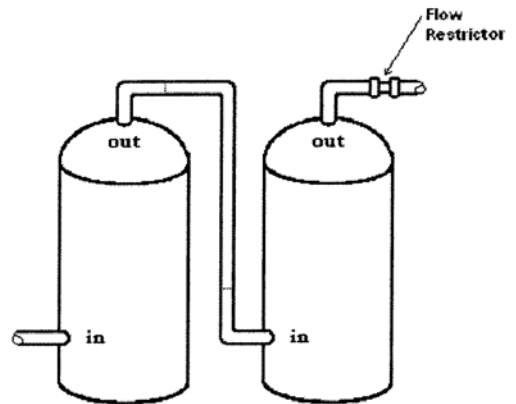
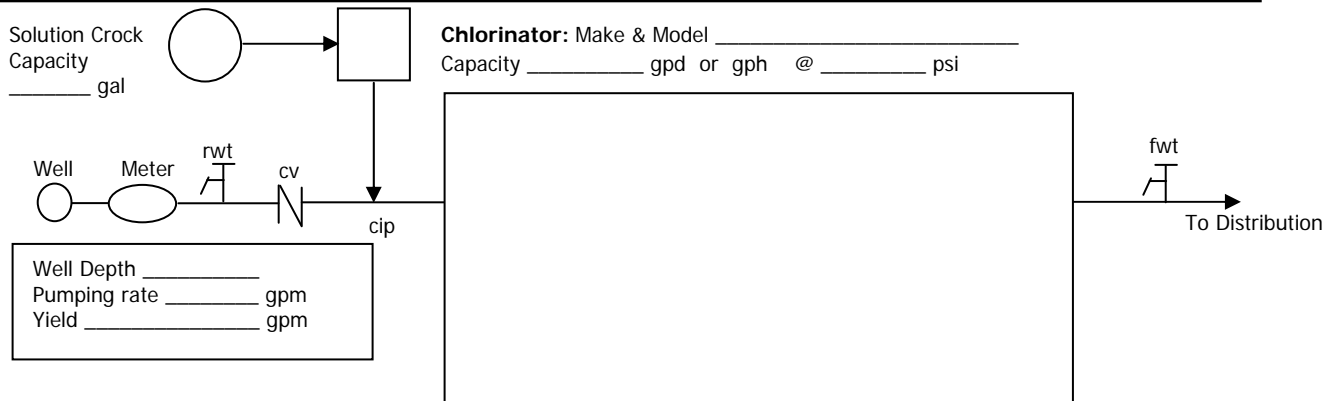


Fig 1.3 - Tank configuration receiving 0.5 Baffling Factor

Table 1

Tanks in series	Tank Configuration	Baffling Factor
1	Fig 1.1	0.1
	Fig 1.2	0.3
2	Fig 1.1	0.3
	Fig 1.3	0.5
3	Fig 1.1	0.5
	Fig 1.2	0.7
4	Fig 1.1	0.7
	Fig 1.2	0.9



Please include a drawing in this box of the Storage tank(s) and Pressure tank(s) configuration

<p>Legend: rwt – Raw Water Tap fwt – Finished Water Tap cv – Check Valve cip – Chlorine Injection Point</p>	<p>Contact Tanks: Number of tanks: _____ Volume _____ gal Make & Model _____</p>	<p>Pressure tanks: Number of tanks: _____ Volume _____ gal Operating Pressure: On _____psi – Off _____psi Make & Model _____</p>
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Use the information above to complete the following equation (remember you must provide a CT of 6 mg/l*min):

$$CT_{ACT} \text{ (mg/l * min)} = \frac{\text{Concentration (mg/l)} \times \text{Volume of tank(s) (gal)} \times \text{baffling factor (from worksheet)}}{\text{peak flow (gal/min)}}$$

$$\text{_____ (mg/l * min)} = \frac{0.2 \text{ (mg/l)} \times \text{_____ (gal)} \times \text{_____}}{\text{_____ (gal/min)}}$$

APPROVAL AND CONDITIONS

This application is approved under the provisions of Subsection 5-1.30 of the N.Y.S. Sanitary Code and is subject to the following conditions:

1. THAT a minimum free chlorine residual of 0.2 mg/l shall be maintained throughout the distribution system. Tests for free chlorine residual shall be taken daily, while the facility is in operation, with a DPD type test kit.
2. THAT microbiological testing of the water supply shall be performed by the water supplier on a monthly/quarterly basis, and further, that a copy of the results of this analysis shall be submitted to the Orange County Health Department upon its receipt by the water supplier. Unsatisfactory microbiological samples may result in the necessity of increasing the capacity of the chlorine contact tanks for additional chlorine contact time.
3. THAT operation reports shall be filled out on a daily basis by the supplier of water and submitted to this office by the tenth calendar day of the next monthly reporting period as prescribed in the N.Y.S. Sanitary Code for a non-community water supplier.
4. THAT the chlorinator approval is based upon a peak flow of _____ gpm.
5. THAT any interruption in the treatment process or the drinking water supply, shall be reported to this office immediately. No change in the source or method of treatment shall be made without first notifying and obtaining approval from the Orange County Health Dept.
6. THAT the water supply shall be constructed in complete conformance with this approved application WS-101.

Date

Orange County Department of Health P.E.