

SECTION -SWIMMING POOL WATER CHEMISTRY CONTROL

1.01 SUMMARY

- A. A **CHEMICAL AUTOMATION SYSTEM** shall be supplied for continuous monitoring of water ORP/Redox (Oxidation Reduction Potential) and for automatic control of chemical feeders.
- B. The system shall be a **CHEMTROL® 230 DIGITAL ORP CONTROLLER** of current design and production model manufactured by **SANTA BARBARA CONTROL SYSTEMS** of Santa Barbara, California or a technically equal system certified by the specifying agent as capable of providing equal performance for all operating functions.
- C. Exceptions to the specifications shall be described in detail together with a list of ten (10) similar operating systems of same model and manufacture, with the name, address and telephone number of operating personnel.

1.02 SPECIFICATIONS

A. CHEMISTRY CONTROLLER

- 1. The controller shall be microprocessor based and shall feature digital readout of ORP. All instrumentation shall be enclosed in a water resistant non-metallic cabinet with a clear window cover. All operating controls, calibration adjustments and safety alarm settings shall be accessible from the front panel.
- 2. The control system shall automatically activate the appropriate chemical feeders in order to maintain the Oxidation- Reduction Potential (ORP) of the Free Active Sanitizer level within +/- 10 millivolts (mV. Setpoint selection shall be by direct dialing on scales calibrated in mV of ORP.
- 3. The control system shall include the following feed modes: off, manual, automatic and proportional. The feed rate in the proportional zone shall be adjustable by the changing the bandwidth of the zone from 1% to 100% of the setpoint value.
- 4. The face panel shall feature three-digit LED digital readout for ORP units.
- 5. Visual and remote alarms shall be activated by high/ low ORP or sanitizer conditions and by the overfeed safety timers.
All alarm settings shall be adjustable from the front panel.
- 6. All electronics shall be mounted on enclosed, PC board(s) and shall be coated with a corrosion-proof coating. The ORP sensor shall be potentiometric, sealed combination glass electrode.

B. WARRANTY

- 1. The controller electronics shall be covered by a standard manufacturer warranty of five (5) years. Special extensions of more limited warranties shall not be considered acceptable. All sensors will be covered by a standard one (1) year warranty. Other parts shall be covered by their own manufacturer's warranty.
- 2. The manufacturer shall supply a complete instruction, operating and maintenance manual.