

CHEMTROL® 240 pH CONTROLLER

ENGINEERING SPECIFICATION (03/2002)

WATER TREATMENT AUTOMATION SYSTEM

1.01 SUMMARY

- A. A **CHEMICAL AUTOMATION SYSTEM** shall be supplied for continuous monitoring of water pH and for automatic control of the chemical feeders.
- B. The system shall be a **CHEMTROL® 240 DIGITAL pH 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 pH. All instrumentation shall be enclosed in a watertight 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 pH within +/- 0.1 of the setpoints selected by the operator. Setpoint selection shall be by direct dialing on scales calibrated in pH units.
- 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 two-digit LED digital readout for pH units. Calibration of the pH display shall be adjustable from the front panel, using a standard chemical test kit for pH.
- 5. Visual and remote alarms shall be activated by high/ low pH 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 a single enclosed, plug-in PC board and shall be coated with a corrosion-proof coating. The pH 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.