

Project Profile

Water Treatment Plant County-Wide Expansion

Bonita Springs, Florida



Owner: Bonita Springs Utilities
Contact: Jimmy Williams, Telephone: (800) 583-1496

Engineer: CH2M Hill
Contact: P.Y. Keskar, Telephone: (352) 335-5877

Contractor: CH2M Hill
Contact: Katus Watson, Telephone: (239) 947-2300

RO Manufacturer: GE Osmonics
Contact: Scott Clark, Telephone: (800) 848-1750



Water Treatment Plant County-Wide Expansion

Bonita Springs, Florida

Project Scope and Description: Complete ILO. Plant Monitoring and Control System:

- A. A New RO. Plant adjacent to an existing lime softening plant, including four membrane trains with future expansion of four additional units; and eight well sites with future expansion of eight additional well sites. Network includes a well master using an Allan-Bradley ControlLogix PLC communicating with seven well slaves utilizing Allen-Bradley FlexLogix PLC's; fiber optic media and ControlNet protocol; a membrane train master using redundant ControlLogix PLC's communicating with four membrane trains three chemical feed systems, a degassifier and odor control system, a storm water pump station and an injection and monitoring well system all utilizing ControlLogix remote I/O, fiber optic media and ControlNet protocol. A high service pump master utilizing redundant ControlLogix PLC's communicating with the high service pump drives via a hard-wired DeviceNet data link and includes a local operator interface touchscreen computer. The membrane train master communicates with the feed pump drives and transfer pump drives via hard-wired DeviceNet data link and includes a local operator interface touchscreen computer. All three master PLC's communicate to the new and existing control room operator workstations via a fiber optic Ethernet network.
- B. Other Network Items Include: Fifty-five thousand feet of six-fiber optical cable, including connectors, jumpers, fan-out kits and termination kits. A control room equipment rack is provided to house fiber interconnect centers, fiber-to-copper media converters, and network switches. All PLC's and operator interfaces are powered by uninterruptible power supplies. Two new desktop PC's and a report printer are supplied by the owner.
- C. PLC and HMI programming and network configuration utilizing Intellution iClient Development and Runtime, MS Windows 2000 operating system, Sytech XLReporter, MS Office XP Professional, A-B RSLogix 5000, A-B RSNetWorx for DeviceNet and ControlNet, A-B RSLinx, A-B Panelbuilder32 and Metrobility NetBeacon.
- D. Eleven miscellaneous field panels housing pilot lights, hand switches, digital indicators, warning horns, alarm beacons, surge suppression, signal conditioners, relays and other components for local control of various processes.
- E. Field instrumentation devices include ten submersible level transmitters, 40 pressure gauges and 34 pressure switches (diaphragm seals as required), ten propeller meters, 11 differential pressure transmitters, four pressure transmitters, 25 ultrasonic level transmitters, five venturi flow tubes, ten rotameters, one temperature transmitter, two magnetic flow meters, 18 flow switches, four float switches, four pH Analyzers, one turbidity analyzer, three conductivity analyzers, one chlorine residual analyzer and 72 field instrument TVSSs.
- F. Miscellaneous items include spare electronic cards of each type used, spare control panel components of each type used, calibration equipment, test equipment and tools.

Accepted: 02/27/04 (scheduled)

Approximate Value: \$1,112,500 (bid plus customer change orders)