
**CITY OF TEXAS CITY
UTILITY DEPARTMENT- WASTEWATER DIVISION
INTEROFFICE MEMORANDUM**

TO: MIKE HOGAN P.E., DIRECTOR OF UTILITIES
FROM: CALVIN D. BREMER, WASTEWATER SUPERINTENDENT
SUBJECT: MOTOR CONTROL CENTER UPGRADE
DATE: 12/8/2008
CC: FILE

The motor control center upgrade is an ongoing project at the wastewater treatment plant. This project is near completion and cannot be completed without the attached PLCs and necessary hardware. These PLCs have had numerous failures over the past five plus years due to heat, moisture, and sewer gas contamination. The new PLCs are conformally coated to prevent corrosion from moisture and sewer gas. We have sealed the MCC buildings and installed air conditioner units to provide protection from the summer heat. All process units requiring a PLC to communicate to the SCADA computer will be located within the MCC buildings. Our plant SCADA system provides alarm status for call outs in the event of an emergency or process problem. This gives us the ability to have operators on the clock eight hours per day without using an evening shift to monitor the plant around the clock. Without this upgrade it will become very difficult to monitor the plant and prevent violations of the TPDES discharge permit. The following is a brief scope of work for this project.

SCOPE OF WORK

Replace failing Allen Bradley PLCs with Modicon Momentum PLCs. The Momentum PLCs are conformal coated to prevent corrosion. Install PLCs where remote IO was used to allow control event if communication lines fail. Rewrite all PLC programs for new controllers. Reconfigure WonderWare HMI software for new controllers and give operators a better interface with more control and history. Install mini HMI faceplates in each MCC and control room to allow operators to maintain automatic control and monitoring in the event of communications or main computer failure. Install wireless Ethernet to replace failing hardwire in conduits throughout the plant.

As you will notice, Graybar is the least expensive of the three proposals attached.

CDB