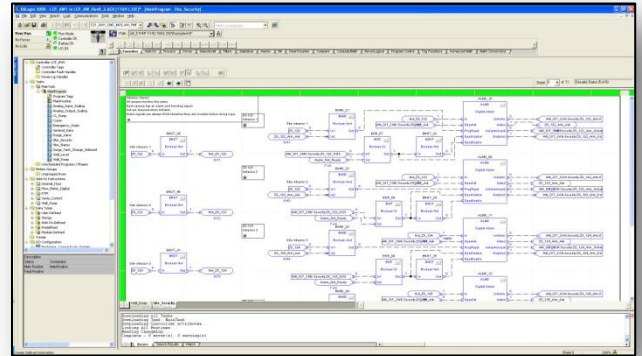




CITY OF GOODYEAR, AZ WATER & WASTEWATER DEPARTMENT

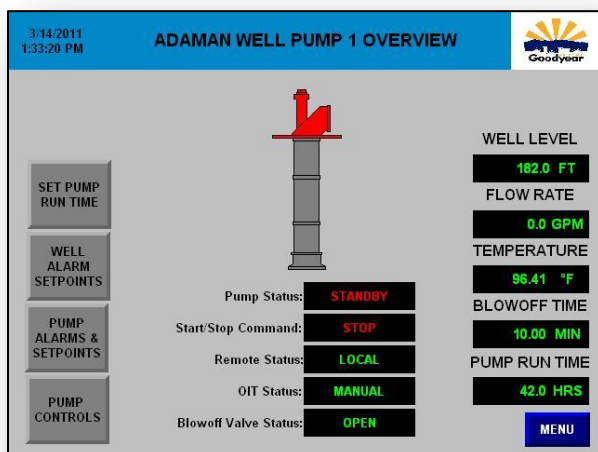
CITY OF GOODYEAR, AZ

As a west coast leader in automated engineering services, Quantum Integrated Solutions developed and implemented an automated system for the City of Goodyear. This system automated the City of Goodyear's Adaman well and arsenic removal sites by programming two Allen-Bradley PLCs and OITs. Programming was done both in RSLogix 5000 and Factory Talk ME. Both the well and arsenic sites required PLC messaging over MDS radios as the sites were separated by an Interstate. Screens were developed and deployed into the field to allow field operators to control each site.



ADAMAN WELL PUMP

Quantum developed the automated programming scheme to control the operation of the well pump located at the Adaman well. The automated well pump scheme was based off status information transmitted from the arsenic removal site. Additionally, programming was done to provide operators site information about the Adaman well site, including well level, flow rates, pump data, remote terminal unit temperature, and much more. Security at the Adaman well was important to the owner, therefore Quantum created a custom PLC program to provide site security.



ARSENIC REMOVAL SITE

To meet EPA arsenic levels Quantum automated the City of Goodyear's arsenic removal site to minimize or eliminate any manual control. The system was automated by controlling and collecting feedback information from various instruments including valves, pumps, compressors, level transmitters, and flow transmitters. Quantum designed four heavily automated programming sequences that control the removal of arsenic. These four major sequences were "Online", "Backwash", "Forward Rinse", and "Idle". The Online sequence is a process system that removes arsenic from the Adaman well and stores it in a vessel. To remove arsenic from the vessel, a Backwash control sequence was designed to deposit arsenic in a removal holding tank. Upon backwash completion, a Forward Rinse sequence was used to rinse the vessel and piping clean of any backwash contaminants.





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CONTROL EQUIPMENT

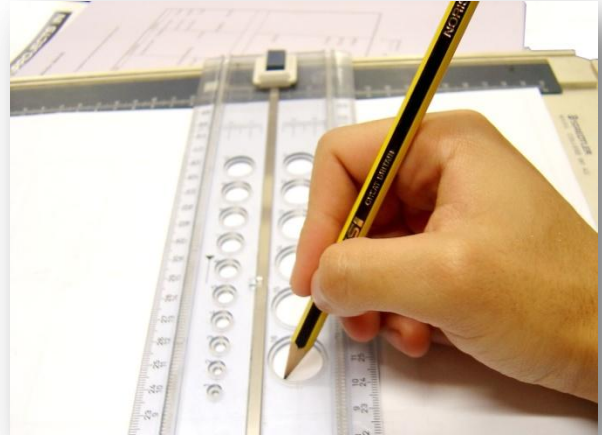
Quantum can evaluate, design, fabricate, install and configure necessary equipment for a wide range of process control designs.

- ✓ Instrumentation
- ✓ PLC Control Panels
- ✓ Motor Control

ADDITIONAL SERVICES

Quantum provides many additional industrial automation applications. Listed below are some additional engineering services provided by Quantum.

- ✓ Radio Surveys
- ✓ Industrial Energy Audits
 - Search for qualifying energy rebates
- ✓ SCADA and HMI Support
- ✓ SCADA Video Surveillance Design and Installation
- ✓ Process Control Training
- ✓ Secure internet access to project backups – 24/7
 - Design Drawings
 - Programming codes
 - Operation and maintenance manuals
- ✓ Fiber Network Design
- ✓ Computer Aided Drafting (CAD)



CERTIFICATIONS AND AFFILIATIONS



MAJOR MARKETS SERVED

Mining



Water/Wastewater



Renewable Energy



Semiconductor

