

Cave Creek WRP Process Control Optimization

Project Name: Cave Creek WRP Process Control Optimization
Location: Cave Creek Water Reclamation Plant, Phoenix, AZ.
Owner: City of Phoenix Water Services Department
Project Construction Cost: N/A

The City of Phoenix commissioned EIC Engineers, L.L.C. to perform a comprehensive Process Control Optimization Study (PCOS) for the Cave Creek Water Reclamation Plant. The project involved identifying plant-wide process control concerns, design issues, equipment problems, and any improvement needs for the day-to-day operation and maintenance of the plant and its support facilities.

Over the period of one year the project required assessing a number items of concern put forward by key members of the plant's operation and maintenance staff. The project required investigating as well as providing recommendations and cost estimates for numerous process equipment enhancements and equipment safety upgrades.

Some major project electrical, I&C, and programming recommended improvements included:

- Addition of motor operated valves and automation of the influent valves
- Replacement of chemical feed pump controllers for three odor control systems
- Replacement of influent pump station level control instruments and controls
- Replacement of secondary sedimentation basin and RAS Splitter box mixers and addition of controls
- Replacement of secondary sedimentation basin, filter effluent, and reuse water flowmeters
- Modification to the main-tie-main and generator automatic transfer switching schemes

