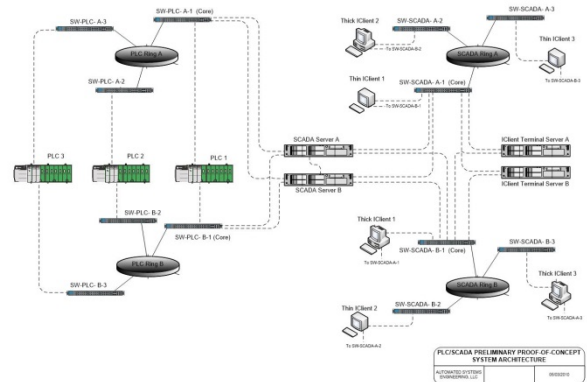


SIMILAR COMPLETED PROJECTS ATTACHMENT 3

MSDGC SCADA System Installs & Upgrades for East Section Treatment Plants

ASE completed the detailed design for the Metropolitan Sewer District of Greater Cincinnati (MSDGC) SCADA Installs and Upgrades Project for the East Section Treatment Plants in July of 2012. The plants included in the SCADA Upgrades were Little Miami, Polk Run, and Sycamore WWTPs.



Services by ASE

Design services included the upgrade of the plant-wide PLC and SCADA system networks as well as the replacement of all of the obsolete PLCs and local HMIs.

ASE was responsible for the overall PLC and SCADA system network design.

The new Control System Network is designed to have full redundancy throughout (including redundant PLC and SCADA System Networks, iFIX servers, Terminal Servers, Control System Network Switches, etc.). *The new design will allow the network to continue to operate during any point of failure in the system.* The design provides redundancy down to the switch level, so that if any switch fails, the network will continue to operate with no loss of communication. The network design utilizes VLANs in order to minimize the number of switches required to provide full redundancy.

ASE provided the base design for the new control network and then performed proof-of-concept testing to prove the overall reliability and redundancy of the proposed control network design. The test proved that even with multiple levels of failure in the network, the systems continued to operate without loss of communication. Both Rockwell Automation and General Electric also reviewed the design and provided their seal of approval for the design. *This initial design was then utilized as the basis of design for implementation across the entire district,* including East, West, and Central Section wastewater treatment plants.

ASE also assisted with the review of MSDGC's PLC & SCADA System Standards. ASE is currently configuring the SCADA systems for multiple projects at MSDGC and continues to update the standards with additional improvements as needed. *ASE is helping to set the new SCADA standards across the district and can provide valuable insight for the new network designs and SCADA system standards for other upcoming projects at MSDGC.*

