

Featured Project

Iron Mountain Mine SCADA

Redding, California

Arcsine Engineering has been under contract since 2007 to maintain, upgrade, and replace Supervisory Control and Data Acquisition (SCADA), Programmable Logic Controllers (PLCs), process instruments, communication networks, data historian and reports, and Computerized Maintenance Management Systems (CMMS), facility-wide for the Iron Mountain Wastewater Treatment Facility. This facility is part of the Environmental Protection Agency's Super Fund site's effluent contamination mitigation process. Due to the critical nature of the control system and the need for continuous data collection and storage, this work has to be done with great precision and care.

Control hardware was upgraded at all nine control locations, including the addition of five Programmable Automation Controllers (PACs). This upgrade required the addition and/or modification of control cabinets, the addition of Uninterruptible Power Supplies (UPS's), temperature control, and communications. The SCADA control Ethernet network was routed to each control location using fiber optics, copper, and high bandwidth spread-spectrum radio.

Unique features to the facility:

- Implementation of upgrades with minimal downtime.
- Comprehensive turnkey integration of control system.
- Challenging harsh and mountainous communications environment with multiple fiber optic, copper, and radio connections.
- Redundant SCADA HMI systems.
- Redundant hot standby PLCs in the treatment plant; multiple PACs at collection sites.
- Coordination with multiple agencies.

Arcsine's work included:

- HMI-Wonderware Intouch system.
- Replacement of redundant InTouch systems.
- PLCs: Upgrade of four Modicon Quantum PLCs and the addition of five new Modicon M340 PACs.
- Communications: New Ethernet network using fiber optic, copper, and spread-spectrum radio.
- Construction, testing, and installation of new and existing control cabinets.
- Eliminated communication multiplexers and data concentrating.
- Converted from centralized to distributed data collection and totalizing.
- Design and installation of a data historian and regulatory reporting.
- Design and implementation of facility-wide CMMS.

Electrical
Programming
Lighting
Power Distribution
Construction Services
Water/Wastewater
Communications:
Fiber Optic/Copper
Radio



"I am very pleased with Arcsine. You'll get the very highest recommendation from me. ArcSine has always responded very quickly to our needs."

Rudy Carver
Project Manager

