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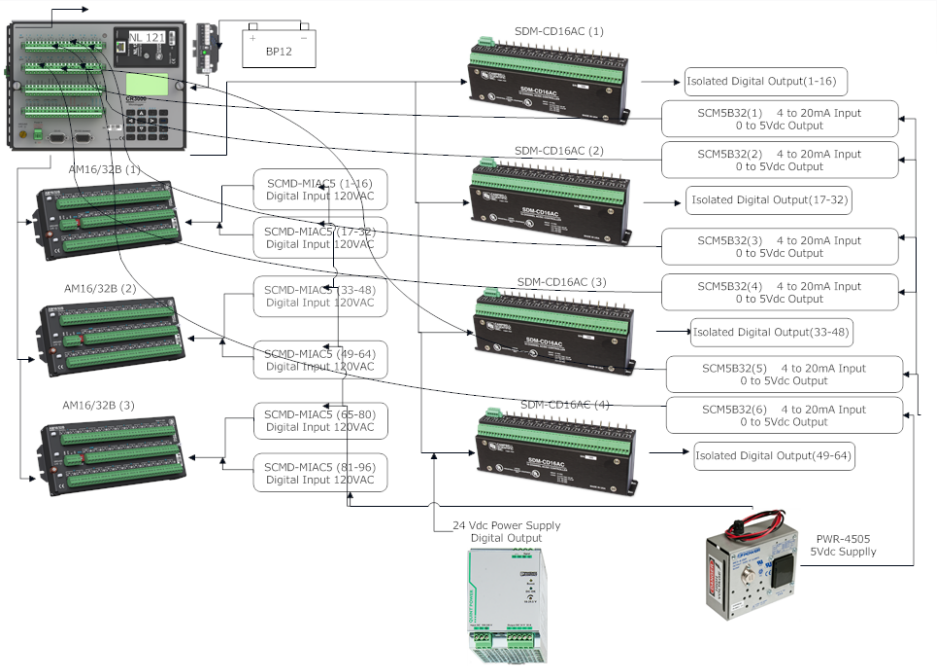
WHEN MEASUREMENTS MATTER

New Mexico: SCADA System

System updated with Campbell data logger, multiplexers, software



In April of 2015, Sandia National Laboratories (SNL) contracted with Montrose Air Quality Services (MAQS) to upgrade an existing SCADA system of a process wastewater facility. The system facilitates the owner's compliance with discharge-permit issues required by the city of Albuquerque.

SNL operates a water handling and sampling facility that captures process water and holds it for discharge into the city sewer. Once a holding tank is full, the water is sampled and submitted for laboratory analysis. The water tank is selected for discharge into the city water treatment system if it meets the quality criteria specified in the discharge permit.

The original SCADA system was installed in 1994. The system provided the following functions:

- Tank-level and fill-rate monitoring
- Valve, pump, and blower motor controls
- Electrical panel switch status for all valves, pumps, and motors as either on, off, or auto
- Reports of tank levels, switch states, sample activities, and discharge activities
- Alarms based on tank levels, fill or discharge rates, switch status, and sample and discharge activities

Case Study Summary

Application
Replacing an existing SCADA system

Location
Albuquerque, New Mexico, USA

Products Used
CR3000, AM16/32B, SDM-CD16AC, NL121, RTMCPRO, LoggerNet Remote, LoggerNet Admin, LoggerNet

Contributors
Robert Powell, MAQS

Participating Organizations
Sandia National Laboratories (SNL)

Measured Parameters
Water level, flow rate, valve status, motor and pump status, system alarms, remote controls for pumps and valves

The SCADA system sent data to a local computer work station. The work station allowed for instrument control, status reports, and alarm notifications. Remote communication and control were not available.

The new system specified, purchased, and configured by MAQS provided all of the functionality listed above and added remote communication and control features. The system is controlled by a Campbell Scientific CR3000 datalogger, with input and output through multiplexers and voltage control switch modules. The system equipment is listed below:

- CR3000 Micrologger®
- AM16/32B multiplexer, four units
- SDM-CD16AC 16-channel ac/dc relays, four units
- NL121 Ethernet interface

MAQS integrated the facility network to provide monitoring and control functions via LoggerNet Remote. They developed RTMC Pro display screens on the local computer work station, which is dedicated to operating LoggerNet Admin support software and is enabled over the SNL network. The platform now enables monitoring and control features from remote office locations, as well as email alerts and status notifications to responsible parties via the PC running LoggerNet.