



BULLETIN — 102

L.A. County Finds Reliable Pump Monitoring Backup in AlarmAgent.com

On January 15, 2006, a power failure at a pump station in Manhattan Beach resulted in massive flooding. Although a sophisticated SCADA system was in place to monitor and manage the wastewater collection system, an extraordinary and simultaneous combination of equipment and communication failures resulted in the largest wastewater spill to hit the county in a decade. This evoked disappointment from residents and environmentalists alike, and placed the Sanitation Districts of L.A. County in a negative spotlight. For an innovative organization known for pioneering the use of technology for the sake of environmental protection, this image was unacceptable. As a result, the Sanitation Districts quickly began looking for an alternative technology solution to provide an additional line of alarm defense and to prevent a similar occurrence from ever happening again.

Sanitation Districts' Search for Reliable Monitoring

The Sanitation Districts had experienced past success and reliability with RACO Manufacturing and Engineering's Verbatim® and Guard-It® monitoring products for other county uses, and had appreciated their post-sales service. So, they immediately turned to RACO to implement a cost-efficient backup solution for their existing SCADA system.

Before a technological solution could be determined, the area's geography and terrain had to be carefully considered. The Sanitation Districts provide wastewater and solid waste management for about 5.3 million people, spread out across 78 cities over the 4,084 square miles of Los Angeles County. Some of these cities and unincorporated areas are separated from the main metro complex by mountains, which could limit technological options. RACO personnel went out and visited 10 of the most critical pump station locations to fully understand the situation.

The Sanitation Districts' current working SCADA system used a landline platform, so in order to ensure reliable backup, the system would need to use either private radio or wireless technology. But, with the mountainous terrain of L.A. County, private radio technology would require the building of many large radio towers. This would be a slow and costly process, made difficult by



zoning regulations, not to mention angry beachfront real estate owners who would likely object to new radio towers blocking their view. After carefully weighing all of the options, RACO determined that their wireless, Web-based alarm detection and notification system, AlarmAgent.com, would be the perfect solution for the job.

RACO's Preparation and Partnership Methods Ensure Success

RACO personnel went to the Sanitation Districts' offices and gave AlarmAgent.com demos to employees, explaining all of the operational features and fielding questions about its operation and reliability. RACO then worked on-site with Sanitation Districts personnel, taking radio frequency surveys to ensure that the signal strength requirements were available for a wireless system, and to ensure that complete system-wide coverage could be achieved. Multiple test units were then supplied to critical sites and installed to test operational usage. These units were successfully tested and retested to the satisfaction of all parties involved.

AlarmAgent.com Meets Every Monitoring Requirement

Today, all 53 pump stations in L.A. County have AlarmAgent.com installed and running as a backup solution. In addition to alarm notification, AlarmAgent.com offers performance monitoring for these pumps, measuring pump operational status, wet-well levels, facility intrusions and alarms with SCADA-

like capabilities. If a pump malfunctions or if a predetermined wet-well level is reached, AlarmAgent.com immediately begins a notification sequence through a chain of appropriate personnel until someone responds to the alarm.

An operations team mans a field office where all AlarmAgent.com monitoring information is displayed. This team can monitor the AlarmAgent.com Web site for alarms, acknowledge a response and coordinate response team assignments when necessary. The Web site also provides a history of the alarms and responses, along with pump performance statistics for review or later analysis. All of this information is available to any authorized personnel from any location that has Web access. With L.A. County's personnel spread out over so many locations, this has been extremely helpful.

AlarmAgent.com Pays Off Quickly

AlarmAgent.com monitoring has already come in handy. Just hours after AlarmAgent.com was installed at a pump station on Pacific Coast Highway #1, a utility transformer feeding this station blew out, cutting off power and disabling the SCADA system. But, AlarmAgent.com was up and running, immediately alerting staff to the situation and providing critical status and alarm information until the power was restored.

Since then, there have been several other times when the Sanitation Districts' main SCADA system has experienced system-wide downtime, both planned and unplanned. In each of these situations, the AlarmAgent.com system provided the necessary system-wide coverage. The continual site monitoring eliminated the need to have personnel drive to all of the

sites and do a visual inspection during this downtime, and with the large coverage area and difficult terrain involved, this provided quite a savings in personnel time, gas and vehicle expenses. The Sanitation Districts of L.A. County have been impressed with the results.

"We couldn't be happier with what AlarmAgent.com has brought to the table," said Jelmer Torres, Supervising Electrical Engineer for the Sanitation Districts of L.A. County. "The units were easy to set up, cost-efficient and provide reliable working data for us. Most importantly, they gave us confidence in our system again."

AlarmAgent.com's Expansion to Other County Applications

AlarmAgent.com's success on the Wastewater Management side of the Sanitation Districts of L.A. County caught the attention of their Solid Waste Management side as well. This division's responsibilities include sanitary landfills, recycling centers, material recovery and transfer, and energy recovery facilities. After careful evaluation and testing of their own, they recently specified and purchased multiple AlarmAgent.com units to be installed at the largest landfill in the nation. In this application, AlarmAgent.com is the primary monitoring system for the energy recovery system.

The Sanitation Districts of L.A. County continue to see RACO Manufacturing and Engineering as a partner in providing efficient and effective monitoring solutions, all to prevent the extreme consequences of a pump malfunction going un-alerted. The security that AlarmAgent.com provides has made the Sanitation Districts confident that an incident like the one that occurred on Manhattan Beach will never happen again.



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