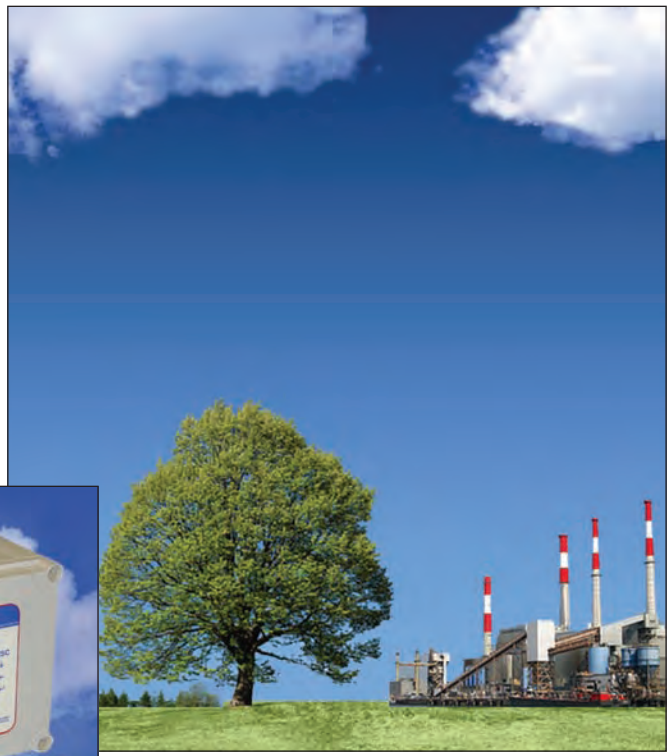
Virtual Environmental Network

A New Vision

This case study will describe the successful installation of maximum achievable control technology (MACT) for a specialty lime materials processor to assure compliance with USEPA dust emission control regulations. In this example, a unique data management challenge was resolved.

The source—a high purity lime products manufacturer, located in the US Midwest where high quality limestone reserves are endemic—required a cost effective solution to comply with the terms of outstanding limestone MACT mandates. In this case, lime processing operators are required to install the latest dust emissions control technology—a triboelectric bag-leak detector (BLD)—to monitor baghouse performance and to permit rapid corrective action following a system failure, within one hour of the onset of the event, usually a filter bag separation from its mounting frame, or a fabric tear in one or more locations within the dust collector.



A system consisting of two, dual channel, Auburn Systems, TRIBO.*dgd* monitors and associated AUBURN.*vision* software were combined to track performance of four baghouses each of which service a vertical processing kiln. AUBURN.*vision* software is uniquely designed to extract, organize and report emissions activity from any plant automation system (i.e. Rockwell, Honeywell, Allen Bradley, etc.). It is configured to separate and manage environmental control data associated with each baghouse to eliminate costly, labor intensive, manual data extractions (e.g. cut and paste) and to generate dust emission real-time and historical reports.

AUBURN.vision Operates Seamlessly with Commingled Device Networks

AUBURN.*vision*, installed in parallel with the existing plant automation network, created a virtual environmental network eliminating the need for additional hardware and additional installation costs usually required to separate environmental data from process operation data. This *new vision* software enabled extraction of the most relevant environmental data from the main data automation system, reliably and conveniently.

However, one major obstacle still existed: the primary plant communication network consisted of a device network, an automation network, and a business network on different subnets with different security policies. One can imagine the difficulty of extracting relevant environmental information in the presence of a flood of data from several commingled networks. The conditions encountered, and flawlessly resolved, were exactly what this new virtual data extraction system was designed to accomplish. The system now functions smoothly and continuously provides all necessary real-time data and alarm notification *as well as* historical data and alarm log information for emissions control and predictive maintenance. Operational data is easily separated from relevant environmental data to facilitate the accurate calculation of process uptime and downtime, an important compliance requirement for emissions control reporting and to avoid false alarms during maintenance operations and other non-reportable periods.

The system was subsequently expanded to include flow and differential pressure data from several rotary kiln wet scrubbers at an adjacent facility, further emphasizing its flexibility. Auburn Systems, the environmental manager, and IT personnel all worked together—as a team—to configure and commission, this intelligent, flexible, monitoring and reporting system.

Today, AUBURN.*vision* systems are creating virtual networks to efficiently supervise environmental information for numerous other industries, as well.

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