Challenge

Five area gas monitors, one at each level of a Coker unit, were set up at one of the world’s leading oil refineries. With use of repeaters, each unit was configured to report information back to a central laptop computer. The lengthy setup time and issues with latency and signals burdened by the Coker unit infrastructure made this configuration challenging. Transmission of information was inconsistent, and often attendants had to go to the individual monitors to verify the readings. In addition, the setup was compromised by each unit’s 12-hour maximum battery life. With the intention to monitor the designated areas around the clock, the units could not be moved, and personnel had to go replace the batteries twice a day.

Solution

The customer was presented with five Radius™ BZ1 Area Monitors with LENS™ Wireless technology, a long-range, power-efficient wireless mesh network from Industrial Scientific that enables instrument-to-instrument, or peer-to-peer communication. One Radius was placed at the manway on every level of the Coker unit, with each monitor at a distance of 100 feet from the next one, allowing them to easily form a group and communicate with each other. The setup time for these monitors was less than five minutes, allowing information to immediately be shared among all five.

Results

With a quick setup time, the ability to detect up to seven gases using 15 sensor options, a typical run time of 7 days, and alarms that sound at 108 dB to cut through high-noise environments, the Radius BZ1 Area Monitors were the perfect solution. The ability to communicate with one another allows a single person to monitor the five area monitors from a single location and eliminates the need for a worker to go up and down to the different levels of the Coker unit. The screen on each monitor displays the conditions of the other monitors within the group. The customer was able to increase worker safety by quickly identifying units in alarm, and saved money by decreasing headcount and man hours.