

Confined Space Monitoring with the Radius™ BZ1 Area Monitor



Standards around the world governing entry into confined spaces, such as 29CFR1910.146 and 29CFR1926.1203 in the United States, require testing of the atmosphere prior to entry into a space. Although there are numerous ways to conduct the pre-entry testing, the recognized best practice is to use a direct reading portable gas monitor equipped with a remote sampling pump. When the pre-entry testing is complete, it is also a best practice, and a requirement of some standards, to continuously monitor the atmosphere inside the space throughout the entry. The Radius BZ1 Area Monitor, equipped with its remote sampling pump, is an ideal monitor to accomplish both the pre-entry testing and continuous monitoring in many confined space applications.

The sample pump of the Radius BZ1 is capable of drawing a remote sample from up to 30 m (100 ft), allowing the monitor to be easily stationed outside and, if necessary, at a safe distance from the entry point of the confined space. The extended battery life of the Radius with a pump, typically 3 ½ days (84 continuous hours), also makes it ideal for continuous monitoring of the atmosphere during long entry procedures. The monitor's large display, bright visual alarms, and 108 dB at 1 m audible alarms help to draw attention to the space if a hazard occurs.

Using LENS™ Wireless for Confined Spaces

Confined spaces must also be monitored by an attendant stationed outside of the space at all times. It is often acceptable for one attendant to serve multiple confined spaces, provided that he can monitor the atmosphere and communicate with the entrants as necessary in all of the spaces for which he is responsible. Peer-to-peer monitoring provided by LENS Wireless, available in the Radius BZ1, allows the atmospheric readings from multiple confined spaces to be viewed on one monitor stationed with the attendant responsible for ensuring safe conditions in each of the spaces. When atmospheric conditions in one space change the Radius BZ1 will alarm causing the monitor stationed with the attendant to also alarm and display the hazardous condition and location, calling the attendant to action.

LENS Wireless also will allow for entrants in the spaces carrying Ventis™ Pro Series portable monitors to have their readings communicated through the Radius BZ1 to the attendant outside the space. If an entrant is endangered by an atmospheric gas hazard, is immobilized, or is in need of emergency assistance for any other reason, the Radius BZ1 will utilize all of its alarm capabilities to summon help.

Although one would normally consider performing confined space atmospheric testing with a hand-held portable instrument, the Radius BZ1 Area Monitor can reduce the costs and increase the efficiency and safety of confined space operations, particularly those calling for extended, continuous monitoring.

Case Study

An example of a Radius BZ1 being effectively used for confined space monitoring comes from a construction company based out of Illinois in the United States. They were drilling a 10 m (~32 ft) deep, 2.5 m (12 ft) diameter shaft, surrounded by corrugated metal. They placed a Radius BZ1 at the bottom of the shaft, with another one at the top, which was sampling using the pump. Both units were communicating with LENS Wireless. "The work that was being conducted around the Radius unit got to be very loud due to jack hammers and riveters, and ear plugs were being worn. The loud audible alarm of the Radius allowed us to hear the alarm even though there were loud work activities going on. With LENS Wireless, the person on the street level could be alerted if there was a hazardous atmosphere. The large display screen and large font of the numbers also were beneficial."

To learn more about the Radius BZ1 Area Monitor and other confined space monitoring solutions, visit Industrial Scientific at www.indsci.com/radius.