



What's an industrial hygienist to do?

Equipment alone won't do the trick

By MARK BALDIGOWSKI

It's an early Monday morning. Joe, an industrial hygienist, has just arrived at the plant of the local paper manufacturing facility where he works. He is delighted to find a large package awaiting him. Feeling like a little boy on Christmas, he tears into the box to find the gas monitors that he recently ordered. He unpacks the monitors, places them on the chargers and begins to peruse the manual included in the packaging.

Joe is not unlike most industrial hygienists or other gas detection end users who believe that the equipment alone will do the trick. But most challenging is the maintenance of the equipment. Calibration, bump testing and battery charging are relatively easy tasks, but what happens when maintenance

requires something more in depth? What is an industrial hygienist to do?

Regardless of the type of equipment Joe has chosen to purchase, a great deal of responsibility is inherently expected following the purchase. An industrial hygienists' job would be fundamentally easier if all that was required was to purchase and use the equipment. In reality, the first day the monitors are circulated into the field for use is when the complex tasks and continuous actions must begin to ensure your gas detection program runs like a well-oiled machine. Following are 10 gas detection challenges Joe and any other end user could face in owning gas detection equipment:

1 Battery Charging – This step is necessary as soon as the unit is received and after each use. Not having a properly charged instrument will result in the availability of fewer units for use

in the field. Discipline is a necessity in order to have the correct tools for your operators.

2 Functional Bump Test and Documentation – The only way to guarantee that an instrument will detect gas accurately and reliably is to test it with a known concentration of gas prior to each day's use. Exposing the instrument to a known concentration of test gas will show whether the sensors respond accurately and if the alarms function properly. Once a functional bump test is performed, proof of this successful test must be supported with documentation.

3 Calibration and Documentation – Depending upon the equipment manufacturer, calibrations must be accomplished on a regular

basis. Calibration refers to an instrument's measuring accuracy relative to a known concentration of gas. The instrument's response to the calibration gas serves as the measurement scale or reference point. Once a calibration is performed, proof of this successful calibration test must be supported with documentation and kept for verification, when needed.

4 Training and Record Keeping

– Upon purchase of new equipment, all personnel must be adequately trained on its proper use. The repair facility or technicians must also receive training. Records of all trained personnel, including technicians and operators, must be accurately maintained. Frequent recurrent training must be accomplished to ensure consistency throughout your facility. Policy changes must also be regularly communicated to your workers.

5 Preventative Maintenance and Repair Decisions

– Continual preventative maintenance programs are necessary to ensure optimum instrument performance. Consumable parts like sensors, batteries and filters need to be replaced throughout the life of any instrument.

6 Parts/Cal Gas Procurement

– Replacement parts and calibration gas must be purchased and readily available for daily use in order to maintain your gas detection fleet. It is an unfortunate event to discover you are out of calibration gas when you are attempting to per-

form a bump test or calibration.

7 Instrument Maintenance and Repair

– Unforeseen expenses such as sensor and battery replacements will happen through the life of gas detection instruments. Scheduled instrument repair, whether performed in-house or sent back to the manufacturer, will be required. This would also require extra equipment to replace units being sent out for repair. Keep in mind that all repairs have varying turnaround times whether done in-house or at the manufacturer.

8 Data Review

– Most instruments today have data logging capabilities. This is the process of storing exposure data of a user into the instrument. This is similar to the black box in an airliner. Exposure data must be constantly reviewed from an instrument's data logger to ensure workers' safety.

9 Policies and Practices Management

– Policies and procedures must be established for the use and maintenance of gas detection equipment.

10 Fleet Usage and Optimization

– Ensure that your facility has enough equipment on hand for all departments' safety use.

In order to keep Joe's gas detection monitors functioning properly, he must take on the responsibility of meeting all these needs for the months and years to come. Had Joe done his research prior to his purchase, he would have learned that there are manufacturers who take

the headache out of owning and maintaining gas detectors by offering gas detection as a service. In addition, this service would have eliminated Joe's need to buy the gas detection equipment at all. Gas detection as a service would have also saved Joe's company money as it has a lower total cost of ownership than a traditional purchase for many customers.

The most important lesson Joe and any other gas detection end user can learn is that you should always do your homework. If you simply purchase a gas monitor without a plan already in place for maintaining the equipment, you are likely to experience the many challenges that come with ownership. Smart end users now look at gas detection as a service, which ensures the safety of you and your employees while freeing you of the hassles of maintaining your instruments. Do not work harder, just work smarter.

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