There is much talk in the safety industry today about OSHA’s recordkeeping and reporting requirements becoming more stringent. Extra scrutiny on recordkeeping and reporting means that many safety professionals must step up their data collection processes. Being that we live in the age of data and that there are easier ways than ever before to collect data on almost any subject, complying with tougher safety reporting standards should be second nature. But is this true when it comes to gas detection? Should data be the king of your gas detection program?

Freedictionary.com defines data as “factual information, especially information organized for analysis or used to reason or make decisions.” Let’s put OSHA’s recordkeeping requirements aside for a few moments and look at data in gas detection for what it is. Gas detection programs exist for the purpose of saving lives. Whether the gas detectors are used for personal protection, exposure assessment, leak detection, confined space entry, or hot work permitting, can there be any better reason for data to be king in gas detection than to help make good decisions aimed at making the workplace safer?

There are three things all safety professionals must know with regard to gas detection in order to run an effective program: 1) Are their gas detectors working properly? 2) Are their gas detectors being used properly? And 3) What gas hazards are their workers being exposed to? The answers to these three questions lie in the data that should be collected from the program.

Proactive Use of Key Data Points
Instrument bump test and calibration records hold key data points that help in determining whether or not gas detectors are working properly. Although OSHA has no specific requirements for reporting instrument calibration records, when a gas-related incident occurs, these records are among the first data points to be requested and examined. If these records are thought to be key data points in post-incident investigations, wouldn’t it make sense that a little more regular assessment and scrutiny of the data that helps to show whether or not a fleet of monitors are working prop-
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In much the same way, data can be used to help determine whether or not gas detectors are being used properly. Data can clearly show if gas detectors are used after being bump tested or calibrated properly, and data will not only show when a gas detector has gone into alarm, it can show how the users reacted to the alarm. Did they evacuate the area immediately? Did they ignore the alarm and keep on working in a hazardous condition? Did they turn the instrument off in order to avoid the nuisance? Regularly looking at data that tells how gas monitors are being used can show where there may be gaps in training and where there may need to be policy changes that lead to safer work practices.

What about knowing what gas hazards workers are being exposed to? Fear of knowing or revealing what workers are being exposed to is probably the main reason that data isn’t number one in more gas detection programs. OSHA’s 29 CFR 1910.1020 outlines the requirements for keeping records of employee exposures and gives workers the right to request records be revealed to them regarding their personal exposure or the exposures of other workers, if they are performing similar duties, without the other worker’s prior consent.

What data actually constitutes an “exposure record” is subject to a number of different interpretations today. Some believe that any value shown on a direct-reading instrument makes up an exposure record. Some believe that only readings captured in a datalogging monitor can be used as exposure records and therefore try to avoid utilizing datalogging monitors in order to avoid having the exposure data. 1910.1020 says that an “Employee Exposure Record” is “any piece of information from workplace monitoring or measuring of a toxic substance or harmful physical agent, including personal, area, grab, wipe, or other form of sampling.” But what difference should it make in how you define what makes up an employee exposure record? Isn’t it important that you collect as much data as you can and analyze the hazards in the workplace so that changes can be made to the environment where possible in order to avoid exposing workers and to keep them safer?

At the end of the day, improvements to your gas detection program and your overall safety program will occur only if you use the data that you have available to you. Too often, data that is collected from a fleet of gas detectors is just stored in a file folder or database and never looked at again. Or, worse yet, it is not looked at until some catastrophic event forces a post-mortem investigation of the numbers. If your data is not going to be used for monitoring conditions and making improvements to your processes and environments, then why collect it in the first place? Do we only feel the need to collect data if OSHA requires it? Doing something productive with all of the numbers has to be part of your plan to get more value out of your gas detection program. You must recognize and accept that having data and using it properly can help you far more than it can ever hurt you.

Automating Gas Detection Data Management
Data should not make you do more work. It should work for you. There really isn’t a question about the value of having more data. To realize that value, however, you must have a more efficient system for accessing the data. You should have a system that organizes and presents it so that the health of your gas detection program can be seen at a glance. The system should alert you when there are problems and allow you to quickly drill down into the data to identify the root cause of any issue, or at least show you where to look for it.

Data management systems are evolving rapidly. As more data is collected, more opportunities arise for innovative ways to use it. Today, there are systems using advanced predictive analytics to identify the source of problems. Future systems will be able to predict incidents before they occur so that you make decisions quickly and take action to prevent them. But until then, there are many options for automating gas detection data management.

Unfortunately data isn’t “king” in many gas detection programs today. Let’s start taking advantage of the benefits that gas detection data provides to worker safety today and not wait to put a royalty on it until OSHA says we have to.

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