

XplorIR and LEL Sensors for Hazmat Response



Introduction

The greatest hazard encountered by responders on a hazardous materials incident is a flammable atmosphere. This is an atmosphere that contains enough flammable vapor or gas mixed with oxygen that, in the presence of an ignition source, will ignite and burn with devastating effects. This is why most hazardous materials teams will make initial reconnaissance entries wearing structural firefighting gear and SCBA while using a variety of sensors to detect the presence of other hazards. Even subsequent entries in chemical protective suits are made carrying some type of LEL sensor for protection because of the perceived dangers of flammable gases and vapors.

Challenge

The common issue with Catalytic Bead LEL sensors is that there are some 58 gases and vapors that can be detected using these sensors and any gas other than the calibration standard will give a response that differs from the actual concentration present. Teams will typically operate under an action level for LEL of 10 metered units for a Methane calibrated instrument to ensure that if a gas or vapor with a high correlation factor is encountered, the responder will act before reaching the lower explosive limit of that gas or vapor. Even with a Pentane calibrated instrument, correlation factors, though lower, still come into play.

Solution

With the introduction of the RedWave XplorIR, responders now have a way to determine exactly what gas or vapor is giving them readings on their LEL sensor and a responder can then change the measurement gas in the menu to reflect actual concentrations on the monitor in real-time. This greatly increases the safety of responders and reduces the need for action levels. This can also speed up the identification of the leak source and subsequent mitigation of the leak, therefore making everyone involved safer.



In collaboration with:



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