Applying iNet® Now and the TGX™ Gateway in Lone Worker Scenarios

People who perform work in isolation without direct supervision are known as lone workers. Lone workers exist across almost every industry, but there are an especially large number of lone workers in industrial environments like oil and gas, utilities, water treatment, and chemical manufacturing.

Lone workers could work hundreds of miles from other people or in an isolated part of a plant, such as a blast furnace in a steel mill. Some lone workers are active outside normal business hours, for example, a utility worker investigating a complaint at 3:00am.

Putting lone worker protection in place is the law in many countries. For example, Canada Bill C45 holds individuals and corporations liable for lone worker safety. Despite the volume of regulations and laws, there are not specific steps for safety leaders to follow to ensure lone workers are safe. Case in point, OSHA standard 1915.84 specifies that safety teams are responsible for protecting lone workers, but the language is vague and raises more questions than it answers.

Since no best practices exist, safety teams employ less than effective tactics to monitor and protect their lone workers.

- The "buddy system," or taking an extra person along, is highly inefficient and if a gas hazard is encountered, both workers will likely be impacted.

- Check-ins, both automated and manual, take workers away from their core tasks and supervisors have no insight on worker status when they aren't checking in.

- Lone workers often carry gas detectors, but without connectivity, if a worker falls unconscious there is no way to call for help.

- Lone worker pendants are useful, but for industrial workers in hazardous environments, they don't detect gas, and that means more equipment for the worker to wear.

- Using fleet management solutions as a proxy for a true lone worker solution puts lone workers at risk. Fleet management solutions track vehicle position, not a person's position, and don't alert based on gas, panic, or man-down situations.

What do You Need to do to Keep Lone Workers Safe?

Real-time situational awareness of gas hazards, man-down situations, and worker distress calls are needed to keep workers safe. Lone workers should have a rugged gas detector equipped with man-down and panic alarms that can be sent to the cloud. Sending data directly to the cloud eliminates the need to set up computers in the field and eliminates dependencies on IT. Sending data to the cloud also ensures that a safety leader can be alerted to gas hazards, panic, and man-down situations even if they are miles away. Certainly, other situational data is available from the field, but when there is an incident, there are three data points that require action: gas, panic, and man-down data; other data can be examined at a later time.

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Using iNet Now and the TGX Gateway to Keep Lone Workers Safe

iNet® Now is a live monitoring software application that provides real-time text and email alerts for gas hazards, panic, and man-down situations allowing you to see and respond to incidents as they happen. You gain total visibility of your lone workers with live status updates relayed to iNet Now from the TGX Gateway's cellular and satellite connectivity. A map of workers pinpoints their location and status, eliminating the need for manual check-ins. All real-time data is available in an exportable log for reporting.

Case Study: Emergency Response

An emergency response team received a call about a chemical leaking from a tank in a remote area. As a team, they relied on their personal gas detectors and the buddy system to keep each other safe and report any incidents. After one team member collapsed, the others could not report the incident and request assistance because their cell phones did not have service. With the satellite-enabled TGX Gateway, all alarms are sent to cloud-based iNet Now, which instantly alerts safety contacts via text and email, allowing a rescuer to see where this team is located and what levels of gas they need to be prepared for.

Case Study: Utilities

A utility worker was checking a powerline in a remote location, conducting a manual check in with his supervisor every 30 minutes. When it was time for his next check in, the employee did not have cell signal and was unable to make the required check in. Believing that this would be a routine check of the powerline, the employee skipped the check in and was then electrocuted and incapacitated. This employee then had to wait for the 30-minute check in period to expire, the supervisor to notice that he missed the check-in, and then send help to his last known location. With the TGX Gateway and iNet Now, the supervisor would have received a real-time alert with GPS coordinates, so the supervisor could direct first responders to the worker's exact location.

Lone Worker Monitoring in 4 Steps

1. A worker carries a Ventis® Pro5 Multi-Gas Monitor and drives a vehicle with a TGX Gateway installed

2. The TGX Gateway automatically connects to nearby Ventis Pro and Radius BZ1 monitors, relaying live data to the cloud through cellular and satellite connectivity.

3. When the gas detector goes into alarm, a real-time alert is generated

4. The alerted person then follows established response protocols

1.   **2.**   **3.**   **4.**

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