# Protecting Against Industrial Emergencies

*How a chemical plant transformed its emergency communications protection by building on its existing systems.*



When the leading U.S. producer of specialty elastomers decided to upgrade the emergency communications capabilities in its plant, it turned to Metis Secure.

The company wanted advanced emergency communications protection, including actionable voice instructions—but didn't want to rip out and replace its existing technology investments. Enter Metis Secure and its powerful Command Center software platform.

Metis Secure's software ties together traditionally separate facility communications, security, and life safety systems. Plant safety and emergency professionals can control their newly unified emergency communications system from a single, easy to use Command Center interface from any authorized computer or mobile device.

## The Challenge

The company initially had a conventional fire system that sounded an alarm when someone activated a fire or gas pull station, or when the process control system detected a hazardous materials leak. The problem: When plant personnel heard a siren, they weren't sure what the emergency was, and had no way of knowing the location or severity of the incident.

To maximize emergency response speed and effectiveness, the plant manager needed everyone on site to have instant, actionable emergency information. To accomplish this, plant safety personnel needed the ability to broadcast urgent, intrusive emergency voice alerts throughout the facility. These instructions needed to launch immediately and automatically upon pull station or sensor activation. In addition, in a hazmat emergency, the alerts needed to specify the location and concentration of dangerous gas in the air, so trained hazmat teams would know immediately how they needed to respond. Metis Secure's emergency communications software, with its powerful control, automation, and integration capabilities, provided the ideal solution.

## Leveraging Existing Systems

In partnership with Metis Secure, the plant's security integration company designed a solution that gave plant and safety leaders the advanced protection they wanted—using existing plant systems as building blocks. The system design called for unifying diverse plant equipment, from its existing fire panel and pull stations, to its process control system and IP phones.

Metis Secure configured its Command Center software to integrate with the plant's pull stations and process control/sensor system using an output on the existing, conventional fire panel. The software also connects to the plant's IP phones via a simple "plug-in"—so it can automatically push actionable voice alerts and phone-screen text displays to office areas without the need for new speakers or other hardware installation.

For the plant floor, the integrator installed seven Metis Secure multi-modal Emergency Help Stations at strategic locations, to provide both audible and visual alerts. Help Stations instantly broadcast intelligible voice alerts, display on-screen instructions on its built-in LCD, sound sirens, and flash lights for attention. In addition, each Help Station has a help button that when pressed, instantly connects the caller to system operators via a live Voice Over IP call.

Now, the plant is protected by an advanced emergency communications system that:

- Continuously monitors the existing fire panel and automatically broadcasts actionable voice announcements when a pull station is activated or the process control system detects a dangerous condition. The voice alerts specify the location of the emergency, and the nature and severity of the incident (e.g., fire or gas leak; what material or condition has been detected, and in what concentration). This lets both general personnel and special emergency teams know how they should respond.

- In an emergency, the system instantly notifies everyone in the facility's control room and administrative offices—broadcasting voice alerts through the company's Cisco IP speakerphones and displaying visual alerts on IP phone screens. In additions, Help Stations broadcast both audible and visual alerts in the plant, to help ensure that emergency alerts cut through noisy conditions.
- Finally, the system features built-in power and communications redundancy, so it will still operate even if an emergency takes down power or cellular networks, or a data closet fails.

## The Whole is Greater than the Sum of its Parts

The result: Metis Secure's technology has transformed the plant's conventional gas and fire alarm system into an advanced, all-hazards, whole-plant emergency communications system. With Metis Secure's powerful Command Center software, plant safety leaders can now commandeer its site's existing communications devices in a crisis—and instantly broadcast the urgent, actionable information its people need to respond rapidly and effectively.

And, because of the Metis Secure software's ability to unite disparate plant systems, and control them from a single, powerful interface, the company was able to preserve the investments they had already made—and ensure easy system expansion in the future to meet changing needs.

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