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# The Monitor



GENERAL MONITORS

Your total solution provider for gas and flame detection

## Second Sight TC® Remote Gas Detection System Provides Additional Layer of Plant Protection



Our newest gas detector, the advanced Second Sight TC Remote Gas Detection System uses high resolution infrared imaging to add another layer of safety to the detection of combustible

and toxic gases. It complements our existing fixed gas detection products, helping to protect people, equipment and plant facilities.

Second Sight TC, developed by Bertin Technologies, is designed for ease of use, with a human machine interface (HMI) that permits operators to see target gases in real time as they are detected by the IR camera. A video image displays overlaid levels of gas concentrations to provide a unique picture of gas dispersal. Personnel are able to efficiently address the source of leaks and respond to alarms based on the type of gas and the size, direction, and speed of evolution of the gas cloud. With the HMI, users can deselect areas within the imager's field of view that are not of interest or may contain potential sources of false alarm.

Second Sight is a gross leak detector that can simultaneously detect up to four different gases. It features a wide field of view (30° standard) and a maximum detection range of 2 km for continuous monitoring of critical areas. Detection sensitivities are verified for quantities of hydrocarbon gas of approximately 2 kg at 250 m.

Second Sight is also a low maintenance system. It requires no gas calibration in the field and automatically performs an optical check every 30 minutes that assesses window cleanliness, optical path integrity, optical alignment, and focal plane array position.

Gas cloud imaging allows plants to be run at higher levels of safety, efficiency, and economy through the ability to supervise large areas, identify the gas species when leaks occur, and see gas dilution in the atmosphere in real time. In addition, Second Sight can be integrated into fire and gas panels through Ethernet and Modbus TCP/IP.

A video recorder function allows Second Sight operators to play back alarm events and record current detection, while stored files enable safety personnel to view images and concentration profiles of events as they

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### Industry news

#### U.S. Chemical Safety Board Releases New Safety Video on One Year Anniversary of Kleen Energy Explosion

One year after the Kleen Energy explosion, the U.S. Chemical Safety Board (CSB) has released a new safety video depicting two major accidents caused by the intentional release of flammable fuel gas near work areas.

This informative video recounts how on February 7, 2010, an explosion at the Kleen Energy in Middletown, Connecticut, killed six workers and injured at least 50 others. The Kleen Energy Incident and another explosion at a ConAgra facility in North Carolina that fatally injured four workers and injured 67 others involved the intentional release of flammable natural gas into work areas, putting workers and nearby communities at risk of fires and explosions. At the Kleen Energy facility workers were conducting a "gas blow," a procedure that forced natural gas at high volume and pressure through newly-installed piping to remove debris. The gas was vented to the atmosphere, where it accumulated, came in contact with an ignition source and exploded.

Entitled "Deadly Practices," the video includes animations that show the hazards of releasing gas into areas where it can accumulate, ignite, and kill or injure workers

unfold over time. The ability to store video files improves the management of plant safety records while reducing the time and complexity of the event analysis process, saving time and money while increasing protection.

The reliable, low-maintenance Second Sight System features a long wave infrared (LWIR) camera with a spectral range of 8-14  $\mu\text{m}$  (IR) at a spatial resolution of 384 x 272 pixels. The camera has a standard maximum range of 3,281 ft (1,000 m) and an optional range of up to 6,562 ft (2,000 m). It can detect methane at 0.1 LEL-m, propylene at 0.1 LEL-m, butane at 0.3 LEL-m, and propane at 0.5 LEL-m. It operates at a temperature range of 14° to 131°F (-10° to 55°C) and humidity range of 0-95% RH, non-condensing.

The flexible Second Sight System detects a broad range of gases and is suitable for multiple applications including chemical plants, compressor stations, gas turbines, LNG/LPG storage, processing and transport, offshore platforms, and refineries.

At General Monitors, our vision is to be a total solution provider by offering integrated, scalable systems that offer diverse layers of protection. Effectiveness in detection is achieved by integrating the sensing equivalents of smelling, seeing, and hearing to detect gas leaks, flames, and other hazardous conditions. By integrating a detection method that mimics the sense of sight, companies stand a better chance to be protected against certain types of hazards.

- ▶ **Second Sight IR Gas Cloud Imaging Video**
- ▶ **Second Sight TC Remote Gas Detection System**

or members of the public.

- ▶ **Watch the CSB video**
- ▶ **CSB's YouTube Channel**
- ▶ **CSB's video announcement**

### **Processing Plant Evacuated Due to Ammonia Leak**

Prince George County Police report that about 100 employees recently had to be evacuated from the Smithfield Packaging Company in Cheverly, MD due to an ammonia leak. Fire department officials discovered that a leak had developed in a pipe connected to a 100-gallon container of anhydrous ammonia. Ammonia is a caustic chemical that has a sharp, suffocating odor and high levels of exposure can cause death from a swollen throat or chemical burns to the lungs. Hazmat crews were able to clear the scene in approximately four hours and no injuries were reported.

- ▶ **Read full article here**
- ▶ **Prevent ammonia leaks**

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