

# Enhancing Safety and Efficiency:

Gas detection systems during shutdowns and the tracking and maintenance of your fleet.

## Introduction

The management of safety hazards is of paramount importance in industries where harmful gases are present. Shut down or turn around periods in industrial operations provide a crucial opportunity to assess, inspect, and maintain facilities. One vital tool for ensuring safety and preventing potential accidents during these periods is the use of gas detection systems.

One common issue that often arises during shutdowns is the loss of portable gas detectors. As a crucial tool in maintaining a safe work environment, comprehensive fleet monitoring is essential to ensure the safety of workers and prevent hazardous incidents. In this article, we will delve into the significance and benefits of gas detection systems in shut down and best practices for monitoring your fleet of portable gas detectors during a shutdown.

## Benefits of gas detection

### 1. Early Detection of Hazardous Gaseous Leaks:

Gas detection systems play a critical role in identifying the presence of hazardous gases that could pose risks to workers, equipment, and the environment. During a shut down or turn around, when various equipment is inspected or maintained, there is a likelihood of accidental leaks or the release of toxic gases due to system malfunctions or human error. By continuously monitoring the ambient air, gas detection systems can quickly detect the presence of harmful gases, triggering alarms and allowing for prompt response and evacuation, if necessary.

### 2. Ensuring Occupational Safety:

The safety of workers is of primary concern during shut down or turn around activities. Gas detection systems provide real-time monitoring of the environment, providing workers and management with accurate data on gas concentrations. By identifying and alerting to the presence of dangerous gases, these systems help prevent incidents, protect worker health, and alleviate the risk of long-term exposure to harmful substances. Incorporating gas detection systems as a part of a comprehensive safety protocol ensures compliance with safety standards, enabling industries to create a safe work environment for employees.

### 3. Preventing Equipment Damage and Losses:

Leaks or abnormal gas concentrations can damage site systems and equipment infrastructure. With gas detection systems in place, early leak detection allows for timely interventions to mitigate further damages. By preventing gas accumulation or prolonged exposure, the risk of explosions, fire, corrosion, or equipment failure is significantly reduced. Detecting leaks early on by using portable and fixed systems helps in reducing repair costs and extending the life cycle of vital infrastructure and keeps employees safe.

### 4. Compliance with Regulatory Standards:

Industries are subject to stringent regulations regarding safety and gas emissions. Companies must adhere to various standards and regulations set forth by governmental bodies or industry-specific bodies, such as OSHA (Occupational Safety and Health Administration) or the EPA (Environmental Protection Agency). Gas detection systems play a crucial role in ensuring compliance with these regulations. By continuously monitoring gas concentrations and emissions, companies can demonstrate their commitment to environmental preservation and the well-being of their workers.

## **5. Improved Operational Efficiency:**

The utilization of gas detection systems during a shut down or turn around enables efficient workflow. By detecting leaks and malfunctions promptly, maintenance personnel can address potential issues quickly, minimizing downtime. Additionally, real-time monitoring and comprehensive data analysis provided by these systems empower organizations to optimize maintenance schedules, allocate resources more effectively, and reduce downtime associated with troubleshooting and investigations.

## **The Consequences of Losing Portable Gas Detectors:**

The loss of portable gas detectors poses serious consequences to the safety of personnel and the overall success of a shutdown. Without these devices, it becomes challenging to detect hazardous gases that could lead to accidents, injury, or even loss of life. Furthermore, a failed gas detection system can lead to production delays, financial losses, and regulatory non-compliance. Therefore, it is crucial for organizations to implement effective fleet monitoring strategies.

## **Best Practices for Fleet Monitoring**

### **1. Pre-Shutdown Inventory:**

Before commencing a shutdown, conduct a comprehensive inventory of all portable gas detectors. Identify the total number of devices, their conditions, and any upcoming maintenance or calibration requirements. This ensures you have an accurate understanding of your fleet's status, highlighting potential shortcomings in advance.

### **2. Track and Monitor:**

Implement a centralized system to track and monitor the location and condition of each portable gas detector. Utilize technology, such as NFC or tagging, to keep an up-to-date record of the devices. This helps ensure accountability and enables immediate action in cases of loss or malfunction.

### **3. Regular Inspections and Maintenance:**

Perform routine inspections and maintenance on all gas detectors to ensure their proper functioning. Implement a consistent schedule for battery checks, sensor calibrations, and firmware updates. This proactive approach significantly reduces the risk of device failure during the shutdown period.

### **4. Risk Assessment:**

Conduct a comprehensive risk assessment of the shutdown environment to determine the potential gas hazards involved. Use this assessment to develop a gas detection plan that considers the location and number of detectors required, based on the nature of the hazards present.

### **5. Security Measures:**

Implement appropriate security measures to prevent the theft or loss of gas detectors. This may include improved access control, surveillance systems, and assigning dedicated personnel responsible for tracking and secure storage of the devices.

### **6. Training and Education:**

Ensure that all personnel involved in the shutdown are well-trained on the proper use, handling, and maintenance of portable gas detectors. Provide regular training sessions to educate workers on emergency response procedures and the importance of gas detection during shutdowns.

## Conclusion

The use of gas detection systems during shutdown or turn around activities in industrial operations plays a vital role in preserving worker safety, preventing equipment damage, and ensuring compliance with regulatory standards. By providing early detection of hazardous gases, these systems empower organizations to react swiftly to potential risks, enabling them to resume operations efficiently and with minimal disruptions. Incorporating gas detection systems as an integral part of safety protocols demonstrates a commitment to worker safety, environmental preservation, and efficient industrial operations.

In an industrial shutdown, the loss of portable gas detectors can be detrimental to the safety and success of the operation. By implementing effective fleet monitoring strategies, organizations can mitigate risks, ensure regulatory compliance, and protect the well-being of workers. Through pre-shutdown inventory, regular inspections, risk assessment, security measures, and ongoing training, organizations can establish a robust gas detection plan. Ultimately, this proactive approach will optimize safety standards and minimize the potential consequences of gas leaks during shutdowns.

## Your solutions

At WatchGas, we always have the right solution for your application. Whether you need portable or fixed, single gas or multi-gas. Please look at our compatible products or contact us directly at [info@watchgas.com](mailto:info@watchgas.com).

### SST1 for Contractors

The SST1 single gas detector provides up to three years of maintenance-free operation. Its simple design makes it perfect for users looking for ultimate protection while being easy to use, durable, and cost-effective.

- Easy to use and limited training;
- 0-500PPM H<sub>2</sub>S levels ;
- TWA & STEL Alarms;
- NFC and WatchGas Application;
- 3-year battery life based on alarms;
- Serviceable Battery and Sensors;
- Solid Polymer Sensor Design;
- Largest LCD display in its class;
- External Filters.



### SST4 Range

SST4 Diffusion covering CO/H<sub>2</sub>S/O<sub>2</sub> and LEL perfect for general use on site. NFC as standard with induction charging and a wide range of options for whatever the application.

SST-Pump is a pumped four gas device and designed for sampling confined spaces, silos and pre-entry checks.

Coupled with WatchGas accessories this makes pre-entry checks quick and easy.

For more details visit our webpage.



## SST Kiosk for Fleet Management

The WatchGas Compliance Kiosk works as a terminal to allow the user to check in the gas detector, providing a full overview of the device status and any unforeseen events. The WatchGas compliance Kiosk automatically sends all data to a designated software site. This provides a cost-effective overview of fleet health, predictive maintenance, events, and alarms.

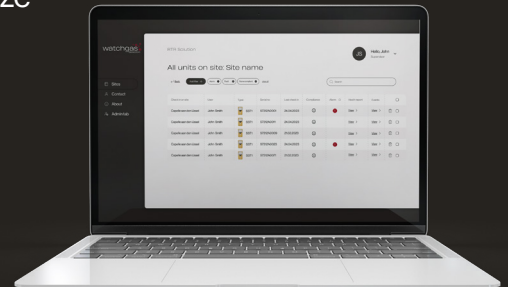
- Configuration verification;
- Health check;
- Action confirmation;
- Multiple mounting options.



## Compliance Watch - RTR

The Record To Report (RTR) solution is a simple to use, cost efficient software solution providing a wide span of features such as fleet management, fleet status, gas alarms, predictive service notification, SMS/email alerts, event log and Unit assigned. Furthermore it allows the safety manager to utilize the SST Range compliance check function ensuring the units are in use.

- System overview;
- Alarm overview list;
- Service attention list;
- Compliance check;
- Web based.



## SST Dock for Bump Testing

The SST Dock is an automated test station that allows Bump and Calibration testing and is compatible with the full SST Range in one module. It has the capability to be connected via Wi-Fi, BLE or Cellular and allows for desk, wall and hard case mounted dependent on your application.

- Easy setup;
- Rapid bump;
- Connectivity;
- Platform design;
- Low gas notification;
- Mounting options.

