



# Turnarounds in the Oil and Gas Industry: To Buy or Hire Gas Detection Equipment?

**Jason Wright, Industrial Scientific**

Bollin House, Bollin Walk Wilmslow, SK9 1DP, United Kingdom

Tel: +44 (0) 1280 706114 (x1423) • Email: [jwright@indsci.com](mailto:jwright@indsci.com) • Web: [www.indsci.com](http://www.indsci.com)

A turnaround is a planned, periodic shut down (total or partial) of a refinery process unit or plant to perform maintenance, overhaul and repair operations and to inspect, test and replace process materials and equipment. With a turnaround comes an often increased workforce requiring gas detection to keep them safe from gas hazards including oxygen deficiency, combustible gases (typically displayed as LEL), carbon monoxide, hydrogen sulphide, sulphur dioxide, and VOC's.

To meet this need, companies are faced with making a decision as to whether they should buy or hire portable gas detection equipment. A common error that people make when making this decision is that they consider the upfront costs while ignoring the long-term, unforeseen costs – the portion of the iceberg that is hiding underneath the surface. Along with the initial cost of purchasing gas detectors are several other factors that are often not considered related to ownership.

This article will explore the options to ensure each worker is equipped with a gas detector during a turnaround, and why hiring gas detection equipment just might be your best option.

One option is to purchase "disposable" gas detectors. There are some very attractive, low-cost disposable gas detectors available in the market today. On the surface, choosing to purchase disposable units might look like a good option, but be sure to consider the following factors before making that decision.

- Disposal Costs – A typical cost to properly dispose of a single gas monitor is upwards of approximately £45 each. Batteries, boards and sensors must all be disposed of separately. This involves labour related to disassembly, collection and paperwork, as well as packaging costs and disposal fees.

Another option is to purchase non-disposable gas detectors to be added to your typical fleet of gas detectors. In this case, companies assume responsibility internally for the maintenance of the instruments. Here are a few things to consider before purchasing extra gas detectors.

- Labour Costs – Bump tests, calibrations, and sensor replacements are some of the time-intensive maintenance tasks associated with portable gas monitors.
- Service Training – To service the instruments, both time and money are required in training employees to do so.
- Purchasing Parts – With a purchase comes the actual cost of parts and pieces, plus taxes.
- Freight Charges – To have the parts shipped, freight and additional expenses are required.
- Logistics – Creating an order for parts can be a time-consuming task that should be accounted for.
- Storage Costs – There are costs associated with storing parts to be used in the servicing of the instruments.

Yet another option is to purchase additional gas detectors for use in the turnaround, and then use a third party to perform the maintenance of those instruments. Also in this case are frequent and unforeseen costs.

- Third-Party Service Fees – The costs of third-party servicing can be immense.
- Parts – All parts and pieces associated with instrument repair must be purchased.
- Freight charges – To have the parts shipped, freight and, thus, additional expenses are required.
- Logistics – Creating an order for parts can be a time-consuming task that should be accounted for.
- Instrument Downtime – When an instrument is being serviced, you are typically without the equipment for one week, at a minimum.

Lastly, you might choose to hire gas detection equipment for your next turnaround and other short-term needs such as in outages, emergencies, special projects, and more. When hiring versus buying gas monitors, it is generally more efficient and cost effective. The expenses and maintenance burdens associated with the aforementioned options for equipping workers with gas detectors during turnarounds are eliminated. But, not all hired gas detector programs offer the same benefits, so be sure to scope out the project and ask the right questions before selecting a provider. Following are some good questions to ask;

- When does the hire period start, and when does it end? – Some companies start the clock the day the equipment leaves their facility, while others start it the day it is received. Similarly, the end date could either be when the equipment leaves your facility or when it is received by the company.
- What is included with the gas detectors? – For example, if you are getting a monitor with a rechargeable battery, ask if the charger will be included. If you are getting a detector with a sampling pump, ask if the sample tubing and filter will be included.
- What gas detector accessories would be ideal for a given application? If you are not sure about the application and the best accessories for the job, ask the company about accessories that might make the job easier.
- Do I need to pay for sensors that fail while in use? Some companies have been known to make up their internal expenses of maintaining their hired fleet by charging customers for sensors that fail while in use, even if the sensors fail due to normal use.
- How will freight charges be handled? If the equipment is being shipped to the job site, find out how the freight will be charged. Some companies may issue pre-paid return labels with the order so that the customer does not pay the return freight charges.
- Are the monitors pre-calibrated? Ask to have calibration certificates provided with each hired unit.
- Are the hired units serviced by factory-trained technicians?
- Will normal wear and tear be covered by the cost of the hire?

Available from Industrial Scientific are several of its portable gas detection monitors, including its multi-gas detectors (MX6 iBrid and Ventis MX4), single gas monitors (the GasBadge Pro), and its area monitor (BM25). When hiring from Industrial Scientific, you can expect to receive robust, reliable instruments that will keep your people safer.

In conclusion, while there are many options to ensure that an increased workforce during a shutdown is properly protected from hazardous gases, hiring gas detection equipment can be the most cost-effective and efficient way to keep workers safe. Be sure to consider the unseen costs of purchasing gas monitors versus hiring them for short-term needs such as turnarounds. To learn about Industrial Scientific's gas detector hire program, visit [www.indsci.com/rental](http://www.indsci.com/rental).

