Importance of gas detection equipment maintenance and calibration

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What happened?

Gas detection equipment at operating plant and used to monitor for the presence of gas was being used outside of þÿmanufacturer s recommendations for device calibration and bump testing.

How did it happen?

Recent inspections of gas detection and monitoring equipment found that some detectors were not being used or þÿmaintained according to the manufacturer s instructions or in line with accepte

Comments

Gas detection and monitoring equipment at operating plant is critical to ensuring the safety of workers and others.

þÿPersonal gas detectors are quite reliable when used, calibrated, and maintaine instructions. Newer devices are able to detect up to 5 different gases including Oxygen, Carbon Dioxide, Methane, Carbon Monoxide and Hydrogen Sulphide.

Many operating plant now also have fixed gas detection and monitoring systems to provide continuous real-time gas analysis for a broad range of gases and exposure levels. These systems provide local alerts and information and cab even be monitored remotely by specialists.

þÿHowever, personal gas detectors remain an important part of a worker s safety monitoring and alerts while also providing a redundancy for fixed systems.

Key issues

The key issues identified during inspections included:

- Irregular bump/challenge testing personal gas detectors
- Insufficient calibration of personal gas detectors by an accredited test authority (every 180 days)
- Not maintaining records of weekly bump/challenge testing or calibration certificates.

Recommendations

Where gas detection and monitoring equipment is used at operating plant, careful attention should be given to:

- Checking equipment on a daily basis for cleanliness, power supply and ensuring it is in good working condition
- þÿConducting regular bump (or challenge) test by exposing personal gas det of the intended set point of the equipment (as often as recommended by the manufacturer)
- Arranging formal calibration every six months by an accredited test authority to verify the correct operation of sensors and alarms. The accredited test authority will issue a certificate of conformity that covers the period to the next

required calibration

Ensuring all workers operating personal gas detector are appropriately trained in the operation and maintenance requirements of the equipment

þÿ K e e p i n g r e s u l t i n g r e c o r d s o f b u m p (c h a l l e n g e) t e s t s a n d f o r m a l c a l i b r a t i o

References and further information

Australian Standard AS 2290.3 - 1990

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