Personal gas monitor use requirements

Personal (wearable) gas monitors, either single gas or multi gas detectors, are designed for personal alarm purposes only. They are Not designed as an atmospheric monitoring device and must not be used in place of active pump gas detector. These instruments are designed as an early indicator at the point of operation to enhance the protection of workers from unseen workplace gas hazards and their proper maintenance and calibration ensures their accuracy in detecting worker exposure to harmful gases.

The following represent areas where either the single gas or multi gas personal monitors are used:

Single gas personal monitors:

• Work areas where there is a potential for exposures to hydrogen sulfide (Lubricant plants and certain international fuel terminals involving fuel oils or bunker fuel)

Multi gas personal monitors:

- Use of cell phones and/or non-intrinsically safe tables in work areas that are considered hazardous / classified
- Vacuum truck operations where removal of hazardous material occurs
- Any other activities as deemed by site leadership.

If these devices are being used, Chevron requires contractors to have a process in place and follow the instruments manufacturers recommendations in respects to bump testing and calibration. For further details, please see and follow the OSHA's Safety and Health Information Bulletin guidance below on calibrating and testing direct-reading portable gas monitors.

<u>Calibrating and Testing Direct-Reading Portable Gas Monitors | Occupational Safety and Health Administration</u> (osha.gov)

Example of Personal Gas Monitor Four Steps of Operation:

Prior to use, ensure that personal gas monitors are functioning, properly calibrated and tested, and are worn in the breathing zone, on the outer most garment, as close as practical to the nose and mouth.



- 1) Bump test instrument on docking station.
- 2) Turn on the instrument and check the battery.
- 3) Zero the instrument in fresh air.
- 4) Clear the peak readings.

Responding to Alarm Events

If gas testing results indicate a hazardous condition (e.g., exceed the acceptable criteria for measurable environmental permissible limits), then the following is required:

- Alarm During Active Gas Testing
 - 1. Stop work (Exercise SWA).
 - 2. Evacuate personnel in the work area to a safe area.
 - 3. Review work conditions and the reason for alarm.

- 4. Implement mitigation solutions.
- 5. Re-test atmospheric conditions.
- 6. Re-validate permits.
- Alarm from Personal Gas Monitor or Odor Detected

1. Review current work conditions and implement appropriate mitigations (e.g. reposition upwind or don respiratory protection) prior to continuing task.

- 2. If monitors continuously alarm, ensure area/task is left in safe state and exit the area immediately.
- 3. Move crosswind or upwind to a safe location.
- 4. Notify your supervisor and Operations immediately.

In addition, use gas testing results to identify appropriate safeguards/controls (e.g. engineering, administrative or PPE) to minimize potential exposures. Work shall not commence until gas testing results are within acceptable criteria defined above.

Resources

• Multi gas monitor hazard alert: Limitations of Monitors110117 (squarespace.com)