**GAS HAZARDS; INVISIBLE HAZARDS**

Gas may be present on any area of an active or closed landfill. Common gases include methane, hydrogen sulfide, carbon dioxide, oxygen, and VOCs. These gases are all invisible and require specialized equipment for detection. Detecting these gases is critical because each can be hazardous in the right situation.

- **Fire Hazards** – methane and high concentrations of VOCs can burn, increased O2 levels can create fire hazards by increasing the temperature of existing fires.
- **Toxic Hazards** – H2S and VOCs can both be poisonous, H2S is fatal at quantities above 500PPM.
- **Health Hazards** – from gas exposure can include asphyxiating gas exposures and gases that can cause long-term health concerns such as low levels of VOCs and H2S.

Early detection at low gas concentrations is critical for employee safety. Detecting gas presence below hazardous levels can prevent accidents which may adversely affect employees. A four gas monitor is the typical detection device. VOCs can be detected with badges and PIDS.

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**Top 10 Best Management Practices**

**Driving in Reverse**

1. Determine you are fit to drive
2. Conduct a thorough pre-trip inspection
3. Plan ahead and avoid backing whenever possible
4. No helpers on the riding step
5. Get Out And Look (GOAL)
6. Start backing within a few seconds after check
7. Use a guide or spotter
8. Blow the horn
9. Utilize technology
10. Back slowly and cautiously

Backing up can lead to a variety of incidents; however all of these accidents are preventable. When driving in reverse always consider the potential that exists for injuring a person or damaging property. Never put yourself or anyone else in a situation that could lead to an incident.

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**Keystone Chapter SWANA Safety Summit**

- Industry Safety Update – Presenter TBD
- OSHA & the Waste Industry – Dale Glacken, OSHA
- Frontline Safety Management – Matt Taylor, Amerisafe Consulting & Safety Services
- Radiation Safety & Equipment Considerations for Landfills – Bonnie Meiliner, LAURUS Systems
- Lone Worker Safety Monitoring – John Aliveto, Montauk Energy
- Hauling Safety – Marc Buckley, Republic Services
- Spotter Training & Traffic Controls at the Working Face – Steve Burns, SECCRA
- Personal Landfill Gas Protection – Scott Messier, SCS Engineers

**March 15, 2017 | Best Western Premier | Harrisburg**

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**SWANA Safety Stand Down: Backing**

National SWANA sponsored a Safety Stand Down the week of January 23rd. SWANA sent out five consecutive days of safety bulletin emails on backing hazards and incident prevention. Backing incidents cause 30% of all industry worker fatalities. All backing incidents are preventable, there are numerous methods of preventing these injuries and fatalities. For more resources on preventing backing incidents check out the Safety Stand Down page at [www.swana.org/safety](http://www.swana.org/safety).

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*Keepers of the mountain*  
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