TANK HAZARD ALERT

gauging • thieving • fluid handling
how to recognize and avoid hazards

designed by: PEC SAFETY

Opening thief hatches of storage tanks can lead to the rapid release of high concentrations of hydrocarbon gases and vapors. Those may result in very low oxygen levels and toxic and flammable conditions around and over the hatch. Recent reports have documented fires or explosions, and described workers experiencing dizziness, fainting, headache, nausea, and, in some cases, death while gauging tanks, collecting samples, or transferring fluids. **Tank gauging, thieving, and fluid handling can be performed safely with proper precautions.**

hazards that workers can encounter

- oxygen deficiency
- fires & explosions
- chemical toxicity
  - hydrocarbon vapors
  - propane
  - butane
  - benzene
  - **hydrogen sulfide (H_2S)**

potential effects of exposure

- death
- chronic illness
- flash fire burns
- dizziness
- irregular heartbeat
- irregular breathing
- respiratory irritation
- fatigue
- nausea
- eye irritation
- headache

EMPLOYERS:

Must Conduct Exposure and Hazard Assessments at Worksites to determine needs for:

- Engineering Controls
- Respiratory Protection
- PPE
- Monitoring Device such as:
  - ► Multi-gas meter
  - ► Other direct-reading toxic gas meter (benzene)

Must Provide Training to Workers:

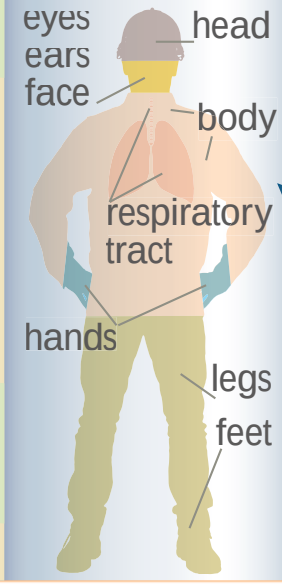
- Hazard Communication
- Lone Worker Policy
- Proper use of PPE and respiratory protection
- Types, use, and limits of respiratory protection equipment as appropriate
- Recognizing ignition sources
- Tank Gauging work practices/procedures
- Emergency Response Plan
  - ► Procedures for alarm response and site re-entry
- Use and limits of toxic- or multi-gas meter for O_2, H_2S, LEL, and CO

Should Implement Engineering Controls such as:

- Remote Gauging
- Closed Loop Systems
- Auto Gauging
- Sight Glasses/Gauges
- Remote Venting

Verify sub-contractors are following work practices/procedures

PPE protect your



WORKERS:

Your employer has established safety procedures for your protection including a Hazard Assessment and Work Practices/Procedures

Follow your employer's Hazard Assessment and Established Work Practices/Procedures

- **Use** toxic- or multi-gas **meter** provided by your employer as per your training
- **Heed** all **alarms**
- **Stop flow** into tanks prior to gauging, **when possible**
- **Minimize leaning** over open hatches – **stand away**/upwind/crosswind when possible
  - ► **Inversion**/high humidity/**lack of wind** could **increase danger**
- **Follow** your employer's **"lone worker" policy**
- **Allow tanks to ventilate** after opening thief hatches
- **Evacuate** unsafe work areas and **report immediately**
- **Know the limits** of your **respiratory protection** as provided during employer training
- Immediately **report** any **health symptoms**

Wear PPE as required/provided

Attend Hazard Communication Training

Be Aware of Potential Ignition Sources:

- Static
- Cell phones
- Sparks from tools or metal objects
- Open flames
- Non-approved electrical equipment/devices
- Ensure proper grounding/bonding

If you are not sure, STOP the job and ask!

Everyone has the right to STOP work that is unsafe.

YOUR LIFE can change in a SINGLE BREATH or with ONE SPARK.