TANK HAZARD ALERT

Opening thief hatches of storage tanks can lead to the rapid release of high concentrations of hydrocarbon gases and vapors. These 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.

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 O₂, H₂S, LEI, 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
- Have 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.

Through the OSHA National Steps Alliance, this Tank Gauging Hazard Alert is for informational purposes only. It does not necessarily reflect the official views of OSHA or the U.S. Department of Labor. March 2019

Under the Occupational Safety and Health Act, employers are responsible for providing a safe and healthy workplace and workers have rights. OSHA can help; answer questions or concerns from employers and workers. OSHA Onsite Consultation Program (www.osha.gov/consultation) offers free and confidential advice to small and medium-sized businesses, with training given to high-hazard workplaces. For more information, contact your regional or area OSHA office (www.osha.gov/lead/R4map.html); call 1-800-321-OSHA (6782), or visit www.osha.gov