



KENTUCKY
AGC Self Insurers' Fund

Safety Tips for Working in Manholes and Underground Confined Spaces

Working in manholes and other underground confined spaces presents a unique set of hazards that can result in serious injury or death if proper precautions are not taken. Workers must be properly trained, equipped, and informed of potential dangers before entering these environments. The following safety tips provide essential guidelines to minimize risks associated with such work.

1. Pre-Entry Preparation

Before entering a manhole or confined space, conduct a thorough risk assessment and obtain a permit if required. Ensure proper training and certification of workers. Verify that all necessary equipment, such as PPE, ventilation, and communication devices, is available and functioning.

2. Atmospheric Testing

Conduct air quality tests to detect toxic gases, insufficient oxygen levels, or flammable/explosive atmospheres. Use a calibrated gas detector to monitor oxygen concentration (19.5% to 23.5% is considered safe), explosive gases, and toxic contaminants before and during entry.

3. Ventilation

Ensure proper ventilation to provide fresh air and eliminate hazardous gases. Forced-air ventilation systems should be used as necessary, especially if harmful vapors or gases are detected.

4. Personal Protective Equipment (PPE)

Wear appropriate PPE, including hard hats, gloves, safety goggles, respiratory protection, and harnesses where applicable. Ensure PPE is in good condition and suitable for the specific environment.

5. Communication and Monitoring

Maintain constant communication between the worker inside the confined space and a standby attendant outside. Use two-way radios or other communication devices as necessary. The attendant should never enter the space to assist without proper training and equipment.

6. Emergency Preparedness

Establish a rescue plan before entry and ensure rescue equipment is readily accessible. Workers should be trained in emergency procedures and the use of rescue devices such as tripods and harnesses.

7. Training and Compliance

Ensure all workers are properly trained and certified to work in confined spaces. Follow OSHA regulations and company policies pertaining to confined space entry to ensure compliance and safety.

Conclusion

Working in manholes and other confined spaces requires careful planning, proper equipment, and adherence to safety protocols. By following these safety tips, workers can minimize risks and ensure a safer working environment.