

The OSHA definition of a confined or enclosed space for construction activities is a space that:

- Has limited means of getting out, and
- Is subject to the accumulation of toxic or flammable gases or has an oxygen deficient atmosphere.

Normally excavations are not considered confined spaces because they are usually subject to natural ventilation. Sometimes, however, excavations qualify as confined spaces if natural ventilation does not occur.



Hazardous atmospheres

Sometimes, you do find hazardous atmospheres in excavations. If so, a competent person must test excavations where oxygen deficiency (atmospheres containing less than 19.5 percent oxygen), or a hazardous atmosphere exists or there is a chance it could exist. If that is the case, the air in the excavation must be tested before you enter any excavation more than four feet deep.

Also, adequate precaution must be taken to prevent your exposure to air containing a concentration of a flammable gas greater than 20 percent of its lower flammable limit.

Excavations that could raise a red flag as “could reasonably be expected to exist” are excavations in landfill areas, areas where hazardous substances are stored nearby, hazardous waste cleanup sites, and underground storage tank digs.

Engineering controls

If hazardous conditions exist, controls such as proper respiratory protection or ventilation must be provided.

Ventilation is probably the best and most effective method of controlling a hazardous atmosphere. In numerous places throughout the OSHA regulations it says you must engineer or administrate out hazardous atmospheres before resorting to respiratory protection.

When controls, such as ventilation, are used to reduce atmospheric contaminants to acceptable levels, the atmosphere must be tested as necessary to ensure it remains safe.

Rescue operations

Where adverse atmospheric conditions may exist or develop in an excavation, the employer must provide and ensure that emergency rescue equipment (e.g., breathing apparatus, a safety harness and line, basket stretcher, etc.) is readily available. This equipment must be attended when used.

This document provides general information about a safety and health topic and is only intended for use in facilitating discussions with employees in safety meetings. It does not address all hazards, OSHA or local requirements related to the topic or accompanying photograph. This document cannot be relied on to determine whether a site specific situation meets all safety and health requirements. Assurance Safety Consulting is not responsible for any health and safety violation or injury at a job site.