

Construction Activities in Confined Spaces

Scope and Application - This section applies to construction activities in any confined space at West Chester University. OSHA's regulations for construction activities are found in 29 CFR Part 1926, which contains general and specific guidelines for work in confined spaces. This section is broken into several parts in order to address those specific situations regulated by OSHA.

General - According to 29 CFR 1926.21(b)(6)(i), "all employees required to enter into confined or enclosed spaces shall be instructed as to the nature of the hazards involved, the necessary precautions to be taken, and in the use of protective and emergency equipment" required for the type of work being performed. Employers are required to "comply with any specific regulations that apply to work in dangerous or potentially dangerous areas." Specific regulations which apply to construction activities in confined spaces are covered below. It is important to note that these general provisions apply to any confined space activity that is not covered by a specific standard.

For construction purposes, OSHA defines "confined or enclosed spaces" as "any space having a limited means of egress, which is subject to the accumulation of toxic or flammable contaminants or has an oxygen deficient atmosphere." Examples of confined or enclosed spaces include, but are not limited to, storage tanks, bins, boilers, ventilation or exhaust ducts, sewers, underground utility vaults, tunnels, pipelines, and open top spaces more than four (4) feet in depth such as pits, tubs, vaults, and vessels.

Engine Powered Equipment - Whenever internal combustion engine powered equipment exhausts in or near enclosed spaces, test must be made and recorded to ensure that employees are not exposed to unsafe concentrations of toxic gases or oxygen deficient atmospheres, in accordance with 29 CFR 1926.550(a)(11).

Excavations and Trenches - The following procedures, included in 29 CFR 1926.651(g), must be used when working in excavations or trenches greater than four (4) feet deep which could reasonably be expected to develop a hazardous or oxygen deficient atmosphere, such as excavations in landfill areas or excavations in areas where hazardous substances are used or stored nearby:

1. The atmosphere must be tested before employees enter the excavation. The test must be for oxygen deficiency, flammable gases, or other toxic air contaminants.
2. If an oxygen deficient atmosphere is detected, ventilation or appropriate respiratory protection must be provided and used.
3. Ventilation must be used to control an atmosphere that contains flammable gas in excess of 20 percent of the lower flammable limit of the gas, or to reduce the levels of air contaminants to acceptable levels.
4. When any of these controls are used, testing must be conducted as often as necessary to ensure that the atmosphere remains safe.

Underground Construction - Contained in 29 CFR 1926 Subpart S, entitled *Underground Construction, Caisson, Cofferdams and Compressed Air*, are procedures for working in confined spaces created during the construction of underground tunnels, shafts, chambers, and passageways. EHS should be consulted if this type of construction is planned and would involve University employees.

Underground Electrical Lines - The requirements for working in manholes and unvented vaults which contain electric utility services, found in 29 CFR 1926.956, are the same as those found in the *Telecommunications* section of this program, with the exception that an attendant must be available in the immediate vicinity of the manhole to render emergency assistance whenever this type of work is performed. The attendant may also occasionally enter the manhole to render other than emergency assistance. This does not preclude a qualified employee, working alone, from entering a manhole for brief periods of time for the purpose of inspection, housekeeping, taking readings, or similar work if such work can be done safely.