Confined Space Program

SafetyNet #: 114

The UC Davis Confined Space Entry (CSE) Program [1] is coordinated by EH&S in accordance with the Cal/OSHA, California Code of Regulations (CCR), Title 8, CCR Sections 5157 [2]. A separate regulation for the construction, grain handling, telecommunications, agriculture and three other specific industries is under 8 CCR 5158 [3].

Cal-OSHA defines a confined space as a space with three characteristics:

1. Large enough and configured such that an employee can enter and perform work,
2. Limited openings for entry and exit, and
3. Not designed for continuous occupancy

Confined spaces examples are: silos, tanks, vats, boilers, ducts, sewers, manholes, pipelines, vaults, bins, tubs, excavations, trenches, pits, wet wells, fireboxes, boxcars, and other confining structures.

Two main categories of hazards associated with confined spaces are atmospheric hazards and physical hazards.

1. Atmospheric hazards:
   - Lack of oxygen
   - Insufficient ventilation
   - Gases/vapors
   - Welding fumes

2. Physical hazards:
   - Mechanical equipment: getting struck by, caught in between, crushed, or otherwise injured by moving parts (i.e. rotating gears, fan belts, pulleys, flywheels, rolling or pressing components, etc.).
   - Electrical equipment (i.e. switchgear, transformers, MCC, panels) with shock, arc flash, or thermal burn hazards.
   - Thermal: steam, condensate, hot water, or chemical exposures and potential burns.
   - Equipment (rotors, sparks, moving machinery, energized systems, etc.).
- Equipment configuration (i.e. converging walls, hoppers)
- Engulfment (i.e. grain silos), or
- Other dangerous conditions (slippery surfaces, heat, noise, lighting, vermin, insects, etc.).

Any of these physical hazards may require a CSE permit and equipment shutdown and lockout/tagout (LOTO) before entering the confined space. LOTO requires the department have a [Lockout Plan](#) on file with EH&S, a written procedure and employee training on LOTO.

The CSE program requirements are outlined in the UC Davis [Confined Space Entry Program](#). Each department must survey their operations and equipment to identify, assess, and label any confined spaces as permit-required or non-permit required. Work within these spaces then must strictly adhere to the guidelines set forth this SafetyNet and the UC Davis Confined Space Entry program.

Prior to conducting any permit-required confined space work on campus, departments must:

1. Have a written confined space program,
2. Employees must attend a classroom and ‘hands on’ training (contact [healthandsafety@ucdavis.edu](mailto:healthandsafety@ucdavis.edu)),
3. Have a four gas meter and calibration equipment, and
4. Develop and retain equipment for confined space rescue

Information Resources

1. [EH&S Confined Space Entry Program Employee Guide](#)
2. [UCD Policy & Procedure Manual Section 290-86 - Hazardous Operations](#)
3. [Cal-OSHA – “Confined Space Guide: Is It Safe To Enter A Confined Space?”](#)

Contact

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**More information**
[https://safetyservices.ucdavis.edu/health-safety-staff-listing](https://safetyservices.ucdavis.edu/health-safety-staff-listing)

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