

Safety Note #39

CONFINED SPACE AWARENESS



Photograph Courtesy of
Kearney REC

Data available from the U.S. Bureau of Labor Statistics reports that between 2011 and 2017, an average of 126 confined space-related fatalities occurred each year, with an increasing trend over the last 5 years of the study period. The primary hazard in confined spaces is usually an oxygen deficient or toxic atmosphere, but victims can also become trapped or engulfed. Information published by the National Institute for Occupational Safety and Health (NIOSH) indicates more than 60% of confined space fatalities occur among would-be rescuers, who enter the space without adequate protective equipment.

Confined Space Definitions

California Code of Regulations (CCR) Title 8, Section 5157 (b) provides the following definitions for classifying confined spaces:

1. A **confined space** is a space that: (1) Is large enough and so configured that an employee can bodily enter and perform assigned work; and (2) Has limited or restricted means for entry or exit; and (3) Is not designed for continuous employee occupancy.
2. A **permit-required confined space** is a confined space that has one or more of the following conditions: (1) Contains or has the potential to contain a hazardous atmosphere; (2) Contains a material that has the potential for engulfing an entrant; (3) Has an internal configuration that an entrant could be trapped or asphyxiated by inwardly converging walls or by a floor which slopes downward and tapers to a small cross-section; or (4) Contains any other recognized safety or health hazard.
3. A **non-permit confined space** is a confined space that does not contain or, with respect to atmospheric hazards, have the potential to contain any hazard capable of causing death or serious harm.

Confined Space Awareness at UC Agriculture and Natural Resources (UC ANR) Facilities

- A survey was conducted at UC ANR Research & Extension Centers to identify and post confined spaces and site-specific plans have been developed for each Center.
- UC ANR personnel are prohibited from entering any permit-required confined spaces.
- In some cases, it may be possible to remove atmospheric or physical hazards and re-classify a confined space, with the review and approval of UC ANR Risk & Safety Services.
- Atmospheric confined space hazards include those due to oxygen deficiency or the presence of toxic or flammable/explosive gases.
- Physical confined space hazards include those associated with mechanical or electrical energy, temperature, engulfment, falling objects, and wet surfaces or standing/moving water.
- Examples of permit-required confined spaces at UC ANR facilities include cotton cyclones, feed mixers, septic tanks and lift stations, manure pits, water storage tanks (used for drinking, irrigation, stock, rinse, recycled water, etc.), water tank trucks, unventilated lysimeter vaults, silos, feed storage bins, liquid feed tanks, and equipment wash facility cone and rinse tanks.
- Examples of UC ANR non-permit confined spaces include ventilated lysimeter vaults, concrete standpipes, walk-in coolers, air filter/cooling plenums, ventilation motor housings, attic or basement crawl spaces, storage containers, and irrigation/pump sumps.

This Safety Note is intended to be used by UC ANR employees, along with the [Confined Space Policy & Procedures](#) and where applicable, site-specific notebooks (and supporting documentation) that describe detailed confined space procedures for the facility. Training consists of site information and review of video E-012 Confined Space Entry, available from the UC ANR EH&S Library: <http://ucanr.edu/safetyvideos>.