



# Training Bulletin

SANTA BARBARA POLICE DEPARTMENT



LORI LUHNOW, Chief of Police

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## Confined Space Awareness

### Action Required

Who: **All** sworn personnel

What: Once you've reviewed the training bulletin, sign the roster located in the WC's office or Bureau briefing office.

When: Complete training and sign the roster by **Saturday, August 31, 2019.**

### **OVERVIEW:**

Annually, per our city's IIPP (Appendix 21) personnel are required to receive training on Confined Spaces.

### **DISCUSSION POINTS:**

- Confined Spaces Defined
- Hazards: Atmospheric & Physical
- Hazard Control
- Entry/Rescue

Although it is uncommon for an officer to conduct their regular duties in a confined space, it is possible that over the course of their duties, a subject may be located in such a space and need to be removed. Confined spaces are deceiving and often appear to be harmless. Danger indicators (such as dead animals, rusting walls and odors) are not always present and even though the space may have been previously entered without incident, conditions can change. **Never** assume that conditions of a confined space will remain the same. This can create a sense of false security that the confined space is safe to enter at all times.

The California Labor Code (title 8 sec. 5157) and The California Occupational Safety and Health Act of 1973, advises all employers in California that they have a legal obligation to provide and maintain a safe and healthy workplace for employees.

The goal of this training is to help personnel recognize confined spaces and hazards and protect employees from job-related injuries and illnesses, including death.



## What are confined spaces?

*A Confined Space as defined by Cal OSHA are:*

1. Large enough and so configured that an employee can bodily enter and perform assigned work.
2. Has limited or restricted means for entry or exit.
3. And is not designed for continuous employee occupancy.

*A Permit Required Confined Space* is a confined space that has one or more of the following:

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 such that an entrant could be trapped or asphyxiated by inwardly converging walls, or by a floor which slopes downward and tapers to a smaller cross section.
4. Contains any other recognized serious safety or health hazard.

Common confined space examples are:

- Tanks
- Boilers
- Pits
- Vats
- Vaults
- Silos
- Sewers / Manholes
- Storage bins
- Pumping stations
- Vessels
- Reservoirs
- Tunnels
- Trenches



## Hazards:

*There are two primary categories of hazards: atmospheric and physical.*

It is critical to identify all the hazards in a space and determine how they can impact health and safety.

### *Hazardous Atmospheres:*

- Flammable or explosive gas, vapor or mist in a concentration greater than 10% of its lower flammable limit (LFL) or lower explosive limit (LEL).
- Combustible dust at a concentration that meets or exceeds its LFL. This concentration may be approximated as a condition in which the dust obscures vision at a distance of 5 feet or less.
- Atmospheric oxygen concentration levels below 19.5% (oxygen deficiency) or above 23.5% (oxygen enrichment) at sea level.
- Atmospheric concentration of any substance with an acutely toxic effect above its permissible exposure limit (PEL), and any other atmospheric condition that is **Immediately Dangerous to Life or Health (IDLH)**.

This does not include atmospheric concentrations of substances that are not capable of causing death, incapacitation, injury, acute illness or impairment of ability to self-rescue.

### *Physical Hazards:*

- Moving equipment or parts
- Energized or pressurized systems

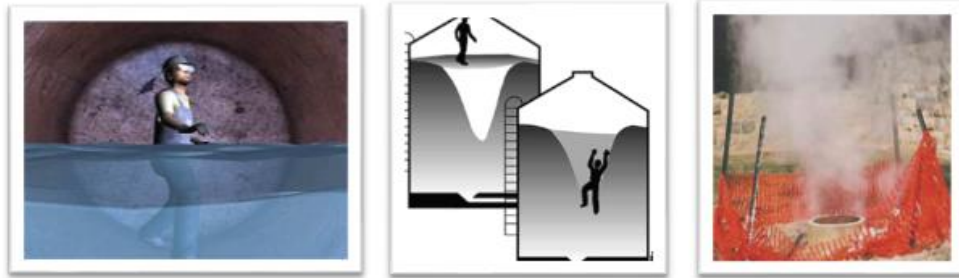
Examples include:

- Shafts
- Couplings
- Gears
- Belts
- Conveyors
- Mixers
- Rotors

## ○ Compressing Devices

Situations that could result are entrapment, engulfment and thermal injuries.

Other possible physical hazards consist of snakes, rodents, spiders, poor lighting, obstructions, falling objects, wet surfaces, trip/slip and fall hazards, electrical shock and acute chemical hazards.



Once hazards are identified, it is critical to institute appropriate control measures for the elimination or at least reduction of the hazards. Remember, acceptable entry conditions must be attained before entry and maintained throughout the duration of an entry.

Two control measures for atmospheric hazards are ventilation and respiratory protection.

Ventilation helps provide adequate oxygen to the air within a confined space, dissipating contaminants and preventing possible fires or explosions. Respiratory protection is needed whenever an emergency exists and entry cannot be delayed. Always assume that an IDLH atmosphere exists. To help you determine which respiratory equipment is appropriate, refer to the Cal/ OSHA *Guide to Respiratory Protection* publication.

Keep in mind that ventilation may not control all atmospheric hazards. In some cases, the introduction of air may bring the fuel-air mixture into the flammable range. In such cases, it may be necessary to fill the confined space with an inert gas such as nitrogen to control vapor or gases that have the potential to ignite. While inert gases eliminate the hazard of combustion or explosion, they also create an oxygen deficiency hazard that is immediately dangerous to life and shall not be entered.

As soon as an officer identifies that they are dealing with a confined space situation, they should request from dispatch a “**confined space response**,” from SBF D Rescue personnel. All SBF D engines carry the proper equipment to monitor the atmosphere of a confined space and determine if it is toxic. If the atmosphere is toxic, then SBF D Rescue personnel will have a hazmat team respond. A typical “confined space response” from SBF D includes their Heavy Rescue team (Squad 1), two engines and a Battalion Chief.

## **ENTRY:**

“Entry” occurs as soon as any part of the entrant’s body breaks the plane of the opening into the space, including any extremities (hands or feet). If entry is to be made, the employer should first have a plan in place for such situations and the entrant should already have received training covering:

- Required roles - entrant, attendant, supervisor, rescuers
- Space assessment - prior to and continually during each entry, including atmospheric monitoring
- Ensuring the space is isolated from other energy sources & materials
- Rescue procedures



## **RESCUE:**

Two-thirds of all confined space fatalities occur among would-be rescuers. Fatalities can occur when the rescuer:

- Does not know the hazards involved.
- Does not have a plan of action.
- And lacks confined space rescue training.

Depending on the severity of the emergency, different rescue methods can be employed:

- Self-rescue is the preferred plan that provides entrants with the best chance of escaping a permit space when hazards are present. A Self-Rescue occurs when an authorized entrant recognizes their own symptoms of exposure to a dangerous atmosphere or a prohibited condition is detected, and entrants are able to escape from the space unaided.
- Non-entry rescue is the next-best approach when self-rescue is not possible. Non-entry rescue can be started right away and prevents additional personnel from being exposed to unidentified and/or uncontrolled confined space hazards. Usually equipment and other rescue aids are employed to assist in removing endangered entrants.

- Entry rescue involves rescuers entering the space to retrieve the entrant and/or provide the victim with emergency assistance such as CPR, first aid, and air via SCBA or a supplied air respirator (SAR)

Time is of the essence during any rescue. Do not delay in reacting appropriately when presented with confined space hazards. Again, as soon as an officer recognizes a confined space situation, request assistance from SBF D Rescue Personnel, unless the incident constitutes an emergency and delayed entry is not an option. In this instance, use respiratory protection, treating every confined space as if an IDLH atmosphere exists.

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**DUE SATURDAY, AUGUST 31, 2019**