



Confined Space Hazards Public Webinar

Introduction

Deborah Gold, CIH
Deputy Chief for Health and
Engineering Services

General Industry – Permit Required Confined Space – Section 5157

- ▶ Limited entrance and exit + potential atmospheric hazard or other hazards = “Permit Required Confined Space”
- ▶ Applies to most workplaces such as:
 - Food production
 - Chemical manufacturing
 - Recycling operations
 - Sewer plants
 - Plating shops
 - Amusement parks

Other Industries –Section 5158

- ▶ Limited entrance and exit + hazardous atmosphere = “Confined Space”
- ▶ Applies to:
 - Construction,
 - Agriculture,
 - Marine terminals
 - Telecommunication manholes and unvented vaults
 - Grain handling facilities,
 - Natural gas utility operation within distribution and transmission facility vaults,

Dick Roberts
Senior Safety Engineer

Cal-OSHA Confined Space Special Emphasis Program

- ▶ In place February 2012
- ▶ All Cal-OSHA units
 - Enforcement
 - Consultation
 - Every inspection will include an evaluation of confined spaces
- ▶ Goal: Zero confined space fatalities in 2012

Goal

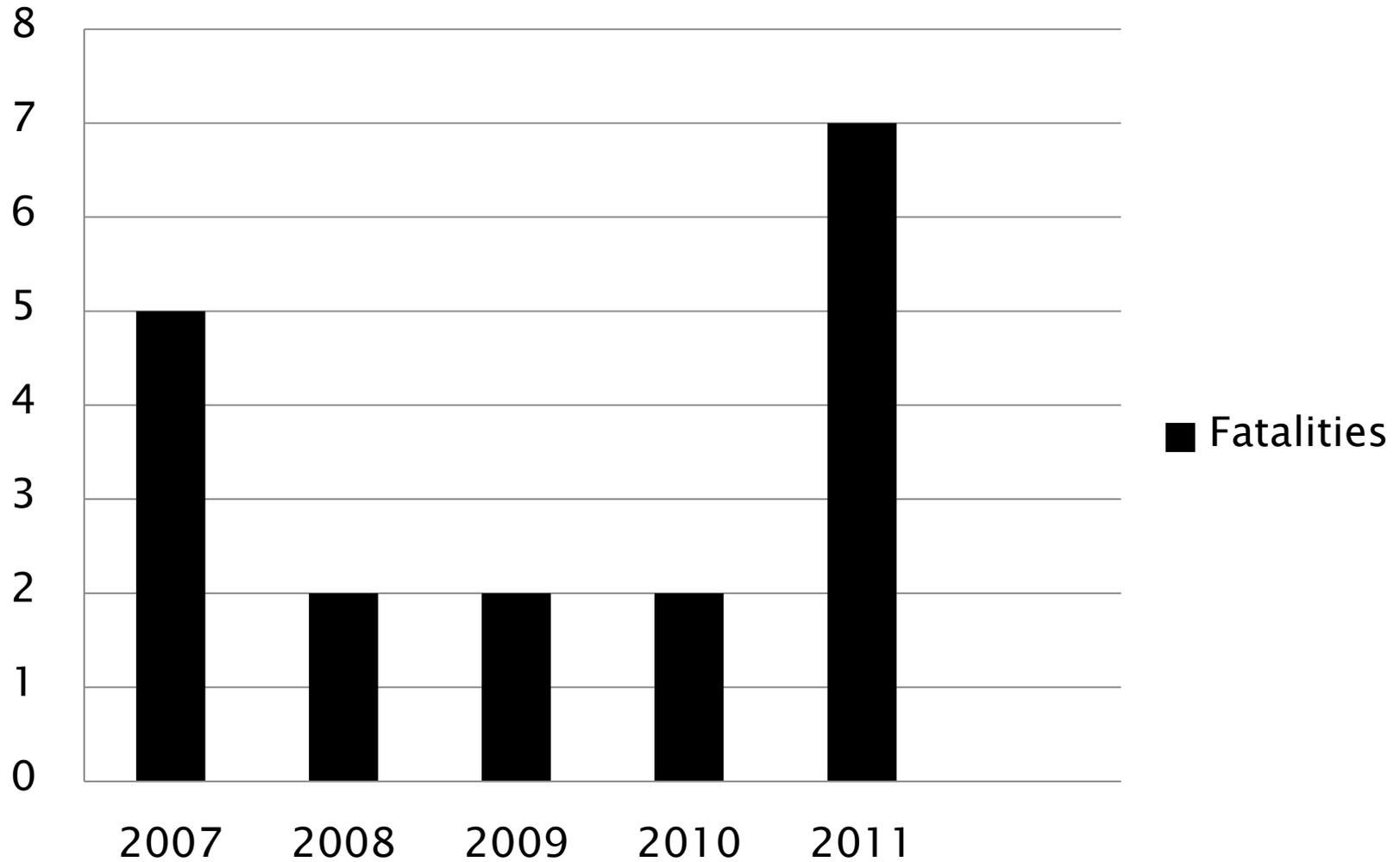
Increase participant awareness of:

- ▶ How to identify confined spaces
- ▶ How to evaluate hazards
- ▶ Confined space program requirements
- ▶ Resources available for program assistance

The Problem

- ▶ Confined spaces present very special work requirements and preparations
- ▶ Safety incidents involving confined spaces may result in fatalities; many have multiple serious injuries

Confined Space Fatalities in California



The Solution

- ▶ If confined spaces exist in your workplace
 - Post the space
 - Warn employees of the hazard
 - Prevent employees from entering until an effective and fully implemented confined space program is in place.



Garrett Brown, CIH
Senior Safety Engineer

What is a “Confined Space”?



Look for spaces that are...

- Large enough and configured so that they can be entered, and
- Have restricted means for entry or exit, and
- Are not designed for continuous employee occupancy

Typical Examples of Confined Spaces:

- ▶ Tanks
- ▶ Boilers
- ▶ Vats
- ▶ Kilns
- ▶ Vaults
- ▶ Silos
- ▶ Pipelines
- ▶ Sewers
- ▶ Manure pits
- ▶ Storage bins
- ▶ Double hulls
- ▶ Pumping stations
- ▶ Pits, sumps
- ▶ Vessels
- ▶ Manholes
- ▶ Water reservoirs







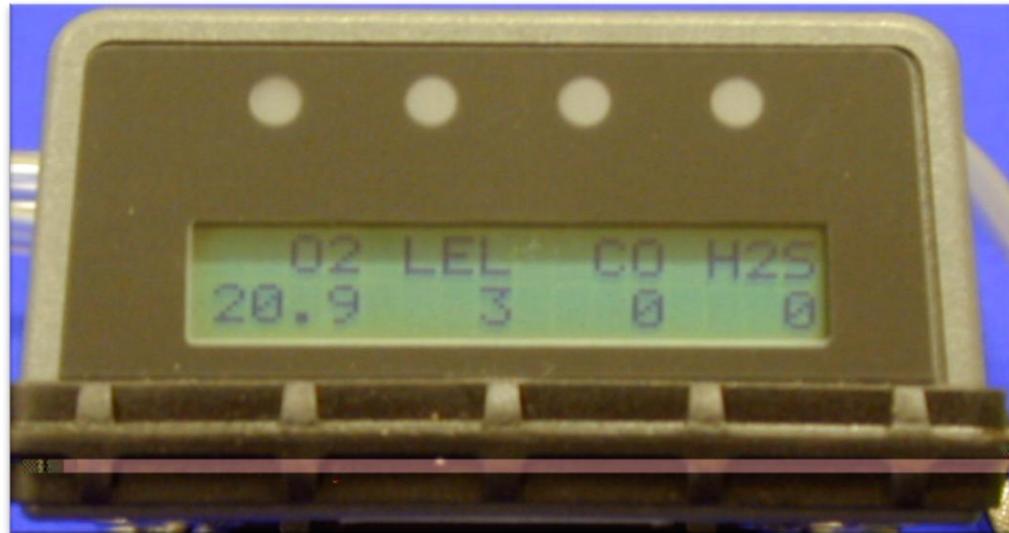


Hazardous Atmospheres

- ▶ If a confined space has a hazardous atmosphere, or has the potential for a hazardous atmosphere, special confined space procedures must be taken
- ▶ Hazardous atmosphere includes:
 - Oxygen deficiency or enrichment
 - Flammable atmosphere
 - Acutely toxic (Immediately Dangerous to Life or Health, or impairs ability to self-rescue)

Air Monitoring

- ▶ Calibration
- ▶ Sample Locations



Causes of Hazardous Atmospheres

- ▶ Inerting of the space
- ▶ Product stored in a confined space:
 - Gases released when cleaning.
 - Materials absorbed into walls of confined space, even if space has been emptied or cleaned.
 - Rotting organic materials and other decomposition

Causes of Hazardous Atmospheres Cont.

- ▶ Work performed in a confined space:
 - Welding, cutting, brazing, soldering
 - Painting, scraping, sanding, degreasing
 - Sealing, bonding, melting
- ▶ Connections or pipes to other spaces, or leakage from adjacent areas or soils.



In most industries confined space precautions must also be taken if:

- ▶ Water or other materials in the space, such as sand or sugar, are an “engulfment” hazard
- ▶ A person may be trapped in the space due to sloping floor, converging walls, or piping or other obstacles
- ▶ Any other recognized serious safety hazard such as energy sources, mechanical hazards, steam, or heat



Entry into a confined space

“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 confined spaces are to be entered the employer must...

- Post the space and prevent unauthorized entry
- Develop a program
- Assess the space prior to and continually during each entry, including atmospheric monitoring
- Train employees in required roles – entrant, attendant, supervisor, rescuers
- Isolate the space from other energy sources & materials
- Have effective rescue procedures



Rescue & Emergency Services

- ▶ Non-entry rescue is preferred! You must utilize retrieval systems unless they would not be effective in the space
- ▶ In addition to the attendant, there must be at least one standby person at the site who is trained and immediately available to perform rescue and emergency services.
- ▶ Practice simulated rescue operations at least every 12 months in actual space or representative spaces based on *opening size, configuration, and accessibility....*
- ▶ **“CALL 911” IS NOT A RESCUE PLAN!!!**

Applicable California Confined Spaces Regulatory Requirements

Title 8, CCR Section 5157

This section provides definitions and requirements for General Industry application of permit-required confined spaces.

Applicable California Confined Spaces Regulatory Requirements

Title 8, CCR Section

5158

This section provides definitions and requirements for other industries including: Construction, Agriculture, Marine Terminals, Telecommunication Manholes, Grain Handling Facilities, Natural Gas Utility, Electric Utility

Questions?

Panelists:

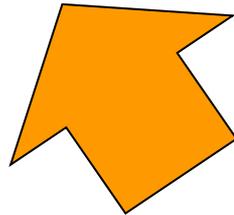
Deborah Gold, CIH, Deputy Chief for Health &
Engineering Services

Vicky Heza, Consultation Program Manager

Garrett Brown, CIH, Senior Safety Engineer

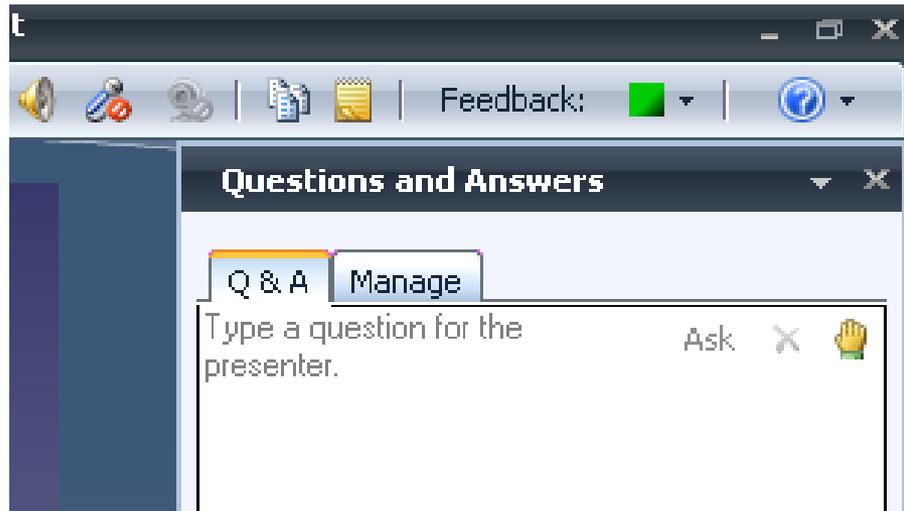
Dick Roberts, Senior Safety Engineer

TO ASK A QUESTION:



Select the Q & A tab at the top of the Microsoft Office Live Meeting screen

TO ASK A QUESTION:



Type in your question and click “ask”

TO ASK A QUESTION:

Send questions to: InfoCons@dir.ca.gov

ADDITIONAL RESOURCES

DOSH webpage

www.dir.ca.gov/dosh/ConfinedSpace

Cal/OSHA Consultation Service

Toll-free Number: 1-800-963-9424