Introduction

Deborah Gold, CIH
Deputy Chief for Health and Engineering Services
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
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

- 2007: 5 Fatalities
- 2008: 2 Fatalities
- 2009: 2 Fatalities
- 2010: 2 Fatalities
- 2011: 7 Fatalities
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
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” 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.
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”
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