Confined Space Entry Basics

DANGER

CONFINED SPACE
KEEP OUT
UNLESS AUTHORIZED

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Training Outline

- Introduction
- General Hazards
- Permits
- Atmospheric Testing
- Safety Procedures
- Training and Duties of the Confined Space Entry Team
Introduction

Confined space definition

- Is large enough that an employee can enter and perform assigned work
- Has limited or restricted means for entry or exit
- Is not designed for continuous employee occupancy
Introduction

Examples of confined spaces

- storage tanks
- pits
- silos
- vats
- tunnels
- sewers
- shafts
- exhaust ducts
Introduction

- The employer must assess the workplace to determine if hazards are present that necessitate the use of PPE.
Risk Management Services

Permit Space Hazards

- Hazardous atmosphere (too little or too much oxygen, flammable or toxic air)
- Engulfment
- Danger from unexpected movement of machinery
- Electrocution
- Heat stress
- Becoming wedged into a narrow space and suffocating
Risk Management Services

Reducing Risks of Hazards

- Post signs to alert employees to the dangers of confined spaces.
- Use barriers to keep unauthorized employees out of permit spaces.
- Develop and use a written space entry program.
- Conduct air monitoring and other tests to identify and evaluate hazards in each permit space.
- Ventilate, eliminate, or control the space’s atmospheric hazards before entry into the space.
Permits

- Permit space
- Purpose, date & authorized length of entry
- Authorized entrants and supervisor by name
- Hazards of the identified space
- Control and isolation methods
- Acceptable entry conditions
- Results of initial and periodic atmospheric testing
- Rescue and emergency services to be summoned
- Communication procedures
- Equipment to be provided
Preparation of Permit Space

- Notify all affected departments.
- Post signs and put up barriers to protect entrants from traffic and pedestrians.
- Blind or disconnect and cap all input lines so that no hazardous materials can enter the space.
- Empty space of any materials that may be hazardous.
- Verify breathing safety by air testing.
- Add emergency contact telephone numbers.
Atmospheric Testing

- Continuously test and monitor air in all areas before entry.
- Make sure that the oxygen content is between 19.5 and 23.5 percent.
- List any toxic materials that could be present and their permissible exposure limits.
- Evaluate heat stress potential.
- Control any hazards present before entry.
- Evacuate the space and cancel the permit if air becomes hazardous.
Risk Management Services

Monitors

Simultaneously monitors up to four atmospheric hazards:

- carbon monoxide
- flammables
- hydrogen sulfide
- variable oxygen levels

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Safety Procedures

- Authorized entrants can enter a permit space only after it’s been tested and found safe for entry.
- The assigned entrant has to know what equipment to use and how to use it.
- Once prepared, you want to get in and do the assigned task as quickly and efficiently as possible.
- Alert the attendant immediately if you recognize a sign or symptom of exposure to a dangerous situation.
Training and Duties of the Confined Space Entry Team

Duties of the Entry Supervisor:

- Verifies that the permit is filled out completely and all safety steps listed are taken; then signs the form.
- Checks conditions to ensure they stay safe throughout the work.
- Sees that any unauthorized people are removed.
- When work is complete, cancels the permit and concludes the operation.
Training and Duties of the Confined Space Entry Team

Duties of the Attendant:

- Maintains an accurate count of who’s in the space, monitors activities inside and outside of the space, and stays in touch with the entrants.
- Keeps unauthorized persons out of and away from an occupied permit space.
- Orders evacuation of the permit space if entrants show signs of behavioral effects of hazard exposure, or if an outside situation is present that could endanger the workers in the space.
- Summons rescue and emergency services when needed.
Training and Duties of the Confined Space Entry Team

Duties of the Entrant:

- Knows the hazards of the space and signs of exposure.
- Follows personal protective equipment training carefully.
- Keeps in contact with the attendant; leaves space at once if instructed to do so.
- Is always ready to evacuate quickly.
- Leaves the space and tells the attendant if there is danger.
Training and Duties of the Confined Space Entry Team

Emergency and Rescue Procedures:

- Self rescue
  An entrant evacuates the space with no help.

- Non-entry rescue
  Only workers trained in rescue can enter the space for the purpose of rescue and only when there is another attendant present.
Questions?

This is a very basic program so that you are aware of the hazards of confined spaces. Much more training is required prior to attempting an entry.

Contact Information

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