

## CONFINED SPACE RESCUE

### BACKGROUND & DEFINITIONS

Scriba Fire Department units may encounter confined spaces of many different types, shapes, and sizes. Most of these are easily recognized as a confined space but some are not (i.e. open tanks or pits). Before OSHA regulations for confined spaces were issued in 1993, approximately 300 deaths a year occurred in the U.S., most caused by poor conditions within the confined space. Nearly 60% of the 300 annual fatalities involved the would-be rescuers. Therefore it is imperative for SVFD units to approach and deal with a confined space incident with caution, common sense, and the guidelines outlined here.

**Confined Space** is one which has all of the following characteristics:

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

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

- Contains (or has a known potential to contain) a hazardous atmosphere
- Contains a material with the potential for engulfment of an entrant (i.e. sand, coal)
- Has an internal configuration such that an entrant could be trapped or asphyxiated by inwardly converging walls, or a floor which slopes downward
- and tapers to a smaller cross-section (i.e. hopper)
- Contains any other recognized serious safety or health hazard

### SIZE-UP

**DO NOT** enter the confined space (**breaking the plane in the opening is considered entry**). This is what gets most rescuers in trouble.

- Dispatch the following to all possible confined space emergencies:
  - 2761, 2762, 2771
  - Oswego City Technical Rescue if needed.
  - Oswego Ambulance
- Request any other equipment as needed (i.e. Phone/Power Company)
- Identify whether or not the space is a Permit-Required or Non-Permit Space, following the criteria listed above. The SVFD Confined Space Rescue Permit is located in the clipboard on 2761.
- Test atmospheric conditions of the space, test in the following order:
  - Oxygen levels
  - LEL
  - Other Toxic gases

### ***Non-Permit Spaces***

If it is determined that the confined space is a non-permit space, proceed with caution in performing the rescue.

### ***Permit Required Spaces***

#### **Initial Response Personnel**

- Use and completion of the SVFD Confine Space Rescue Paperwork is mandatory, prior to entry. (Found in the ICS clipboards)
- Use the Permit as both a guide and checklist to assist with walking you through the procedures necessary to safely and effectively handle a confined space rescue.
- Obtain the confined space Entry Permit. This is the permit that the contractor should have had to work in the space.
- Contact attendant / entry supervisor
- Limit access to the area.
- Establish control zones
- Attempt to find out as much victim information as possible.
  - Number of victims
  - How long they have been unaccounted for.
  - Their specific location inside if possible.
  - What type of protection i.e. half mask, supplied air respirators?
- Identify the confined space hazards.
- Determine if atmospheric hazards exist. Most common hazards include
- low oxygen levels.
- Testing for atmospheric hazards should be done at several locations.
- Identify other known or possible physical hazards (i.e. sand, grain).

## **II. Rescue / Entry**

### **1. Make the confined space safe for entry (isolate from hazards)**

- Atmospheric testing - reading should be every 5 min, must maintain a log of readings.
- Ventilation
- Lock-out / tag-out
- Disconnect machinery that might cause entanglement or injury.
- Barriers / surrounding area so no one inadvertently falls.

### **2. Designate Personnel**

- *Entrants:* Select two entrants, if confined space allows
- *Back-up rescue team:* for each primary rescuer there needs to be a back-up rescuer
- *Attendant:* monitors the entry into the confined space and stays in communication with the entrants

### **3. Equipment / PPE**

- *Respiratory protection:* Mandatory use if potentially hazardous atmosphere exists
- *Fall protection:* Mandatory if over 5 feet deep
- *Lifelines:* Use is mandatory
- Two Line System
  - One for Raising and lowering
  - One for Safety not to be removed
- *Communication equipment:* Mandatory between entrants and attendant.

### **4. Personnel Awareness**

- *Pre-entry briefing:* Includes location/ condition of victims, hazards that exists in the space
- *Recorded by Attendant:* Time of rescue team entry, monitor air supply levels, monitor fatigue level
- *Maintain log on atmospheric testing*

### **5. Authorization**

- *Before entry is made:* Command must sign-off on the operation that all necessary steps have been taken to make safe entry
- *After the incident:* All paperwork generated should be filed with the fire report