

4.17 Trench Rescue

Scope- Most Trench Operations should be handled under the Confined Space Rescue Standard Operating Guidelines. Like CSR, trench work by contractors must be performed safely with adequate shoring material and rescue equipment. Any accident or fatality associated with a trench will also be thoroughly investigated by OSHA. The main goal of our Incident Commander shall be to prevent additional injuries to by-standers and rescue personnel.

This Standard Operating Guideline is intended to provide an overview of Command and control of a trench rescue only. Further training and information is available from the Training Division.

Safety- Trench collapse usually occurs because of:

- A. lack of shoring
- B. shoring not properly installed
- C. shoring being constructed of improper sized materials
- D. placing the spoil pile too close to the edge of the trench
- E. placing supplies too close to the trench
- F. allowing operating equipment, construction operations, blasting or moving traffic to cause vibrations near the trench.

All such operations within several hundred feet of the trench should be stopped
Emergency response vehicles shall park at least 100 feet away from the trench.

Incident Command should be immediately established at the scene to coordinate and control by-standers, other workers any specialized agencies that may be utilized. Remember, the Incident Commander is responsible for all people on the scene and fellow workers may have to be managed to prevent further injuries.

If the victim(s) is yelling or speaking, their breathing is likely adequate and the trench wall support must be assessed and adequately shored before any rescue attempt is made. Death by suffocation can occur within 4 - 6 minutes, so in many cases, the victim that is totally buried is not likely to be a viable patient upon arrival of the fire department.

Ground pads (4 x 8 sheets of plywood) should be placed adjacent to the trench wall to protect rescuers working around the trench.

Air monitoring devices, rescue harnesses, SCBA, rescue rope and protective equipment as outlined in the Confined Space Rescue Standard Operating Guidelines shall be utilized.

1. First Arriving Unit:

- A. Establish incident command structure
- B. Position unit no closer than 250 feet to the scene, walk to the collapse site
- C. Establish off-site staging area for other responding apparatus
- D. Shut parked apparatus off if possible

2. Conduct an Outer Circle Check:

- A. Eliminate sources of vibration out to 500 feet from collapse
 - a. Stop and shut off all construction equipment
 - b. Halt any drilling and/or blasting operations being conducted in the area
 - c. Stop and re-route traffic
- B. Identify witnesses to incident.
- C. Identify the job foreman and engineer if on site or the phone number of the

engineer in charge

D. Determine availability, quantity and size of shoring material on site

E. Determine the time when accident occurred

F. Begin establishing incident perimeter, minimum 100 feet around trench collapse site

3. Inner Circle Check:

A. Approach site from end of excavation

B. Conduct a visual inspection of the trench walls to determine type of soil involved in the trench collapse

C. Attempt to identify victim location

a. Determine if available on site shoring material is of sufficient quantity and size

b. Identify number of victims

c. Establish victims condition, if possible. (Do not enter any trench over 4 feet deep without adequate shoring for any reason.)

D. How is the victim trapped? (Rescue vs. Body Recovery)

a. Totally buried

b. Depth buried

c. Trapped by utilities, if so notify proper utilities

E. Immediately get non-entrapped personnel out of the trench

a. Encourage construction personnel to assist at ground level gathering lumber, hand digging and moving spoil piles, moving excess construction materials away from emergency site, etc.

b. Establish and maintain contact with victim(s) if not totally buried

4. Establish Incident Command Structure

5. Complete outlining of 100 foot perimeter with tape

6. Confirm notification of proper utilities

7. Begin clearing and leveling site for ground pads utilizing:

A. Fire and rescue personnel (leaving apparatus in staging area)

B. Non-trapped workers from onsite construction company

a. Personnel will not walk around trench site without ground pads in place. Pads need to be installed ahead of work areas

b. The location of tension cracks shall immediately be called to the attention of the IC and the Rescue Safety Officer

8. Consult with construction personnel to determine best method for shoring and how construction equipment can best be utilized to conduct rescue on victim retrieval

9. Post-incident Report -Have all personnel involved document their observations and actions on the fire report supplemental report