SPOKANE COUNTY FIRE DISTRICT 8

Standard Operating Procedures

130.03.01 SPECIAL OPERATIONS, TRENCH RESCUE	Adopted: 12/20/16 Reviewed: 11/21/19 Revised: 11/21/19 Approved:

Purpose: To provide trench rescue guidelines within the capabilities of District personnel's training and equipment.

References: WAC 296-305-05007
WAC 296-809
NFPA 1670

Procedure:

1. This procedure will provide the initial responding crews the basis of approaching and securing the unstable area of a trench collapse or cave in.
2. Incident Action Plan Considerations.
    a) When responding to a report of a potential trench rescue, personnel should consider immediately initiating a Technical Rescue Team response via Dispatch.
    b) Respond to the scene and park apparatus at least 100 feet away.
    c) Determine what happened.
    d) Determine if anyone other than those in the trench are injured and handle accordingly.
    e) Assess for hazards: traffic, spectators, downed wires, disrupted or exposed utilities, flammable liquids/gases and flowing water.
    f) Determine how many persons are buried, their location, and how long they have been buried.
    g) Determine if the operation is a rescue or a body recovery.
    h) Call for additional resources: Call Dispatch for a trench rescue response.
        i. Ambulance.
        ii. Law Enforcement-for traffic and crowd control.
3. Points To Remember.
    a) A trench is a narrow excavation made below the surface of the ground where the depth is greater than the width, but the width is not greater than 15 feet.
    b) Cave-ins happen almost instantaneously with little or no warning, which explains why trench failure usually results in injury or death.
    c) The effects and results of victim engulfment will depend on the degree and depth of burial.
    d) Since one cubic foot of soil weighs approximately one hundred pounds, a victim buried under just two feet of soil will have seven-hundred to one-thousand pounds concentrated on the chest and back prohibiting lung and chest expansion necessary for breathing.
    e) It's unlikely a victim will survive more than three to four minutes with cause of death being suffocation and compression injury.

f) Not all trench incidents are cave-ins.
g) There can be injured workers in a trench that has not caved in.
h) Rescuers must still use caution any time they need to enter a trench that is over four (4) feet in depth.
i) A cubic yard of soil weighs 3,375 pounds or 1.5 tons.
j) Two feet of soil on a victim's back/chest can be in excess of 1,000 pounds, making it impossible to expand the chest.
k) The time it takes to remove two feet of soil off of a victim can easily exceed 30 minutes.
l) If a trench collapses or caves in, there is a 500% chance it will cave in again.
m) All digging is done by hand.
n) No power equipment is to be used.
o) Resist the urge to jump into the trench to make the rescue.
p) You will do no good if you become a victim yourself.

4. Hazard Control.
   a) Stop or re-route traffic 300 feet in all directions.
   b) Vehicles not needed at the immediate scene park at least 100 feet away.
   c) Try to eliminate sources of vibrations.
   d) Have all equipment in the area turned off except dewatering equipment (i.e. sump pump) and any equipment giving protection to the victims.
   e) Have the utilities company turn off electricity, natural gas, or water.
   f) Make trench lip safe.
   g) Place ground pads (4'x8' x ¾" plywood) along edge of trench to disperse personnel weight.
   h) Move spoil pile back at least four (4) feet from edge of trench.
   i) Keep all unessential personnel off of trench edge.