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| **Technical Rescue - General** | Related Policies: Confined Space Rescue; SCBA; Accountability; Life Safety Rope, Harnesses and Hardware |
| *This policy is for internal use only and does not enlarge an employee’s civil liability in any way. The policy should not be construed as creating a higher duty of care, in an evidentiary sense, with respect to third party civil claims against employees. A violation of this policy, if proven, can only form the basis of a complaint by this department for non-judicial administrative action in accordance with the laws governing employee discipline.* |
| Applicable KY Statutes: Applicable KY Regulations: 803 KAR 2:200 |
| OSHA: 29 CFR 1910.146, 1926.650, 1926.651, 1926.652 |
| NFPA Standard: 1500, 1006, 1670  |
| Date Implemented: | Review Date: |

1. **Purpose:** The purpose of this procedure is to establish general guidelines for the response to technical rescue incidents. It does not pertain to specialized technical rescue team personnel, who shall operate under discipline specific standard operating procedures.
2. **Policy:** The fire department will respond to technical rescue incidents with what equipment and resources are available. The fire department will request specialized technical rescue teams to respond when necessary.
3. **Definitions**

**Technical rescue incident:** Incidents that require the application of special knowledge, skills, and equipment to safely mitigate complex and potentially deadly rescue situations, including rope/high angle rescue, trench rescue, confined space rescue, and collapse rescue.

**Trench rescue:** Any incident, in which a patient is trapped, buried, or experiencing a medical emergency in a trench or excavation.

**Trench:** A narrow excavation in relation to its length made below the surface of the ground. In general, the depth is greater than the width, but the width is not greater than 15 feet. (Per OSHA regulation 29 CFR 1926.650).

**Excavation:** - A man-made cut, cavity, trench or depression in the earth’s surface, formed by earth removal. An excavation is usually wider than it is deep. (Per OSHA regulation 29 CFR 1926.650).

**Confined Space:** A space that is:

1. Large enough and so configured that a person can bodily enter; and
2. Has limited or restricted means of entry or exit; and
3. Is not designed for continuous human occupancy

NOTE: The OSHA definition of confined space is limited to those confined spaces found in general industry.­ The fire department definition includes any space meeting this definition.

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

1. Contains or has known potential to contain a hazardous atmosphere;
2. Contains material with the potential for engulfing an entrant;
3. 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; or­
4. Contains any other recognized serious safety or health hazard

**Competent Person** - a person who is capable of identifying existing and predictable hazards in the surroundings, or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them. In order to be a competent person for the purpose of operations in trenches and excavations, the person must have specific training in, and be knowledgeable about soils analysis, the use of protective systems, and the requirements of trench and excavation operations.

1. **Introduction**
2. Technical rescue incidents pose challenges to firefighters that are well beyond those commonly associated with fires and other day-to-day responses. It is essential that all personnel be able to recognize technical rescue incidents, the hazards that such incidents pose, and the need to request personnel with specialized equipment, skills and training to safely mitigate such incidents.
3. All personnel operating at technical rescue incidents shall act within the scope of their skill and training.
4. Incident commanders and all officers shall ensure that personnel do not act beyond the scope of their skill and training.
5. **Arrival on Scene**
6. The first unit arriving on-scene at a technical rescue incident shall establish command.
7. Command should quickly assess the situation and provide a brief size-up to Dispatch based on initial information available.
8. The safety of responding personnel shall be given first consideration before any action is undertaken.
9. Apparatus should park in such a manner that will minimize the risk of secondary collapse, vibrations, or exhaust fumes endangering the incident site. As a general rule, apparatus should be brought no closer than 100 feet from a trench, excavation, confined space, or structural collapse, and vehicular traffic should be excluded within 300 feet.
10. The size up assessment should include:
11. locating a responsible party knowledgeable about the situation
12. determining the number, location and status of victims
13. determining if the incident is a rescue or a recovery
14. evaluating any known potential hazards, and identifying unknown hazards
15. determining what level of evacuation, if any, is needed.
16. A safety officer shall be assigned or appointed as early into a technical rescue incident as resources permit.
17. **Request Additional Resources**
18. As soon as Command recognizes the need, he/she shall request such additional resources and/or specialized teams as may be necessary to safely mitigate the situation.
19. Command should also utilize on-scene responsible parties who have specialized knowledge to assist in:
	1. Understanding the operational picture and enhancing situational awareness
	2. Evaluating dangers to personnel and victims
	3. Formulating an incident action plan
20. The specific information obtained in the assessment process should be relayed to Dispatch to ensure additional responding resources and/or mutual aid agencies understand the situation and have the specialized capabilities necessary.
21. **Stabilizing the Scene**
22. While each technical rescue incident presents unique challenges, there are some common issues must be addressed prior to the strategic and tactical commitment of personnel. These questions include:
23. Are there savable lives in danger (rescue or recovery)?
24. Are there any immediate environmental hazards that need attention?
25. Have adequate personnel and resources been requested?
26. Do available personnel have the appropriate level of training to handle the situation, or is a specialized team required?
27. Given the equipment carried by the apparatus on scene, what can be done to stabilize the incident, while maintaining personnel safety?
28. Incident scene activities shall be limited to those that are within the training levels of personnel and equipment available on scene.
29. Command shall apply basic risk management principles in formulating an incident action plan.
30. **Discipline Specific Guidelines**
31. Rope/High Angle Rescue:
32. Rope rescue should only be attempted as a last resort, and only using appropriately trained personnel and equipment
33. Identify whether the victim is suspended or supported, type of injuries, and if there is any other method to access the victim
34. Maintain visible contact with the victim, and establish verbal contact if possible
35. If possible, attempt to access the victim via a non-rope method, including ground or aerial ladders, using available safety equipment such as ladder belts and harnesses for the safety of personnel
36. If the victim cannot be rescued immediately, attempt to stabilize him/her until specialized resources can arrive
37. Request a specialized rope rescue team from:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
38. Trench/Excavation Rescue:
39. Under no circumstances shall any fire/rescue personnel enter an unprotected trench or excavation, unless:
	1. Excavations/trenches are made entirely in rock
	2. Excavations/trenches are less than 5 feet in depth and examination of the ground by a competent person provides no indication of a potential cave-in (29 CFR 1926.652 (a))
40. Establish a perimeter and exclude non-essential personnel and civilians
41. Identify and control utilities using lockout tagout procedures
42. Consider the effects of machinery, equipment, vehicles, apparatus and personnel on the stability of surrounding ground
43. Approach from the ends of the trench and avoid any activities that may cause further collapse
44. Consider placing ground pads (plywood or similar materials) around the lip of trench to support the weight of responders
45. Assess the number of victims, and locations
46. If possible, talk the victim into a self rescue (place ladders into trench as necessary)
47. Initiate air monitoring from a safe location outside the trench/excavation
48. If appropriate, apply ventilation into the area with positive pressure ventilation (PPV).
49. Erect suitable guardrails or barriers to prevent personnel from falling into the trench or excavation
50. If the trench is filling with water, consider options to dewater, including the use of portable pumps, trash pumps, etc. that can be placed without personnel having to enter the trench
51. Request a specialized trench rescue team from:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
52. Confined Space Rescue:
53. Under no circumstances shall any personnel enter a permit required confined space without proper training, PPE, and respiratory protection. Any such entrance must be in accordance with the SOP on Confined Space Rescue.
54. Initiate atmospheric monitoring and evaluate the need for a hazardous materials team
55. Identify and secure utilities using lockout tagout procedures
56. Identify the opening, victim(s), and potential entrapment (non-entry)
57. Ventilate the space and open any other egress or entry points
58. Obtain a map, or blueprint of the space
59. Request a specialized confined space rescue team from:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
60. Collapse Rescue:
61. Establish a collapse zone and a safety perimeter, and exclude non-essential personnel and civilians
62. Be alert for possible secondary collapse
63. Ensure utilities and fires are controlled
64. Assess the type of structure, cause for the collapse, and stability of adjoining structures
65. Establish an observation area in a safe location
66. Attempt to evacuate surface victims
67. Request a specialized collapse rescue team from:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
68. **Victim Access**
69. Regardless of the discipline, Command must identify the incident as a rescue or recovery operation using risk management principles.
70. Attempt to secure and access the victim(s) without exceeding the level of training of available personnel.
71. At no time shall any personnel operate above their level of training nor shall personnel utilize equipment that they have not been trained to use, or equipment that is inadequate for the intended use
72. If the victim(s) are not accessible by any other means than a technical rescue operation, and access will be delayed until appropriately trained personnel and equipment arrive on scene, personnel shall take what steps can be safety taken to enhance victim survivability, including ventilation (confined space and trench), fire control (collapse rescue), securing utilities (gas, water, electric), and establishing a perimeter to prevent well intentioned co-workers or others from endangering the victim(s) further.