

Falmouth Fire-EMS Operating Guideline

Confined Space

Objective:

To ensure a reasonable level of safety in the performance of permit required confined space rescue, and to help ensure that reasonable practices are followed in the performance of duties.

General Information:

These guidelines shall serve as the minimum basic guideline for all permit required confined space rescues, whether above and/or below ground. Confined spaces which do not meet the definition of a Permit Required Confined Space may also utilize this guideline.

Definitions:

Confined Space:

A confined space is defined as any space, above or below ground which:

1. Is large enough and shaped so that a person can enter and perform work and,
2. Has limited or restricted means of entry or exit. (i.e. sewers, ground holes, storage tanks, boilers, tunnels, vaults, etc..) and,
3. Is not designed for continuous employee occupancy.

Permit Required Confined Space (PRCS)

A Permit Required Confined Space is defined as a Confined Space with one or more of the following characteristics:

1. Contains or may contain a hazardous atmosphere including but not limited to:
 - a. Oxygen content below 19.5 or above 23.5%
 - b. Flammable atmosphere above 10% of the LFL
 - c. Presence or possible presence of toxic vapors
2. Contains a material that may engulf a person in the space
3. Has an internal shape that could allow a person to be trapped or asphyxiated, such as inwardly converging walls or a floor that slopes downward and tapers to a smaller cross section.
4. Contains any other recognized serious safety or health hazard.

Guidelines:

1. Response

- a. The response for any possible confined space rescue shall be a still box alarm with both an ambulance and Engine 2 assigned. In addition, Cumberland Heavy Rescue 103 and Yarmouth Tower 84 will also be dispatched via automatic mutual aid agreement.
- b. Engine 2, the ambulance, and the mutual aid companies shall respond directly to the incident location.
- c. Other apparatus shall respond to staging, unless otherwise directed by the incident commander.
- d. The response may be required to be altered due to special needs (lighting, lifting, special equipment, equipment capability, etc.).

2. Size up & Categorization

- a. Upon arrival the IC shall assess the situation to categorize as either a Confined Space or Permit Required Confined Space. All spaces predesignated by industry as Permit Required Confined Space as evidenced by signage, a permit or verbal report shall be so categorized by the IC. Non-predesignated Permit Required Confined Spaces may be so designated by the IC after assessment. Operations in Permit Required Confined Spaces shall follow this guideline. Operations in Confined Spaces may also utilize this guideline or portions thereof as determined by the IC.
- b. Initial size-up shall also begin the process of determining rescue or recovery. If a recovery mode is designated, no personnel shall be placed into the Permit Required Confined Space until all hazards have been essentially eliminated and all involved agencies have agreed to the recovery plan. Involved agencies include at least Falmouth Fire-EMS, Falmouth Police Department and Industry Rep. Frequently this will also include the DEP, OSHA, Medical Examiner and any industry specific Regulatory agencies.

3. Rescue

- a. No rescue attempt from Permit Required Confined Spaces will be conducted unless there is a minimum of five (5) personnel assembled

on scene. Two for primary rescue, 2 for a back-up team, 1 for IC and safety.

- b. It shall be the incident commander's responsibility to enlarge the organizations and rescue function as he/or she determines.
- c. No rescue shall be attempted until such time as the Permit Required Confined Space atmosphere is monitored for hazardous and/or flammable vapors, as defined in this procedure.
- d. If it is determined that a hazardous atmosphere does in fact exist, the Incident Commander shall perform a risk benefit analysis to determine if rescue efforts are feasible or if the operation should go into a body recovery operation. If the latter is determined, the incident shall be removed from the emergency mode and required resources shall be sought to make the atmosphere completely safe prior to body recovery.
- e. If it is determined that rescue is feasible the following procedures shall be strictly followed.

No personnel shall enter any Permit Required Confined Space without completely following these procedures. Entering a Permit Required Confined Space shall be considered whenever any body part (including the face) breaks the plane of the opening to the Permit Required Confined Space.

4. Operations

- a. All team members, rescue and back-up, shall be in full protective clothing for the hazard involved.
- b. In all cases, all team members, rescue and back up team members shall be equipped with self-contained breathing apparatus. Prior to entering any confined space, breathing shall be from the SCBA & Pass devices shall be active.
- c. All rescue team members and back up team members shall be equipped with a full body harness with a retrieval line attached. Said retrieval line shall be attached to the harness in the rear near shoulder level. The other end of each retrieval line shall be securely affixed to a stationary object. (tripod)

In no case, shall anyone enter the Permit Required Confined Space until all team members, rescue and back-up, are

harnessed, retrieval lines secured, and, if necessary, fire protection is provided.

- d. If the rescue is vertical in nature, and the vertical distance of the rescue exceeds five (5) feet, the retrieval lines shall be secured to a mechanical device located above the vertical opening. Said mechanical device may be tripod designed for this function or it may be by means of a block and tackle from an aerial ladder unit.
- e. In so much as practical, all rescue operations shall be completed incorporating the team concept. In the event that the size of the Permit Required Confined Space limits rescue capabilities to one member, the other member shall stay immediately available at the opening attempting to stay in communications with the rescuer. At no time shall this position or the position of the back-up team members be vacated while the rescue mission is in progress.
- f. In all cases the Incident Commander and the rescue team shall size-up and plan the rescue prior to entry to enable all required equipment to be taken in order to reduce rescue time to a minimum.

These guidelines may be changed or altered by the Fire Chief at any time.