

655 **CONFINED SPACE ENTRY**

PURPOSE:

To set emergency operational guidelines for department members when engaged in confined space entry operations.

SCOPE:

This procedure is applicable to all members.

DEFINITIONS:

Attendant - Someone who meets the Training requirements under section 330 “Training for confined space entry team members”, who is responsible for monitoring the atmosphere of the confined space and overseeing operations of entry members.

Confined Space - an area: not designed for continuous human occupancy; has limited access; may have poor or no ventilation; may or may not be located below grade; and where the atmosphere may be toxic, oxygen deficient or flammable.

Examples: wells, pits, sewers, boilers, vats, silos, bins, manholes, etc.

Confined Space Entry Team Member - Someone who is trained as a confined space entry team member as outlined in section 330 “Training for confined space entry team member”

Entry - the physical entry of the confined space by team members for the purposes of rescue or emergency work.

Qualified Incident Commander - A person who has met the training requirements as outlined in section 330 “Training for Confined Space Members”.

PROCEDURE:

Fires in Confined Spaces

General Operations:

Size Up

Upon arrival at the scene of a fire burning within a confined space, the Qualified Incident Commander will perform a size up and form an action plan. The action plan will include the addressing of life safety issues, take steps to limit the spread of the fire and finally to extinguish the fire.

The safety of our members, as always, will be the IC's number one priority.

Extinguishment

Prior to entering the confined space to effectuate extinguishment, the IC will exhaust all other methods to extinguish the fire from above ground. Including the discontinuing of the supply of fuels to the fire (natural gas, electricity, etc.), eliminating the oxygen supply (smothering) and use of alternate extinguishing aids (CO₂, dry chemical, high expansion foam, etc.)

The use of members to manually extinguish a fire in a below grade setting will be the last option the IC shall utilize.

Confined Space Rescue/Recovery Operations

General Operations:

Size Up

The first arriving fire department resource shall perform a size up of the situation and begin to develop an action plan.

Information deemed vital to safe confined space rescues include:

- establishing the entry point and controlling or denying access through any other point.
- determining if there is need for rescue and if so how many persons are trapped.
- determining if there is any communication with those trapped and if not, when the last communication with them occurred.
- developing any on scene resources, i.e.; on scene workers and supervisors, plant managers, etc. All of whom will report to the Incident Commander.

Entry

Upon determining that it is necessary to enter the confined space, the Qualified Incident Commander shall assure that sufficient confined space entry personnel are on hand to adequately staff the incident. Under **NO CIRCUMSTANCES** shall a member enter a confined space without meeting training standards from confined space members and without the benefit of an adequate support staff during a rescue operation. Additional alarms may be struck to fill out the assignment. Mutual aid may be a viable option as well.

Support staff for confined space entry shall include:

- A back up rescue team, ratio = one rescuer for each confined space entry member in the space.
- A qualified incident commander with the sole function of managing the incident.
- At least one BLS unit. At incidents where victims are reported down within the space, additional BLS and ALS service must be considered as well.
- An attendant who will be appointed for the duration of the incident to continually monitor and make appropriate recommendations to the IC and the rescue team(s).
- Prior to entry into any confined space, any hazardous conditions which exist within the space and which may be neutralized from outside the space shall be secured.

Such conditions include:

- removal of any chemicals
- discontinuing of any electrical, gas or fuel services which may pose a hazard
- discontinuing of water, steam or hazardous materials which may discharge into the space
- removal of any mechanical objects which may block or impede rapid exit from the space

Atmospheric Check

Prior to entry, an attendant shall perform an atmospheric monitoring. The purpose of the check shall be to detect that:

- no flammable or combustible vapors exist
- oxygen levels in the confined space is not lower than 19.5% nor higher than 23.5%
- no flammable or combustible dust exists within the space
- If an unknown or hazardous substance has entered the confined space

An attendant shall be assigned to continually check the atmosphere during the entire duration of the operation. Should the attendant assigned this function detect any changes in the atmosphere or conditions within the space, he/she shall supply the IC with that information immediately. Should these changing conditions pose a possible danger to the entry team they shall be so notified and evacuated immediately.

Ventilation

Continuous ventilation shall be established at each incident. Ventilation should be of the positive ventilation type, unless there is adequate information to do otherwise. Positive ventilation shall be the ventilation type of choice as it will serve to increase fresh air in the space and push away any build up of combustible or flammable vapors in the area.

In addition to mechanical methods, ICs should evaluate the use of on-site equipment and investigate the opening of manhole covers, other entry points or switching "on" of built in equipment. All of these options should be carefully explored based upon advice of on-scene persons familiar with the space and information gathered about the incident by the IC. Once ventilation has begun, it shall be continuous throughout the operation.

Personal Protective Equipment

All confined space entry members shall wear full turnout equipment as required into confined spaces. Self-contained breathing apparatus shall be worn in all cases. Such apparatus will be fully functional.

The first confined space entry member entering the space shall be equipped with a rescue harness secured by a rope of sufficient size and strength so as to be capable of removing him/her during an emergency should the need arise.

Rescue Team

An equally prepared rescue team shall be posted close to the confined space entry team and will act as a rescue team for the initial rescue group. The rescue team shall include one fully equipped equally trained member for each member who has entered the confined space. Members of the rescue team shall have no other function than to stand by for a possible rescue of the rescuers.

ENFORCEMENT;

Line officers and those acting as line officers shall be responsible for implementing this procedure when conditions warrant.