

CONFINED SPACE FIREFIGHTER FATALITY – CASE STUDY

The following information was taken from various news reports of the incidents. The circumstances are given as points for discussion and should not be taken as 'factual.'

A Tarrytown (NY) Volunteer Firefighter died attempting a rescue of a Public Works foreman who collapsed in a manhole. According to early reports:

- A Tarrytown Public Works Foreman responded to a sewer backup behind the Consolidated Engine Company. The foreman was also a member of the Engine Company.
- After entering the 15-foot-deep manhole, the foreman was overcome with toxic fumes and fell unconscious. Later, oxygen levels were also found to be below the minimum permitted levels.
- His friend and fellow firefighter entered the manhole without SCBA or turnout gear and was also quickly overcome. Early reports indicate neither man used an air monitor to test the atmosphere.
- Fellow firefighters in full turnout gear and SCBA removed both victims at about 6:30 p.m. Attempts to revive them were unsuccessful.

A team of Liberty Township (IN) firefighters entered a 5' diameter by 12' deep pit to rescue 4 people, including 2 of their own, who were overcome by muriatic acid and/or hydrogen sulfide. Muriatic acid is often used to clean pipes and other components. The firefighters survived. Sadly, the 2 civilians died.

An Indiana Department of Labor investigation found the firefighters were not trained in Confined Space Rescue and fined the Fire Department. The Department is taking a cooperative approach and is developing a program.

Fire departments that do not perform confined space rescue are not exempt from Confined Space regulations. According to OSHA,

1910.146(c)(3) *If the employer decides that its employees will not enter permit spaces, the employer shall take effective measures to prevent its employees from entering the permit spaces and shall comply with paragraphs (c)(1), (c)(2), (c)(6), and (c)(8) of this section.*

1910.146(c)(4) *If the employer decides that its employees will enter permit spaces, the employer shall develop and implement a written permit space program that complies with this section. The written program shall be available for inspection by employees and their authorized representatives.*


Fire Departments must decide whether firefighters will rescue / recover victims in confined spaces or will they remain outside the confined space and support the Confined Space Rescue Team. Either way, firefighters must be trained to identify confined spaces. A confined space must meet all three of the following conditions:

1. Large enough to bodily enter and perform work
2. Has limited or restricted means of entry / exit. (including turnout gear & SCBA)
3. Is not designed for continuous employee occupancy

Confined Spaces include pits & manholes, industrial vessels & tanks, vehicle hoppers & containers such as the rear of a trash truck or cement mixer, trenches (typically 4 feet or deeper), large dumpsters, and more.

Discussion questions:

1. **Confined Space must be identified. Signage is one way. How does your town's Public Works and Utilities identify their spaces? Are they all marked?**
2. **What are the challenges and possible actions while standing by for a Rescue Team?**



Include Confined
Spaces in Your
Site Visits and
Pre-Plans