

TerranearPMC Safety Share

Week of September 15, 2014 – Emergency Egress

On February 20, 2003, the Station Night Club in Rhode Island showcased the rock band, Great White (with their most famous song, "Once Bitten, Twice Shy"). This show included a pyrotechnic extravaganza designed to put the icing on the entertainment cake for the evening.

Just seconds into the band's opening song, "Desert Moon," the band's tour manager ignited flammable acoustic foam on both sides of the drummer's alcove at the back of the stage. The pyrotechnics were gerbs, which are cylindrical devices that produce a controlled spray of sparks. The gerbs were set to spray sparks 15 feet for 15 seconds. However, this distance easily encompassed the ceiling and wall insulation that was comprised of urethane and polyethylene. These materials are highly flammable and yield harmful gases such as carbon monoxide when ignited. Initially the flames were thought to be part of the act, but when smoke began to billow, the audience realized there was danger and the situation was out of control.

By this time, the nightclub's fire alarm had been activated, and although there were four possible exits, most people headed for the front door through which they had entered. The ensuing stampede caused people getting crushed as they frantically pushed through the narrow hallway that led to the exit. This resulted in the egress path being blocked as numerous deaths and injuries occurred to both patrons and staff.

462 people were in attendance, even though the club's official licensed capacity was 404. 100 people were killed and about half of the survivors were injured, either from burns, smoke inhalation, or being trampled. Among those who perished in the fire were Jack Russell's lead guitarist, Ty Longley, and the show's emcee, WHJY DJ Mike "The Doctor" Gonsalves. Survivors later stated that a bouncer stopped people trying to escape via the stage exit, stating that that door was "for the band only."

The Rhode Island nightclub tragedy illustrates the collapse of a real world system. As in most tragedies, there were many contributing factors; however, one of the most prevalent misfortunes was the inability to use emergency escape routes. The lack of an efficient means of evacuation prevented people from properly exiting the club and surviving the blaze. According to many witnesses, there were not enough exits to get everyone out of the club, and people quickly found themselves trapped in the club with no means of escape. Ironically, the club was also cleared by the fire department for operation a week before the disaster.

While this incident is not considered to be occupational, nevertheless the national Fire Protection Association Life Safety Codes (NFPA 101), which specifies requirements for emergency egress, is still applicable as it is designed for the safety of the general public as well as occupational settings. Even though one would expect that occupational settings would be under more stringent regulations and inspections by regulators and facility personnel, tragedies involving inadequate egress are unfortunate incidents within the workplace. Such was the case with the Hamlet chicken processing plant fire at the Imperial Foods processing plant. On September 3, 1991, there was a failure of a hydraulic line, causing a fire and Twenty-five employees were killed and 55 injured. This tragedy could have been avoided, but unfortunately these people were trapped behind a fire door that was



TerranearPMC Safety Share

intentional locked on the outside. In its 11 years of operation, the plant had never received a safety inspection.

Other notable tragedies include the Las Vegas MGM fire and the Dupont Plaza Hotel fire in Puerto Rico. In both cases, numerous people were killed as they fled to the exit doors. Unfortunately these doors opened from the outside (pushing inward). Therefore panicked people crowded at the doors pushing outward, where the doors could not be opened.

OSHA, through its regulation under 29 CFR 1910, Subpart E, *Exit Routes, Emergency Action Plans and Fire Prevention Plans*, addresses such aspects as the design and construction requirements for exit routes, including the maintenance, safeguards and operational features for exit routes.

In general, there needs to be at least two exit routes available in a workplace so that there can be prompt evacuation of persons during an emergency. While OSHA does not define “prompt,” it should be understood that this is an unhampered egress. If it is determined that two exists are not enough (based on the number of employees, size of the building, as well as the specific facility operations), then the employer has the responsibility to provide additional exit routes: although OSHA regulations do not indicate a specific number of routes.

Emergency exit routes must be located must be located as far away as practical from each other so that if one exit is blocked by fire or smoke, employees can evacuate using the second exit route.

Many times we find ourselves in the field trailers. In this type of scenario, OSHA does specify that a single exit route may be appropriate if there is evidence that indicates a safe and prompt evacuation can be conducted.

OSHA does reference NFPA 101 which provides design specifications for exit routes. For instance, ceilings for exit routes must be at least seven feet, six inches while any projection from the ceiling must not reach a point less than six feet eight inches from the floor. Exit accesses must be at least 28 inches wide at all points. Therefore, when developing an emergency action plan where egress pathways are specified, the employer needs to ensure that design features meet NFPA 101 provisions.

OSHA requires that each exit route door be clearly visible and marked by a sign reading “Exit.” Emergency exit doors must be unlocked at all times and persons must be able to exit from the inside at all times without the aid of a key, tools or any special knowledge (i.e. pass code).

OSHA regulations and NFPA codes are, at their best, tools to ensure that when an emergency situation arises, occupant are provided an adequate means to safety. But just like all rules and regulations, it will always be up to us, as individuals to be aware of our surroundings and to maintain proper housekeeping as well as understanding potential hazardous scenarios; so when we are confronted with an emergency we do not solely rely on a building’s compliance with proper design features, but we are mentally prepared to act.

You are never too old to set another goal or to dream a new dream.

C. S. Lewis

