



# What is “Designed for Human Occupancy”?

Info Sheet 2

In areas that are built for people, laws have builders and manufacturers design and construct buildings as well as equipment that enables people to work safely and effectively. In your normal operation, machines are guarded; lighting and ventilation systems ensure good air quality and egress systems are designed to evacuate people in an emergency. However, most traditional confined spaces (e.g. pits and tanks) or those areas that might be a confined space (e.g. crawl spaces or reservoirs), are only accessed by worker(s) for short time periods.

Workers are entering these spaces to perform work (e.g. cleaning operations or maintenance) that support the work process that normally occurs in the area. Having a person inside the area all the time is either not possible and/or not practical. Therefore human occupancy to conduct work was not really considered during the design and building process. These areas do not have the required ventilation, heating, egress facilities, lighting appliances, and ceiling height for occupancy as set out in the Building Code of the jurisdiction having authority.

In confined spaces this lack of safe design causes problems. For example the dirt floor could support a large colony of mould spores that the worker inside may be allergic to. The mould spores will consume the oxygen and could create an oxygen deficient atmosphere. Poor contributes to the problem by not replacing the oxygen and not drying out the air allowing the mould to continue growing. Poor lighting could cause the worker to hit their head or trip on the uneven floor surface.

Further to this is most of these areas are isolated from the general work population. Either a wall or their location makes it all but impossible for someone to see the worker inside. This isolation will adversely affect their ability to call for help or safely exit the area in an emergency.

This is contrary to both the Fire Codes in Canada as well as many Safety Regulations (e.g. Regulation 231/91, Section 18). The isolation coupled with the missing design criteria, make it difficult for the local emergency response services to effectively provide aid should an incident occur.

This lack of design attention places workers at risk of injury or in a case of emergency, hampers those inside getting out to a safe location. Therefore, ensure these shortcomings are included in the hazard identification stage.