CONFINED SPACES: Answers to 9 Frequently Asked Questions

Of all of the hazards in the workplace, confined spaces such as wells, tanks, tunnels and vats are one of the most dangerous’for both the workers who enter such spaces to work as well as rescuers who come to the aid of workers in trouble in a confined space. So it’s no surprise that the OHS laws in every jurisdiction contain detailed requirements for protecting workers from the hazards posed by confined spaces (called ‘enclosed areas’ in Qu□bec). Because these requirements are often extensive, complying with them can be complicated. So here are answers to nine frequently asked questions (FAQs) about this particular workplace hazard.

9 FAQS ABOUT CONFINED SPACES

Q What’s a Confined Space’

A: Many confined spaces are obvious, such as manholes, boilers, tunnels, wells, storage tanks, vats, silos and trenches. But some aren’t so easily recognized. So to ensure that you comply with the confined space requirements, you should be familiar with how your OHS regulations define ‘confined space’ and identify all parts of your workplace that meet this definition. In general, the OHS regulations consider an area to be a confined space if it has these four characteristics:

1. Is enclosed or partially enclosed;
2. Isn’t designed or intended for continuous human

occupancy but is large enough for a worker to enter to perform work;
3. Has restricted or limited means of entrance and exit; and
4. Is or may become hazardous to anyone entering it because of its design, construction, location, atmosphere, materials or substances in it, work done in it or other conditions.

Although most OHS laws require an area to exhibit all four of these characteristics to be considered a confined space, there are some variations. For example, Saskatchewan has separate definitions for ‘confined space’ and ‘hazardous confined space.’ A ‘confined space’ exhibits the first three characteristics, while a ‘hazardous confined space’ is a confined space that exhibits the fourth as well.

Q Why Are Confined Spaces So Hazardous’

A: Confined spaces are so dangerous because many of the hazards they can contain aren’t easily seen, smelled, heard or felt’making it difficult to protect workers from them. For example, confined spaces can be oxygen deficient and pose a serious threat to workers who may not even realize they’re at risk until it’s too late. And even if workers in confined spaces become aware of a hazard, the limited means of exit can prevent them from escaping in time. In addition, the walls of some confined spaces, such as trenches, pose the risk of collapse if they’re not properly shored.

Example: An installer of sewer and water mains hired an engineering company to do testing at a site. A worker for that company entered a trench to perform a test. Because the trench wasn’t shored, the soil collapsed, trapping and injuring the worker. The installer was convicted of failing to ensure that the trench was shored and was fined $55,000. The engineering company pleaded guilty to not providing instruction to the worker about how to notify a supervisor that a trench wasn’t

safe to enter. The court fined it $20,000 [*SMRS Construction and Terraprobe Inc.*, Govt. News Release, June 24, 2013].

Q Are We Required to Have a Confined Space Program'

A: Whether you're legally required to have a confined space program depends on your jurisdiction. (See the chart for each jurisdiction's requirements.) Several jurisdictions, such as BC, require confined space or confined space entry programs. Some, such as Alberta, require confined space codes of practice, which are essentially the equivalent of a confined space program. But even those jurisdictions that don't specifically require a confined space program or the equivalent *do* require employers to have procedures for safely working in confined spaces. And the best way to implement those procedures and ensure workers comply with them is through a confined space program. *Bottom line*: Even if your jurisdiction doesn't specifically require confined space programs, having a formal program is a good idea and may even be considered a best practice.

Q What Should Such a Program Cover'

A: The requirements for a confined space program vary by jurisdiction. But BC has a pretty comprehensive list that serves as a good baseline, especially for employers in jurisdictions that don't specifically require such a program. In BC, a confined space program must include an assignment of responsibilities and a list of each confined space or group of similar spaces and a hazard assessment of those spaces. In addition, the program must include written safe work procedures for entry into and work in the confined space that address, where applicable:

- Identification and entry permits;
- Lockout and isolation;
- Verification and testing;
- Cleaning, purging, venting or inerting;

- Ventilation;
- Standby persons;
- Rescue;
- Lifelines, harnesses and lifting equipment;
- PPE and other precautions; and
- Coordination of work activities.

Q What's a Confined Space Attendant'

A: One of the safety measures that most jurisdictions require is the use of a confined space attendant'also called a standby person/worker or sentinel'who's assigned to stay outside of the space and monitor the work inside to ensure the safety of the workers in the space. You should post an attendant at or near the entrance to a confined space. Workers assigned to this position must be 'competent' and get appropriate training. (For information on who qualifies as a 'competent person,' see 'Compliance 101: What Makes a Worker a 'Competent Person' under OHS Laws'' Sept. 2008, p. 11.) Their duties typically include:

- Monitoring the work in the confined space;
- Keeping track of and communicating with the workers inside;
- Controlling their lifelines; and
- Taking appropriate steps in an emergency.

It's critical that confined space attendants don't leave the confined space unattended, enter the confined space or do other work that distracts them from their duties as attendants. You should also ensure attendants have all necessary equipment, such as an alarm or other means of summoning assistance in an emergency.

Q What's an Entry Permit'

A: The OHS laws in some jurisdictions require employers to use entry permits to limit workers' access to confined spaces. Other jurisdictions simply recommend their use. An entry

permit lists critical safety information such as the workers' qualifications and the PPE required for the work. Under an entry permit system, a worker isn't allowed into a confined space unless a supervisor has reviewed the entry permit to verify that it's complete and accurate. Depending on the jurisdiction, the permit may then be posted at the entry to the confined space while the work's being done.

Even if your jurisdiction doesn't specifically require the use of an entry permit system for confined spaces, there are still some good reasons to use one anyway. For example, many confined space incidents happen because either the worker wasn't qualified to enter the space in the first place or although he had the necessary training, he didn't understand the risks involved in *this* confined space and so failed to take the appropriate precautions. Using an entry permit system ensures that workers are trained, qualified and understand the risks *before* they enter a confined space and thus helps prevent incidents.

In addition, a entry permit system creates a written record of the steps you took to comply with the confined space requirements. For example, permits document the fact that someone assessed the risks in the confined space, explained those risks to workers and gave them other appropriate safety instructions before they were allowed to enter the space. Should an incident happen despite your efforts and the company faces OHS charges as a result, the permits may help it prove due diligence by showing the reasonable steps it took to protect workers.

Q What Information Should an Entry Permit Contain'

A: In the jurisdictions that require the use of entry permits, the OHS regulations usually spell out the information the permit must include. And the jurisdictions that simply recommend their use may spell out the required information in confined space guidelines. Although there are some

differences, entry permits should generally include the following information:

- The location of the confined space;
- The name of each worker who enters the space;
- When each worker entered and exited the space;
- The reason for their entry, such as the work to be performed;
- The time period for which the permit is valid;
- The name of the confined space attendant, if any;
- The equipment required for entry and rescue, and verification that it's in good working order;
- The results of atmospheric testing, if any was done; and
- The necessary precautions to take in the confined space, including ventilation and required PPE.

Q Are There Requirements for Handling Confined Space Emergencies'

A: It's estimated that 60% of the workers killed in confined spaces were coming to the rescue of the workers inside. For example, in Sept. 2008, two Vietnamese-Canadian workers at a BC mushroom farm died after being overcome by toxic fumes in a shed when a pipe carrying a compost mixture broke and released a gas. Three workers tried to rescue them'one died and the other two were seriously injured. So it's hardly a surprise that the OHS regulations address the measures required to ensure the safety of anyone who might have to go into a confined space to rescue workers, such as having an effective confined space emergency plan.

The OHS regulations generally don't specify what confined space emergency plans should include beyond requiring plans them to address rescue procedures, PPE and the emergency equipment to be used by rescuers. A good rule of thumb, however, is that an effective confined space emergency plan includes:

- All hazards in the confined space that were previously identified in a risk assessment;
- The dimensions of the space;
- The location of entry and exit points;
- Any obstacles to removing an injured worker;
- Rescue equipment required and how that equipment will be brought to the site, set up and operated;
- PPE for rescuers, including appropriate respirators;
- Communication between workers, rescuers, the confined space attendant and the supervisor;
- Procedures to follow immediately after an incident, including when rescue team members performing specific roles will be deployed;;
- Possible hazards that may arise *during* a rescue, appropriate evaluation of these hazards and control methods for them;
- The types of rescue that are options, such as self-rescue, external rescue or entry rescue, and when each will be used;
- Rescue methods for a worker who's unconscious, unresponsive or distressed; and
- The emergency medical care and materials that'll be available to treat the injured on site.

Q Are There Special Training Requirements for Workers Who Work in Confined Spaces'

A: All workers who work in confined spaces must get training specific to the hazards, safety measures and other requirements for such work. For example, as of Jan. 1, 2013, employers in Newfoundland must ensure that workers operating in confined spaces have completed training with an approved confined space entry training provider. In addition, the OHS laws usually require confined space attendants and members of the rescue team to get special confined space training. For example, Ontario requires members of the on-site confined space rescue team to be trained in not only the rescue plan

and use of the rescue equipment spelled out in the plan but also first aid and CPR.

The OHS laws may require you to repeat confined space training at regular intervals. For example, Nova Scotia requires workers who work in confined spaces to be trained every two years and confined space rescuers every year. The Newfoundland confined space training is valid for three years from the date of completion.

Bottom Line

Too many workers die each year in confined space incidents. For example, between 2000 and 2008, 17 workers died in such incidents in BC alone. So if your operations involve work in confined spaces, it's critical that you comply with the confined space requirements. The answers to these questions provide an overview of what you must do. Post this infographic on confined spaces in your workplace to remind workers of the dangers they pose.