

# Confined Space FAQ: Registered Refrigeration Plant Rooms

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January 2013

## **Q. Is a Registered Plant Room Considered a Confined Space?**

**A. Not Normally!** Confined Spaces are governed under Ontario Regulation 632/05. The Regulation helps to determine if an area is considered a Confined Space based on the intended use of the space when originally constructed; and by what standards it was designed and constructed to allow people to occupy it.

The definition of 'confined space' is consistent across all regulations. "Confined Space" means a fully or partially enclosed space,

- (a) that is not both designed and constructed for continuous human occupancy, and
- (b) in which atmospheric hazards may occur because of its construction, location or contents or because of work that is done in it."

If you have a space that is fully or partially enclosed, the two conditions - (a) and (b) above - must both apply before the space can be considered a "confined space".

**Clarification** – the Registered Plant room is designed to allow for a person to walk in and walk out of with no restrictions. It has points of egress, available fire suppression, ventilation and proper lighting levels. However, if within the plant room there is an area that has a trap door, lid or other such protective device that secures entry into a crawl space or tunnel to piping, pumps or electrical allowing worker access for inspection or repair work then this area may be considered or become a Confined Space. It is crucial to conduct a risk assessment to determine if any space is a confined space according to the definition outlined above. All elements of the definition have to apply for a space to be defined as a confined space.

## **Q. Can a Registered Plant room become a Confined Space?**

**A. No.** A fire which could result in, lack of oxygen, or significant toxic gas leak may result in emergency

conditions, but it does not make the area a Confined Space under the Regulation. The conditions inside the room have changed, but the construction conditions in the room have not. The area is still constructed for continuous human occupancy so the room still does not meet the definition.

**Clarification** – The Registered Plant room is not a Confined Space in its proper working order, but the responsibility of the owner under *occupational health and safety legislation and regulations must then be applied and must be complied with regards to the protection of all workers*".

## **Q. So What Does This Really Mean?**

**A.** It means that the registered plant room under any condition (proper working order or a crisis situation) does not require a worker to complete any of the required permits and postings that is required under Confined Space Regulations. That's the good news, the bad news is that the facility must develop and maintain a Job Safety Analysis (also referred to as a Job Hazard Analysis) for any work to be conducted inside the room. Some operations may adopt a Total Job Analysis approach to properly prepare for the task at hand.

## **Defining These Health and Safety Tools**

A **job safety analysis** (JSA or JHA) is a process that helps you define specific tasks and hazards related to the work and provides a risk rating on each activity. Acceptable health and safety principles are applied to each task being considered. Its primary objective is to identify potential hazards, rate the risk and to recommend the safest way to do the job.

A **total job analysis** expands the written document beyond the health and safety aspect of the task to include all details on how the task will be completed. The methodology is based on the idea that safety is an integral part of every job and not a separate entity.

**Note:** regardless of which written tool you select to utilize, be reminded that it must only be used by a worker who has been given proper training to conduct the work.

### Creating These Tools

*Don't become caught in the trap of the belief that "we have never had a problem" and "everyone knows how to do that task safely"*

Consider a basic everyday task such as a plant room reading and then apply the following information as a self-assessment toward compliance and preparedness.

In your role as facility supervisor ask yourself, *"when was the last time you observed staff actually perform the plant reading task"*? Have you ever had a group of experienced workers and/or supervisors complete an analysis of these activities through open discussion? Consider the fact that the more individuals who are involved in this process provides a wider base of experience and therefore helps to promote staff acceptance of any resulting written work procedures.

The analysis process may also help identify previously undetected hazards and increasing the job knowledge of those participating. Safety and health awareness is raised, communication between workers and supervisors is improved, and acceptance of safe work procedures is promoted. It may further assist in forming the basis for regular contact between supervisors and workers and regular Safety Talks. It can serve as a teaching aid for initial job training. It may also be used as a standard for health and safety inspections or observations. Additionally it can assist in completing comprehensive incident and accident reports.

Six basic stages in conducting a JSA are:

- Conducting a job inventory and prioritizing jobs by risk
- Selecting the job to be analyzed
- Breaking the job down into a sequence of steps
- Identifying potential hazards
- Rating the risks
- Determining preventive measures (controls) to overcome these hazards

Factors to be considered in setting a priority for analysis of jobs include:

- Accident frequency and severity: jobs where accidents occur frequently or where they occur infrequently but result in disabling injuries.
- Potential for severe injuries or illnesses: the consequences of an accident, hazardous condition, or exposure to harmful substance are potentially severe.
- Newly established jobs: due to lack of experience in these jobs, hazards may not be evident or anticipated.
- Modified jobs: new hazards may be associated with changes in job procedures.
- Infrequently performed jobs: workers may be at greater risk when undertaking non-routine jobs and a JSA provides a means of reviewing hazards.

### Identify Potential Hazards Associated With the Task

Consider the following key questions:

- Can any body part get caught in or between objects?
- Do tools, machines, or equipment present any hazards?
- Can the worker make harmful contact with moving objects?
- Can the worker slip, trip, or fall?
- Can the worker suffer strain from lifting, pushing, or pulling?
- Is the worker exposed to extreme heat or cold?
- Is excessive noise or vibration a problem?
- Is there a danger from falling objects?
- Is lighting a problem?
- Can weather conditions affect safety?
- Is harmful radiation a possibility?
- Can contact be made with hot, toxic, or caustic substances?
- Are there dusts, fumes, mists, or vapours in the air?

### Eliminate or Control the Hazard(s)

The final stage is to determine ways to eliminate or control the hazards identified. The generally accepted measures, in order of preference, are:

1. Eliminate the hazard
2. Contain or control the hazard
3. Revise work procedures
4. Reduce the exposure

### Registered Plant Room Toxic Gas Leak Emergencies

Consider your level of preparedness for a significant primary gas leak? The CSA B-52 Refrigeration Mechanical Code requires electronic gas detection equipment for every refrigerant plant using ammonia as a refrigerant. The alarms must be both visual and audible with a setting no higher than 300ppm. Many facilities are not adequately prepared to have staff safely deal with such situations. As much as the room is not a Confined Space, such situations would most likely require the same level of protection and preparedness for entry under a high level toxic gas leak. A Confined Space Entry procedure is a positive template when designing high toxic level entry procedures.

The immediate reaction by many readers is that “we have emergency procedures in place” These are most likely the same people who have an owner’s manual in the glove box of their vehicle. What do these two documents have in common? Simply keeping a formal written emergency procedure is not enough without also providing workers with detailed training and guidance in case of any emergency situations.

- When was the last time that an actual emergency drill was conducted in your building to determine whether these procedures work in practice as well as thoroughly training staff of their roles in an emergency situation?
- Is there an actual record of such a drill?
- Do you have adequate personal protective equipment on site to deal with emergency situations?
- When was the last time they were updated and reviewed?

Any time enough ammonia is released to set off the alarm, the employee should submit an “incident” report and the employer should consider the benefit of conducting a formal investigation and root cause analysis.

This investigation should examine measures that will prevent similar situations in the future and

discussing with staff how these events might be best managed in the future. These reports might also be shared with the Joint Health and Safety Committee (JHSC).

Owners must also consider the relationship with their refrigeration contractor and how any high risk work will be conducted in their operation. In the end, remember **it is the owner’s responsibility** under the OSHA to ensure the safety of all workers while on site – this includes all sub-contracted work.

### Conclusion

A registered plant room is not normally a Confined Space under law, but some emergency conditions can elevate entry into these spaces to the same level of care and preparedness required by a Confined Space. The ORFA encourages its members to immediately assess their operation to determine the level of training and preparedness and to take immediate action to correct any shortcomings to improve worker safety.

### More Information

#### ONTARIO REGULATION 632/05 CONFINED SPACES

<http://www.e-laws.gov.on.ca>

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