

# PUASARO25

## Learner Guide Instructions

Who is this document for?

The learner.

What is in this document?

- Course information that matches the PowerPoint presentation.
- Review questions.
- Practical assessment instructions for learners.

What do you need to do before you use it for the first time?

1. Rebrand the document.
2. Review the document as part of your validation process.
3. Set the reading and test time limits that are highlighted in pink at the end of the document.

**See the 'Read Me First' document for a complete set of instructions on how to use these resources.**



# LEARNER GUIDE

# PUASAR025 Undertake Confined Space Rescue

<b>Learner Name:</b>	
<b>Learner ID:</b>	
<b>Learner Contact Number:</b>	
<b>Learner Email Address:</b>	
<b>Date Training Commenced:</b>	

## This Book Contains:

- Course Information.
- Review Questions.
- Practical Assessment overview and Instructions.

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# 1.1 Introduction

These training materials are based on the National Unit of Competency **PUASAR025 Undertake Confined Space Rescue**.

You will learn about:

- ◆ Preparing for a confined space rescue.
- ◆ Assessing and managing confined space rescue.
- ◆ Determining the location and condition of casualties.
- ◆ Gaining entry to the confined space.
- ◆ Removing casualties.
- ◆ Concluding rescue operations.



It is essential that the prerequisite units listed below are obtained prior to the issuance of this unit to individuals within the fire sector or the units contributing to the attainment of a fire qualification:

- ◆ PUAFIR306 Identify, detect and monitor hazardous materials at an incident.
- ◆ PUASAR022 Participate in a rescue operation.

# 1.2 What is a Confined Space Rescue Situation?

A situation involving confined space rescue occurs when persons in a confined space cannot remove themselves and require urgent emergency assistance to be saved or retrieved.

Selecting rescue personnel with the appropriate skills and experience is of utmost importance due to the complexity of the emergency rescue operation and the hazardous environment.





## 1.2.1 What is a Confined Space?

Persons requiring rescue from a confined space have either knowingly or unknowingly entered and become trapped in a space that meets the definition set by the Code of Practice for Confined Spaces.



A confined space is determined by the hazards associated with a set of specific circumstances and not just because work is performed in a small space.

The Code of Practice defines a confined space as an enclosed or partially enclosed space that:

- ◆ Is not designed or intended to be occupied by a person, and,
- ◆ Is, or is designed or intended to be, at normal atmospheric pressure while any person is in the space; and,
- ◆ Is, or is likely to be a risk to health and safety from:
  - ◇ An atmosphere that does not have a safe oxygen level, or,
  - ◇ Contaminants, including airborne gases, vapours and dusts, that may cause injury from fire or explosion, or,
  - ◇ Harmful concentrations of any airborne contaminants, or,
  - ◇ Engulfment.
- ◆ Is not a mine shaft or workings of a mine.

Confined spaces may be found in:

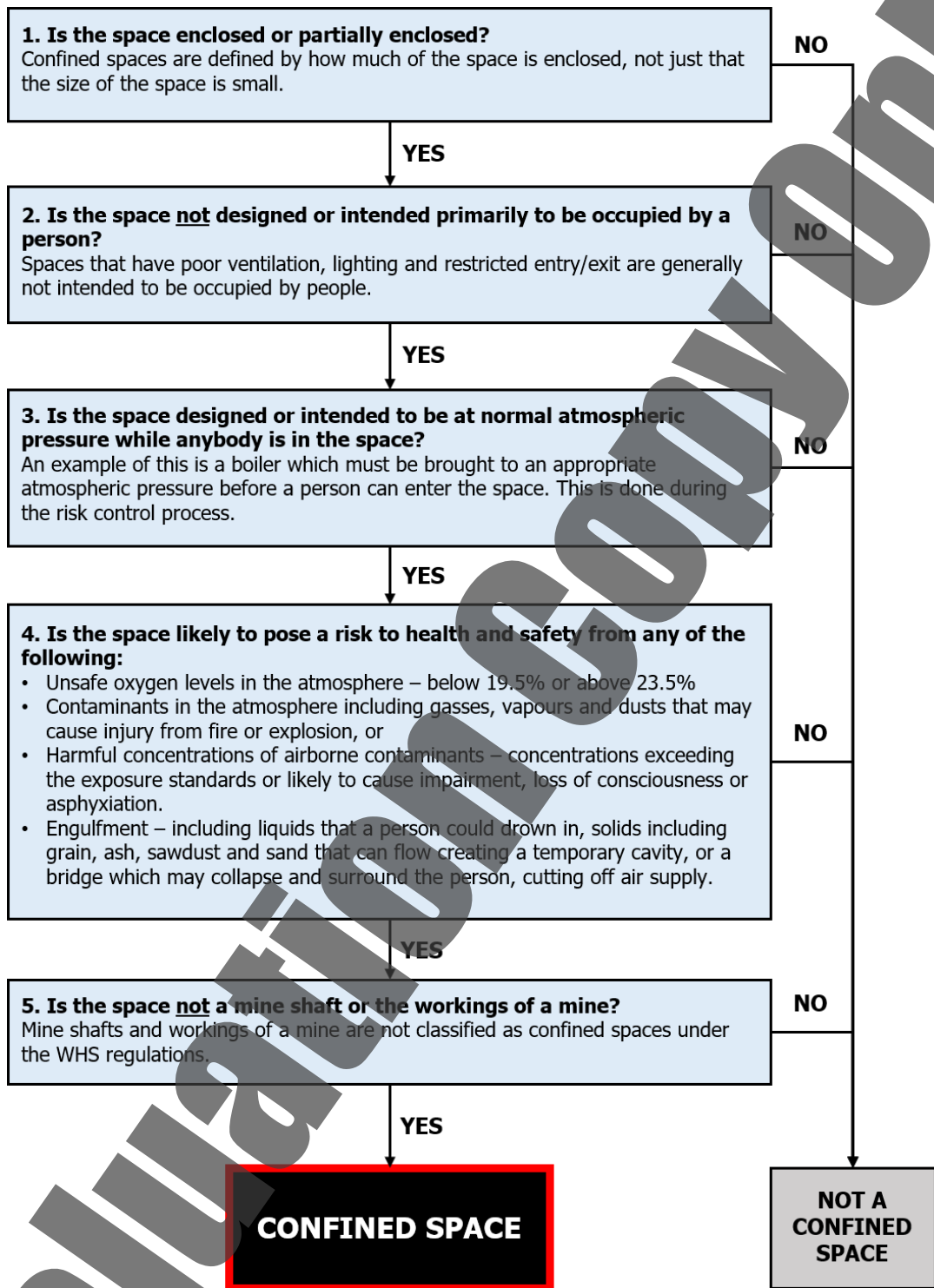
- ◆ Culverts and storm water systems.
- ◆ Pipes and live or inactive underground sewer mains.
- ◆ Shafts, ducts and access chambers.
- ◆ Pits or trenches.
- ◆ Wet or dry wells.
- ◆ Flues and chimneys.
- ◆ Environmental traps and tanks.
- ◆ Box girders and bridge voids.
- ◆ Storage tanks, process vessels, boilers, pressure vessels, silos and other tank-like compartments and containers.
- ◆ Tunnels or other similar enclosed or partially enclosed structures, when these examples meet the definition of a confined space in the WHS Regulations.

Entry into a confined space means a person's head or upper body is in the confined space or within the boundary of the confined space.



A confined space rescue situation arises when one or more persons are unable to remove themselves from the confined space and require rescuing.

You can use a chart like the one shown below to work out if the work area is a confined space.



NOTE: This chart reflects the definition of a confined space as it appears in the model code of practice and Work Health & Safety (WHS) regulations.

## 1.2.2 Rescue Information

Once you become aware that a person or persons require rescue from a confined space, preparation must immediately commence for the rescue operation.

Specific information will need to be gathered and communicated to the team whilst keeping the emergency situation a priority. This information will provide you with the essential details you need to know to perform a successful rescue. It is similar to the information you would be asked for if you were to call "Triple Zero" and speak with an emergency services telephone operator.



You will need to know the following:



- ◆ The event or circumstance which prompted the need for confined space rescue. For example, no response to external communications, engulfment, an accident or injury, or the presence of a hazardous atmosphere.
- ◆ The type of confined space.
- ◆ The incident location.
- ◆ The magnitude or severity of the event.
- ◆ The number of persons requiring rescue and their injury status.
- ◆ Any immediate hazards or ongoing risks.

Understanding this information will help you to decide the following:

- ◆ The size of the rescue team and areas of expertise required.
- ◆ The equipment they will need to use.
- ◆ The hazard controls required.
- ◆ The first aid/emergency services necessary to treat any casualties.

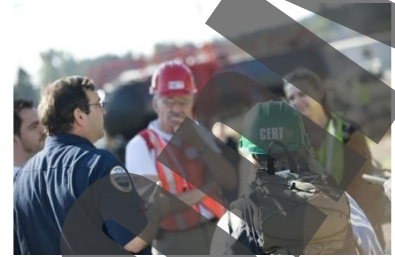




## 1.2.3 Roles and Responsibilities of Rescue Personnel

The composition of the rescue team will be dependent on several factors, including:

- ◆ The type of confined space rescue performed.
- ◆ The degree of difficulty and level of risk.
- ◆ Environmental conditions such as weather and hazards.
- ◆ Availability of rescue personnel and persons with appropriate expertise.
- ◆ The equipment that needs to be used.



The personnel involved in a confined space rescue may include a combination of in-field rescue personnel, support crews, volunteer and associated personnel.

Each job role will have responsibilities they must understand and perform as required.

An emergency team may include the following roles:

### **Command Incident Management Superintendent**

Responsible for developing plans and policies. Providing off-site leadership and liaising with other emergency organisations and stakeholder groups. Providing strategic leadership and direction.

### **Incident Controller or Team Leader**

Responsible for providing leadership and direction to the in-field emergency team.

### **Deputy Incident Controller or Deputy Team Leader**

Responsible for providing deputy leadership and direction to the in-field emergency team.

### **Emergency Team Members**

The team comprised of personnel participating in accessing the confined space, providing first aid, standby personnel and rescuing casualties.

### **Communications Officers**

Personnel located at the command base, communication centre or other remote location and are responsible for relaying information between the command base and rescue teams.

### **Specialist Medical**

Responsible for providing specialist emergency medical care such as ambulance crews and care flight medical crews.

### **Logistics Coordinators**

Responsible for the organisation and dispatch of people, equipment and transport.

### **Standby Person**

Responsible for monitoring conditions from outside the space and communicating with the team.

## 1.2.4 Training for Rescue Personnel

All persons who form part of the rescue team and associated operations must have completed specific training.

Training may cover the following:

- ◆ Enter and work in confined spaces.
- ◆ Heights rescue.
- ◆ Atmospheric monitoring.
- ◆ Use of supplied air respirators.
- ◆ Entry control procedures.
- ◆ First Aid and CPR.
- ◆ Fire fighting.
- ◆ Use of PPE and specialist equipment.



This type of rescue requires personnel to be competent in using specialist equipment in high risk environments. It may require one or more certificates of competency to be regularly renewed at a set frequency. Training for this type of specific hazardous rescue generally includes participation in practical activities to simulate an emergency rescue situation.



Training in providing first aid, resuscitation (CPR), and defibrillators is a common requirement for confined space rescue personnel.

Companies will have policies and procedures in which staff must be trained before performing confined space rescue activities. For example, this may include standards for signalling, radio communication, record keeping and dealing with the public.

The organisation's training matrix, personal development plans, position descriptions and work procedures include details of any training requirements rescue personnel must meet.

## 1.2.5 Task Briefings

Your company will communicate rescue operation and task information through their communication channels.

These channels will vary depending on the nature of your company.

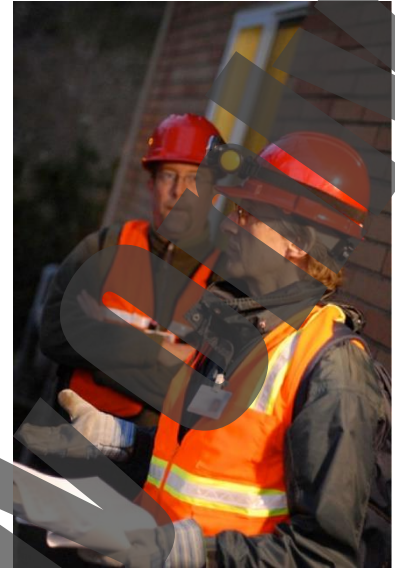
Many companies will use a task briefing to communicate rescue information to stakeholders.

A task and rescue operation briefing is essential to prepare personnel for the rescue, especially when there are multiple teams and a complex rescue operation. It ensures that all personnel involved understand the objective of the operation, key details, roles and responsibilities, reporting and other process requirements.



When preparing to conduct a briefing, ensure you have considered the following essential items:

1. Ensure the relevant personnel have been notified and are present.
2. Select a meeting time to suit the urgency of the communication, other activities occurring and the type of confined space rescue.
3. Select a suitable location (e.g. protected, private), and appropriate communication systems are in place.
4. Minimise distractions.
5. Prepare supporting materials to provide visual displays or as handout materials eg. Maps, schematics, lists and photographs.



Volunteer associations may use pagers and telephone calls to assemble rescue team members. In contrast, an organisation with full-time staff members may use internal radio communications to notify of an incident and communicate task information.

You will need to determine how your organisation provides rescue task information to team members per your rescue and emergency procedures.

## Review Questions

<b>1.</b>	What determines whether a space is defined as a confined space?	<input type="checkbox"/>
<b>2.</b>	How soon must you start to prepare for the rescue operation, once you become aware that persons require rescue from a confined space?	<input type="checkbox"/>

**3.**

What three (3) factors may influence the composition of the rescue team?



1.

2.

3.

**4.**

Which rescue team members must have completed specific training?



**5.**

Why is a task and rescue operation briefing essential?



## 1.3 Work Safely

Confined space rescue operations are activities that present hazards to all persons entering the confined space including those requiring rescue and the rescue team.

Legislation provides the framework for ensuring safety is maintained throughout the rescue operation.



### 1.3.1 Health and Safety Rules

Legislation passed by Parliament sets out health and safety rules that must be followed in the performance of all types of work, including rescue operations.

Work health and safety legislation is comprised of and supported by the following:

<b>Laws</b>	Laws (or Acts) are broad rules made by governments and courts which apply to everyone. There are consequences for not following the law because they help to keep everyone safe.
<b>Regulations</b>	Regulations support laws by providing more detailed information on the duties different people must follow to comply with the law.
<b>Standards</b>	Standards detail technical specifications or procedures to establish minimum requirements for how work is to be completed.
<b>Codes of Practice</b>	Codes of practice guide individuals on how to meet their 'duty of care' responsibilities.

Not all of these documents are legally binding but may be referred to in court proceedings as examples of best practice.



## 1.3.2 Organisational Policies and Procedures

Before commencing a rescue operation, you must identify, access, and understand the company policies and procedures.

Organisational requirements could relate to the following:



- ◆ Operational, corporate and strategic plans.
- ◆ Operational policies, procedures and performance standards.
- ◆ Organisational personnel/workers and Work Health & Safety (WHS) practices and guidelines.
- ◆ Legislative and regulatory requirements, including codes of practice and Australian standards.
- ◆ Organisational quality standards.
- ◆ Organisational environmental management and sustainability policies and approaches.

Organisational policies and procedures relating to confined space emergency management and rescue may include:

- ◆ Roles and responsibilities – Defining emergency roles such as emergency coordinator, members of the emergency team, standby persons and communications controllers.
- ◆ Atmospheric monitoring – How and when to conduct atmospheric monitoring.
- ◆ Entry control – How to control entry to and exit from the confined space.
- ◆ Entry permits – How to complete confined space entry permits.
- ◆ Equipment procedures - Equipment maintenance and inspections and how to use and store equipment.



Before implementation, the company should consult with everyone impacted by the policy or procedure. All relevant personnel must understand how the process will apply to them, including their responsibilities and duties.

The company should regularly review policies and procedures to ensure they remain relevant and comply with the latest legislative requirements.



### 1.3.3 Environmental Protection Requirements

When conducting rescues in a confined space it is necessary to consider the impact to the environment.

Some environmental requirements are:

- ◆ Organisational or project environmental management plans.
- ◆ Waste management.
- ◆ Water quality protection.
- ◆ Noise, vibration, dust and clean-up management.

Rescue procedures should be developed with the aim to minimise impact on the environment through use of appropriate equipment and substances, management of spills and reduction of noise, dust and vibration.

Contact the Environment Protection Authority (EPA) for more information on how to work safely without impacting on the environment.

Before any work is carried out, make sure environmental protection requirements are in place according to site procedures.



### 1.3.4 Receive Further Details En Route

Additional details and instructions are typically communicated from the emergency response teams already on site as you travel to the incident scene.

Type of Information:	Description:
<b>Casualty Details</b>	Often you will be dispatched knowing you have entrapped people. Still, additional details of how many and the condition of the casualties may be received while en route.
<b>Access and Egress Issues</b>	This could include information about the entry size, obstructions and whether the extraction involves vertical lifts or other methods.
<b>Weather Conditions on Site</b>	Consider the need for protective measures such as setting up tarps to protect casualties from sun exposure, rain, or harsh winds.
<b>Other Agencies in Attendance</b>	Details of other emergency personnel or services that may be in attendance.
<b>Confined Space Hazards</b>	Information about the types and severity of potential hazards in and around the confined space.
<b>More Information on the Nature of the Incident</b>	Any updated information regarding the incident.

The team communications officer or team captain should receive these details and updates and share them with the rest of the team.

If you are the vehicle's designated driver, you should concentrate on driving and responding appropriately to the road conditions. You must always drive to the conditions and follow your company's standard operating procedures.

Updating the rescue team with any changes to the rescue site or operation will improve the chances of a safe and successful rescue operation.



## Review Questions

6.

What do work health and safety 'Standards' detail?

7.

What do policies and procedures relating to entry control cover?

8.

Who should you contact for information on how to work safely without impacting the environment?

9.

What information might you receive about access and egress while en route to the rescue?