

Council Name

Confined Spaces Management Plan

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Contents

	Page No.
1. Introduction	3
2. Interpretation	3
3. Objectives of Confined Spaces Management Plan	4
4. Regulatory Requirements	4
5. Who has health and safety duties in relation to a confined spaces	5
6. How to determine whether a space is a confined space	5
7. What is required in managing risks	7
8. Risk Assessment	8
9. Confined space Risk Assessment Form	11
10. Organisational Responsibilities	12
11. Permit System	13
12. Confined Space Entry Procedure	15
13. Signposting and barricades	15
14. Training	16
15. Emergency Response	17
16. How to Review Control Measures	19
Appendix 1 – Flow Chart of procedures to work in Confined Space	21
Appendix 2 – Example of a Confined Spaces Safe Work Procedure	22
Appendix 3 – Sample Confined Space Entry Permit	26
Appendix 4 – Sample Rescue Procedures	30

1. Introduction

Confined spaces have for a long time been a workplace hazard which claims several lives each year in Australia, mainly because of a lack of understanding and education of the dangers. Council recognises its obligations in relation to the management of risk associated with the exposure of workers, contractors and visitors to hazards created by workplaces or workplace activities under its control. In accordance with the Work Health & Safety Act (WHS Act), Council aims to proactively meet its work health and safety obligations through the development of 'Confined Space Management Plan'. This plan will ensure that a risk management approach has been applied to all situations likely to be considered a risk from confined spaces.

Confined spaces pose dangers because they are usually not designed to be areas where people work. Confined spaces often have poor ventilation which allows hazardous atmospheres to quickly develop, especially if the space is small. The hazards are not always obvious and may change from one entry into the confined space to the next.

The Code of Practice CP103 – Confined Space suggests risks of working in confined spaces include:

- loss of consciousness, impairment, injury or death due to the immediate effects of airborne contaminants
- fire or explosion from the ignition of flammable contaminants
- difficulty rescuing and treating an injured or unconscious person
- asphyxiation resulting from oxygen deficiency or immersion in a free-flowing material, such as liquids, grain, sand, fertiliser or water.

2. Interpretation

A Confined space according to AS 2865-2009, is defined as an enclosed or partially enclosed space that is not intended or designed primary for human occupancy, within which there is a risk of one or more of the following:

- (a) an oxygen concentration outside the safe oxygen range;
- (b) a concentration of airborne contaminant that may cause impairment, loss of consciousness or asphyxiation;
- (c) a concentration of flammable airborne contaminant that may cause injury from fire or explosion.
- (d) engulfment in a stored free-flowing solid or a rising level of liquid that may cause suffocation or drowning.

Confined spaces may include but are not limited to enclosed or partially enclosed spaces that may meet definition criteria for a confined space are:

- storage tanks, tank cars, process vessels, boilers, pressure vessels, silos and other tank like compartments;
- pipes, sewers, shafts, degreaser, and sullage pits, ducts and similar structures; and
- any shipboard spaces entered through a small hatchway or entry point, cargo tanks, cellular double bottom tanks, duct keels, ballast and oil tanks and void spaces.

The Code of Practice CP103 – Confined Space suggests 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 Work Health and Safety Regulation's state in the '*Interpretation*':

Regulation 5: A confined space means an enclosed or partially enclosed space that:

- is not designed or intended primarily 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.

Confined spaces are commonly found in vats, tanks, pits, pipes, ducts, flues, chimneys, silos, containers, pressure vessels, underground sewers, wet or dry wells, shafts, trenches, tunnels or other similar enclosed or partially enclosed structures, when these examples meet the definition of a confined space in the WHS Regulations.

3. Objectives of the Confined Spaces Management Plan

The hazards encountered and associated with entering and working in confined spaces are capable of causing bodily injury, illness and death to the worker. Accidents occur among workers because of failure to recognise that a confined space is a potential hazard. Therefore, the aim of the confined spaces management plan is to highlight all confined spaces and remove or minimise the risks associated with work in these areas.

The confined spaces management plan will give a procedure for working in confined spaces that will minimise the risk to workers. This procedure will include:

- methods for reporting confined spaces hazards and risks;
- the initial risk assessment;
- the magnitude of the risk, ie the category of confined space;
- the confined space entry permit;
- responsibilities of all staff associated with confined spaces; and
- emergency and evacuation procedures

4. Regulatory Requirements

The control of confined spaces health risks in the Tasmanian workplace is enshrined in several pieces of legislation. Any confined space entry and procedures associated with Council owned or leased property, shall be performed in accordance with all relevant State and Commonwealth Acts, Regulations, Advisory Standards, Codes of Practice and industry Standards, including, but not limited to the following:

- Work Health and Safety Act (2012);
- Work Health and Safety Regulations (2012) – Part 4.3 Confined Spaces;
- Code of Practice CP103 – Confined Space;
- Australian Standard AS 2865-2009 – Confined spaces.

5. Who has health and safety duties in relation to a confined spaces

The Code of Practice CP103 – Confined Space suggests the following positions have health and safety duties in relation to confined spaces:

A **person conducting a business or undertaking** has the primary duty under the WHS Act to ensure, so far as is reasonably practicable, that workers and other persons are not exposed to health and safety risks arising from the business or undertaking.

The WHS Regulations include specific obligations on a person conducting a business or undertaking who has management or control of a confined space.

Designers, manufacturers and suppliers of plant or structures that include a space that is intended, or is likely to become, a confined space must eliminate the need for any person to enter a confined space and eliminate the risk of inadvertent entry or, if this is not reasonably practicable, ensure safe means of entry and exit and minimise risks to the health and safety of any person who enters the confined space.

Officers, such as company directors, have a duty to exercise due diligence to ensure that the business or undertaking complies with the WHS Act and Regulations. This includes taking reasonable steps to ensure that the business or undertaking has and uses appropriate resources and processes to eliminate or minimise risks that arise from entry into confined spaces.

Workers must take reasonable care for their own health and safety and that their work does not adversely affect the health and safety of other persons. Workers must comply with any reasonable instructions given relating to confined space entry permits, risk control measures and emergency procedures, and should carry out work in a confined space in accordance with any relevant information and training provided to them.

Emergency service workers are not required to comply with some requirements for entering confined spaces when either rescuing a person or providing first aid to a person in the space (WHS Regulations 67 and 68).

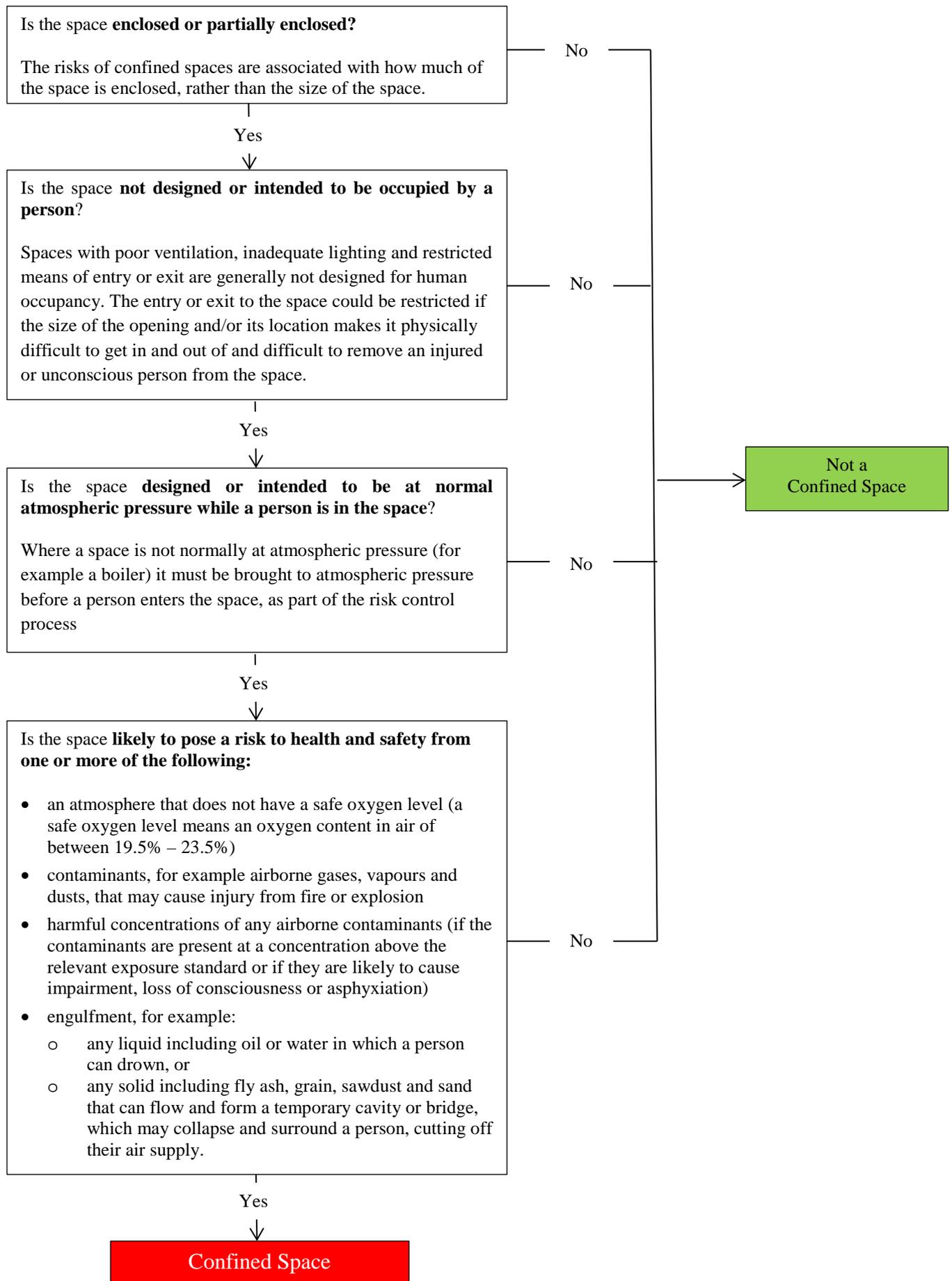
6. How to determine whether a space is a confined space

A confined space is determined by the structure and a specific set of circumstances. The same structure may or may not be a confined space depending on the circumstances when the space is entered. Entry to a confined space is considered to have occurred when a person's head or upper body enters the space.

A space may become a confined space if work that is to be carried out in the space would generate harmful concentrations of airborne contaminants.

Temporary control measures such as providing temporary ventilation or achieving a satisfactory pre-entry gas test will not cause a confined space to be declassified. For a confined space to be declassified as a non-confined space, it needs to have undergone sufficient changes in structure and use to eliminate all inherent hazards that define a confined space.

The Code of Practice CP103 – Confined Space suggests the following flowchart will help to determine whether a space is a ‘confined space’ for purposes of the WHS Regulations.



7. What is required in managing risks?

Duties in relation to confined spaces include:

- managing health and safety risks associated with a confined space, including risks when entering, working in, on or near a confined space, as well as the risk of inadvertent entry;
- ensuring, so far as is reasonably practicable, that a worker does not enter a confined space until all the duties in relation to the confined space have been complied with, for example entry permit requirements; and
- establishing first aid and rescue procedures to be followed in the event of an emergency in the confined space.

The WHS Regulations also set out requirements for specific controls measures including communication and safety monitoring, signs, isolation of connected plant and services, and controls to maintain a safe atmosphere within the confined space.

Regulation 34-38: In order to manage risk under the WHS Regulations, a duty holder must:

- identify reasonably foreseeable hazards that could give rise to the risk
- eliminate the risk so far as is reasonably practicable
- if it is not reasonably practicable to eliminate the risk – minimise the risk so far as is reasonably practicable by implementing control measures in accordance with the hierarchy of control
- maintain the implemented control measure so that it remains effective
- review, and if necessary revise, risk control measures so as to maintain, so far as is reasonably practicable, a work environment that is without risks to health and safety.

The Code of Practice CP103 – Confined Space includes guidance on how to manage the risks associated with a confined space by following a systematic process that involves:

- identifying hazards associated with confined spaces;
- assessing the risks associated with these hazards;
- implementing risk control measures; and
- reviewing risk control measures.

Guidance on the general risk management process is available in the Code of Practice CP 112 - How to Manage Work Health and Safety Risks.

Consulting your workers

Section 47: The WHS Act requires that you consult, so far as is reasonably practicable, with workers who carry out work for you who are (or are likely to be) directly affected by a work health and safety matter.

Section 48: If the workers are represented by a health and safety representative, the consultation must involve that representative.

Consultation with workers and their health and safety representatives is a critical part of managing work health and safety risks.

You must consult your workers who are involved in carrying out work in or near a confined space during the process of identifying hazards, assessing risks and implementing control measures.

It is often more effective to involve a team of people in the risk management process to draw on a range of knowledge and experience, for example knowledge of:

- the particular confined space under assessment;
- any work methods that will be used in or near the confined space; and
- confined space hazards and control measures.

Consulting, co-operating and co-ordinating activities with other duty holders

Section 46: If more than one person has a duty in relation to the same matter, each person with the duty must, so far as is reasonably practicable, consult, co-operate and co-ordinate activities with all other persons who have a work health or safety duty in relation to the same matter.

Sometimes more than one person conducting a business or undertaking will have the same duty in relation to a confined space. For example, a person who owns the plant or structure that contains the confined space will have management or control of the confined space. A contractor engaged to carry out work in the same space will also have management or control of the confined space at the time that work is being carried out. In these situations, effective communication, co-operation and co-ordination of activities between duty holders is essential to ensure that risks associated with the confined space are eliminated or minimised as far as is reasonably practicable.

Further guidance is available in the Code of Practice CP 135 - Work Health and Safety Consultation, Co-operation and Co-ordination.

8. Risk Assessment

AS 2865-2009 – Confined spaces states that a risk assessment shall be conducted by a competent person or persons before conducting any tasks associated with the confined space. The assessment shall be documented and take into account at least the following:

- The hazards of the confined space;
- The tasks required to be conducted, including the need to enter the confined space;
- The range of methods by which the tasks can be conducted;
- The hazards involved and associated risks involved with the actual method selected and equipment proposed to be used;
- Emergency response procedures;
- The competence of the persons to conduct the tasks.

Risk factors

Factors to consider when undertaking a risk assessment of a confined space include the following:

- Atmospheric assessment, including testing or monitoring to be undertaken and the parameters to be assessed before a written authority is issued;
- Engulfment of a person in any flowing solids in the confined space or engulfment for a rising level of liquid in the confined space;
- All proposed operations and tasks, particularly those that may cause a change to the conditions in the confined space;
- The number of persons occupying the space;

- The soundness and security of the overall structure and the need for illumination and visibility;
- The identity and nature of the substances last contained in the confined space;
- Any risk control measures needed to bring the confined space to atmospheric pressure;
- The number of persons required outside the space –
 - a) to maintain equipment essential for the task being undertaken within the confined space;
 - b) to provide adequate communication with and observation of the persons within the confined space; and
 - c) to properly initiate emergency response procedures.
- Risks associated with other hazards;
- Arrangements for emergency response, e.g. first aid and resuscitation;
- The physiological and psychological demands of the task and the competency of those persons involved in the tasks or emergency response duties;
- Adequate instruction of those persons in any required procedure, particularly those which are unusual or non-typical, including the use and limitations of any personal protective equipment and mechanical or other equipment to be used;
- The availability and adequacy of appropriate personal protective equipment, protective clothing and emergency equipment for all persons likely to enter the confined space;
- The need for additional risk control measures, including-
 - a) prohibition of hot work in adjacent areas;
 - b) prohibition of smoking and naked flames within the confined space and, where appropriate, the adjacent areas;
 - c) avoidance of contamination of breathing air from operations or sources outside the confined space, e.g. from the exhaust of an internal combustion engine;
 - d) prohibition of movement of equipment such as forklifts in adjacent areas; and
 - e) prohibition of spark generating equipment, clothing and footwear.
- Whether purging or cleaning in the confined space is necessary;
- Whether hot work is necessary;
- Conditions that could impede entry and exit or the conduct of the tasks in the confined space, e.g. plant layout, dimensions, manual handling and ergonomic aspects of the task activity.

Risk assessment process

A risk assessment process should be determined and implemented; Risk assessment should be conducted by a competent person or persons.

It is often found that a team will produce a better outcome than individual efforts. Such a team should possess a wide ranging knowledge, which should include:

- Knowledge of the particular confined space under assessment;
- Any work methods that will be used during the operations to be conducted in or on the confined space;
- Confined space safety practices; and

- Risk assessment processes.

Note: Guidance on risk assessment may be found in AS 3931 and AS 4360.

Generic risk assessment

If Council has multiple similar confined spaces in which similar tasks are conducted, are present and the risk factors are identical, a generic risk assessment may be appropriate.

For these confined spaces, a single hazard identification and risk assessment can be carried on a single or representative sample of the similar confined spaces. These generic risk assessments save time and avoid unnecessary duplication of the identification and risk assessment process. Where there are any differences in the circumstances, such as the environment of the confined space or the tasks performed in it, which could result in a different risk this generic procedure may not be appropriate.

Review of risk assessment

The risk assessment shall be reviewed and revised whenever there is evidence to indicate that there is a change in the risk.

Change in risk

Factors that may change the risks in a confined space include, but are not limited to:

- Installation or modification of plant;
- A change in equipment operating conditions;
- A change in the atmosphere or occupational environment;
- A change in working arrangements or procedures; or
- Incidents that affect, or could affect the safety of persons.

9. Confined Space Risk Assessment Form

Confined Space Risk Assessment Form

Confined Space Location:

Nature of space (size, type of space e.g. tunnel, trench)

Method of entry into and exit from confined space:

The task to be undertaken:

Selected task method	Any change that might occur during task	Hazards (specify)	Control measures
		Atmospheric:	
		Flammable concentrations:	
		Unsafe oxygen:	
		Plant process hazards:	
		Environmental hazards:	

Procedures for emergency and rescue:

Authorised by: _____

Date: _____

10. Organisational Responsibilities

Works Manager:

To approve and register Authorised Persons under this standard.

The Authorised Person:

- To ensure all hazards associated with the proposed work in the confined space have been identified, assessed and controlled.
- To be familiar with the intended task(s) involved.
- To outline how the work is to be undertaken (e.g. procedures, precautions, equipment, location, start time, duration) – verbally, and where necessary, in writing.
- To ensure that any necessary tags and signs are prominently displayed so that personnel are aware if equipment or plant is isolated/not to be operated.
- To ensure that Entry Permits are cross-referenced with any other relevant permits (e.g. Hot Work Permit).

Supervisors:

- To understand the work for which an Entry Permit has been sought and understand isolation and tagging procedures.
- To ensure that no work commences before an Entry Permit is granted.
- To ensure that the person(s) doing the work in a confined space are Competent Persons as defined in this standard.
- To ensure that all necessary PPE is available, fit for purpose and is used for that purpose and as needed and appropriate.
- To ensure that relevant people are informed of changes of shift, job suspension and/or job completion to ensure that the Entry Permit is cancelled or transferred as appropriate.

The Competent Person (undertaking the work):

- To satisfy themselves that they understand the requirements of the Entry Permit.
- To be skilled, qualified, trained and competent to perform the work, including the use of any PPE or rescue equipment.
- To adhere to the Entry Permit requirements.
- To ensure that the work is performed in a safe manner.
- To be aware of the hazards that could exist and have the necessary controls in place.
- To use all necessary PPE for the purpose for which it is provided as needed and appropriate.
- To make the work area safe and seek immediate advice if in doubt or if circumstances or conditions change.
- To make equipment and area safe on completion of the task.

The Stand-by Person:

Stand-by Persons are required to maintain constant attention on the person working in the confined space and to act effectively in perceived emergencies.

Standby Persons will:

1. Assist in assembling, checking and preparing the work and any safety gear, PPE and equipment to be used.
2. Agree upon and confirm the communication system or method before the worker enters the confined space.
3. Monitor the employee's entry into the confined space to ensure that it occurs safely, and that any lines and hoses do not foul or tangle.
4. Ensure that equipment that is being used to support the worker operates effectively.
5. Check that airlines are supplying a flow of clean air to the wearer at all times.
6. Remain at his/her position while the person is in the confined space, unless a substitute stand-by person is in position.
7. Maintain continuous visual and/or other communication (as previously confirmed) with the employee in the confined space.
8. Assist the employee to exit and vacate the confined space when requested to do so.
9. Bring the employee out of the confined space immediately in the event of perceived danger, raise an alarm and take further appropriate emergency actions.

Contractors:

Contractors have a responsibility to provide their own Confined Space Management Plan which is in accordance with the principles outlined within Council's Confined Space Management Plan. Contractors are responsible for their own health and safety, and should not endanger the health and safety of others eg. visitors, Council staff. They should complete the entry permit prior to entering a confined space and submit to a qualified person for approval.

11. Permit System

Council will ensure that an effective permit to work system is in place and applies to any task undertaken in confined spaces in any Council workplace.

A confined space entry permit provides a formal check to ensure all elements of a safe system of work are in place before people are allowed to enter the confined space. It also provides a means of communication between site management, supervisors and those carrying out the work and ensures that the person conducting the business or undertaking has checked and authorised the entry to the confined space and it is safe to proceed.

Regulation 67: A person conducting a business or undertaking must not allow or direct a worker to enter a confined space to carry out work unless the person has issued a confined space entry permit for the work.

The permit must be completed in writing by a competent person and:

- specify the confined space to which the permit relates
- record the names of persons permitted to enter the confined space and the period of time that the work will be carried out
- set out risk control measures based on the risk assessment, and
- contain space for an acknowledgement that work in the confined space has been completed and all persons have left the space.

Regulation 77: The permit must be kept until the work is completed, or if a notifiable incident occurs, for at least 2 years after the confined space work to which the permit relates is completed.

A competent person is one who has acquired through training, qualification or experience, the knowledge and skills to carry out this task.

A confined space entry permit must be issued for each entry into the confined space. Each permit only applies to one confined space and allows one or more workers to enter that space. A competent person who directs and supervises the work should be nominated and authorised to issue the permit on behalf of the business or undertaking.

A confined space entry permit is also required when a person enters a confined space to conduct the initial hazard identification or risk assessment. The permit may need to be revised after the risk assessment is completed. The confined space entry permit must list the following:

Requirement	
Confined space to which the permit applies	<ul style="list-style-type: none"> • The permit form should be designed and completed in such a way as to enable clear identification and recording of the space that each permit applies to. • A single permit can be used for multiple entries into a space and can be used where there is more than one access point into a single space.
Name of any worker permitted to enter the space	
Period of time that the permit is in operation	<ul style="list-style-type: none"> • A permit may be required for varying periods of time depending on the time required to complete the work being carried out in a confined space. • The permit should be re-validated if the person with direct control of work in the space changes, a break in work continuity occurs, changes are made to the work that introduce hazards not addressed by the current permit, or new controls measures are needed.
Measures to control the risk	<ul style="list-style-type: none"> • List the control measures that must be implemented before work commences, for example the isolation of plant and services, purging, ventilation, atmospheric testing, cleaning and signage. • List the control measures that must be implemented or continued while work is being done in the space, e.g. ventilation, continuous monitoring, respiratory protective equipment and personal protective equipment. • List any equipment to be taken into the confined space, including any exclusions such as ignition sources.

The entry permit must be used as a written record that all workers have exited the confined space on completion of the work. It should be displayed in a prominent place to facilitate signing and clearance. Each worker must be able to understand the entry permit.

The information on the entry permit may be used as a suitable record of the risk assessment that has been carried out. An example of an entry permit is provided at *Appendix 3*.

12. Confined Space Entry Procedure

Council will specify a safe work procedure to be followed for any entry to and task carried out within a confined space. Amongst other things, the procedure shall ensure that entry to confined spaces only occurs when the following criteria have been satisfied:

- A Risk Assessment form has been completed by a Competent Person; and
- An Entry Permit has been completed and issued by an Authorised Person; and
- Those personnel who enter a confined space have the appropriate training in confined space operations and meet the definition of Competent Person in this standard.

Council will also ensure that training for Authorised Persons and supervisors in respect of confined space entry will be arranged and conducted as and when required.

The procedure to be followed for work in a confined space is that set out in the attached flow chart headed Procedure for Work in a Confined Space (Appendix 1) and Example of a confined spaces entry procedure (Appendix 2).

13. Signposting and Barricades

Before any work in relation to a confined space starts, signs must be erected to prevent entry of persons not involved in the work.

Signs must warn against entry by people other than those who are listed on the confined space entry permit, and must be placed at each entrance to the confined space. Signs must be in place while the confined space is accessible, including when preparing to work in the space, during work in the space and when packing up on completion of the work.

AS 2865-2009 – Confined spaces states that confined spaces should at all times be secured against unauthorised entry and, where practicable, permanently signposted as per the figure below. Signs should comply with AS 1319.



Signposting alone should not be relied on to prevent unauthorised entry to a potential confined space. Security devices, for example locks and fixed barriers, should be installed in accordance with AS 2865-2009.

14. Training

The aim of training in confined spaces is to remove or minimise risks in the workplace associated with confined spaces.

The Code of Practice CP103 – Confined Space suggests that workers and their supervisors must have the skills and knowledge to understand the hazards associated with working in the confined space, the contents of any confined space entry permit, and the control measures implemented for their protection.

Training should be provided to workers who:

- enter or work in confined spaces
- undertake hazard identification or risk assessment in relation to a confined space
- implement risk control measures
- issue entry permits
- act as a standby person or communicate with workers in a confined space
- monitor conditions while work is being carried out
- purchase equipment for confined space work
- design or lay out a work area that includes a confined space.

Regulation 76: The training provided to relevant workers must cover:

- the nature of all hazards associated with a confined space
- the need for, and appropriate use of, risk control measures
- the selection, use, fit, testing and storage of any personal protective equipment
- the contents of any relevant confined space entry permit
- emergency procedures.

Re-training or refresher training should be provided as appropriate for a particular workplace. The frequency of this training should depend on how often workers are required to carry out tasks associated with entry to or work in confined spaces.

Records of all training provided to workers in relation to confined space work must be kept for 2 years.

15. Emergency Response

Regulation 74: A person conducting a business or undertaking must establish first aid and rescue procedures to be followed in an emergency and ensure those procedures are practised as necessary to ensure that they are efficient and effective. First aid and rescue procedures must be initiated from outside the confined space as soon as practicable in an emergency.

The person conducting a business or undertaking must also ensure that openings for entry and exit are of a sufficient size to allow emergency access; openings are not obstructed; and any plant, equipment and personal protective equipment provided for first aid or emergency rescue are maintained in good working order.

AS 2865-2009 – Confined spaces states that appropriate emergency response and first aid procedures and provisions shall be identified, planned, established and rehearsed.

Emergency situations may arise during work in confined spaces. Emergency planning for confined spaces provides a safety net in the event control measures fail. All employees who may be involved with rescues from a confined space should be made aware that rescue procedures are to be followed at all times. This will include procedures where:

- employees are uninjured and evacuate themselves;
- employees are injured but still capable of self-evacuation;
- entry is required to provide treatment;
- employees are assisted to evacuate by persons remaining outside the confined space;
- emergency entry is required in order to evacuate employees.

The Code of Practice CP103 – Confined Space suggests that when establishing emergency procedures, the following factors must be taken into account to manage risks associated with confined spaces:

- whether the work can be carried out without the need to enter the confined space
- the nature of the confined space
- any changes in hazards associated with the concentration of oxygen or the concentration of airborne contaminants in the confined space
- the work to be carried out in the confined space, the range of methods by which the work can be carried out and the proposed method of working
- the type of emergency and rescue procedures required.

Consideration should also be given to the following:

Relevant considerations	Questions
Location of the confined space	What is the geographic location of the space, how accessible is it in an emergency and how far away is it from appropriate medical facilities?
Communications	<p>How can workers working inside the space communicate to people outside in an emergency?</p> <p>Exactly how will the alarm be raised and by whom? Planning needs to ensure that rescue and emergency personnel can access the workplace during night shift, weekends and holiday periods.</p>
Rescue and resuscitation equipment	<p>What kinds of emergencies are contemplated?</p> <p>The provision of suitable rescue and resuscitation equipment will depend on the potential emergencies identified. Selected rescue equipment should be kept in close proximity to the confined space so that it can be used immediately.</p>
Capabilities of rescuers	<p>Are rescuers properly trained, sufficiently fit to carry out their task and capable of using any equipment provided for rescue (e.g. breathing apparatus, lifelines and fire-fighting equipment)?</p> <p>How will rescuers be protected during the emergency operation?</p>
First aid	<p>Is appropriate first aid available for immediate use?</p> <p>Are trained first aid personnel available to make proper use of any necessary first aid equipment?</p>
Local emergency services—if they are to be relied on for rescue	<p>How will the local emergency services (e.g. fire brigade) be notified of an incident?</p> <p>What information about the particular dangers in the confined space will be given to them on their arrival?</p> <p>Have prior arrangements been made with local emergency services to ensure they are able to respond in a reasonable time and have the specialist confined space retrieval equipment readily available?</p>

First aid and rescue procedures must be rehearsed with relevant workers to ensure that they are efficient and effective.

Rescue should be performed from outside the confined space, if possible. Workers performing rescue must be adequately trained. Rescuers must be provided with and wear appropriate respiratory protective equipment if they enter a confined space in an emergency.

If a person inside a confined space has been overcome by lack of oxygen or airborne contaminants, it should always be assumed that entry for rescue is unsafe unless air-supplied respiratory protective equipment is used.

Potential problems with the size of entrances and exits must be addressed when developing emergency and rescue procedures. Where openings are found to be inadequate, their size should be increased, or an alternative safe means of entry and exit should be provided.

Confined space emergency response

Those persons involved in an emergency response shall be made aware of the conditions and the number of persons in the confined space prior to any entry.

Confined space emergency procedures

In a confined space emergency, the spontaneous reaction to immediately enter and attempt to rescue a person from a confined space could lead to the death or serious injury of those attempting the rescue. All persons who might be involved in any way with emergency response associated with a confined space should be made aware that emergency response procedures are to be followed at all times.

16. How to Review Control Measures

The Code of Practice CP103 – Confined Space suggests that control measures that have been implemented must be reviewed, and if necessary, revised to make sure they work as planned and to maintain, so far as is reasonably practicable, a work environment that is without risks to health and safety.

Regulation 38: A person conducting a business or undertaking must review and as necessary revise risk control measures:

- when the control measure does not minimise the risk so far as is reasonably practicable
- before a change at the workplace that is likely to give rise to a new or different health and safety risk that the control measure may not effectively control
- if a new hazard or risk is identified
- if the results of consultation indicate that a review is necessary
- if a health and safety representative requests a review.

Control measures may be reviewed using the same methods as the initial risk assessment process.

In undertaking the review, there is a need to consult workers involved in the confined space work and their health and safety representatives and consider the following questions:

- Are the control measures working effectively in both their design and operation?
- How effective is the risk assessment process? Are all hazards being identified?
- Are workers actively involved in the risk management process? Are they openly raising health and safety concerns and reporting problems promptly?
- Have new work methods or new equipment made the job safer?
- Are safety procedures being followed?
- Has instruction and training provided to workers been successful?

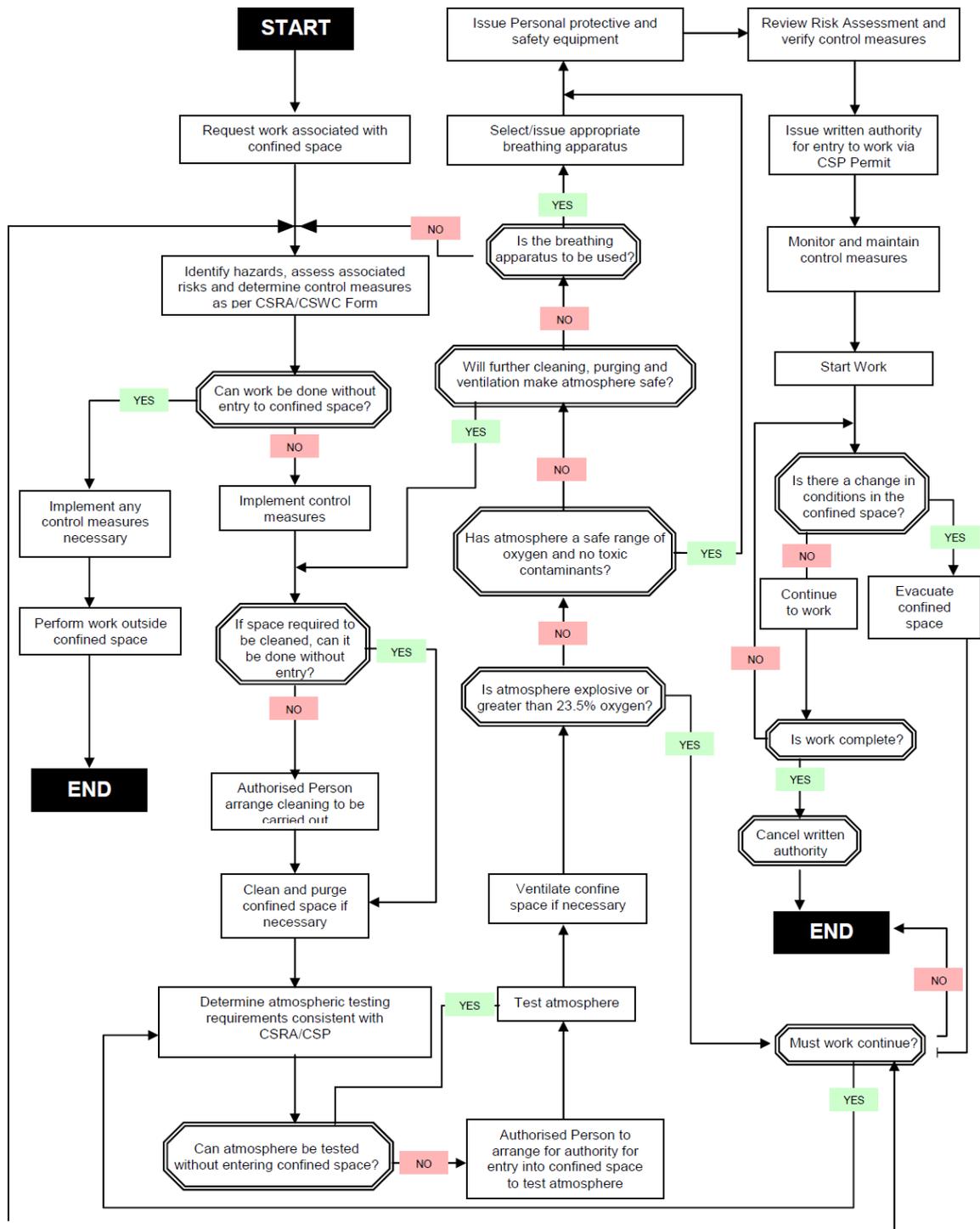
- If new legislation or new information becomes available, does it indicate current controls may no longer be the most effective?
- Is any change planned to any plant or structure that may create a confined space or change the nature of an existing confined space?
- Has an incident occurred as a result of work carried out in a confined space?

If problems are found, there is a need to go back to any point in the risk management process, review the information and revise any decisions about controls measures.

Appendix 1 – Flow Chart of procedures to work in Confined Space

Council Procedures for Work in a Confined Space (Based on AS2865:2009)

Legend	
CSRA	Confined Space Risk Assessment
CSWC	Confined Space Permit to work checklist
CSP	Confined Space Permit



Appendix 2 – Example of a Confined Spaces Safe Work Procedure

SAFE WORK PROCEDURE

CONFINED SPACES

Purpose

The purpose of this safe work procedure is to specify the minimum safety requirements for entry to or any work carried out within a confined space in any Council workplace.

Application

This standard applies to any employee or contractor who may be required to enter and/or work within a designated or suspected confined space in any Council workplace.

Definitions

Confined Space: means an enclosed or partially enclosed space that:

- (a) is not intended to be used as a regular workplace;
- (b) may have restricted means of entry or exit;
- (c) is at atmospheric pressure during occupancy; and
- (d) may have either:
 - (i) potentially harmful atmospheric contaminants or an unsafe oxygen level, or both; or
 - (ii) the potential to cause entrapment or engulfment.

Entry (to a confined space): means when a person's head (i.e. the breathing zone) or upper body is within the boundary of a confined space.

A permit to work system: is a formal written system used to control work in certain types of potentially hazardous environment.

Entry Permit: means a permit to enter and work in a confined space.

PPE: means personal protective equipment.

Workplace: Any plant, building, premises, enclosed space or site owned, operated or controlled by the Council in, on or at which work is or may be carried out by employees or contractors to Council; or

Any public place or area under the control of the Council, either temporarily or otherwise, in or on which work is being carried out by Council employees or its contractors; or

Any vehicle owned, leased or operated by the Council being used for the purposes of business.

Authorised Person: means a holder of current Confined Space Entry and Self Contained Breathing Apparatus tickets, together with other relevant current accredited skills to enable that person to issue an Entry Permit to allow work to be done in a confined space. An Authorised Person must be approved and registered by the General Manager.

Competent Person: A person who has, through a combination of training, education and experience, acquired knowledge and skills enabling that person to perform correctly a specified task.

Stand-by Person: A Competent Person assigned to remain on the outside of, and in close proximity to, the confined space and capable of being in continuous communication with and, if practical, to observe those inside. In addition, where necessary, initiate emergency response procedures and operate and monitor equipment used to ensure safety during entry and work in the confined space.

References

- Work Health and Safety Act 2012
- Work Health and Safety Regulations 2012
- Code of Practice – Confined Space (CP103)
- Code of Practice - How to Manage Work Health and Safety Risks (CP- 112); and
- AS 2865:2009 Confined Spaces.

Responsibility

The Works Manager is responsible for the implementation and maintenance of this Standard.

Policy Statement

Council will ensure that an effective permit to work system is in place and applies to any work to be undertaken in confined spaces in any Council workplace.

Council will also specify a safe work procedure to be followed for any entry to and work carried out within a confined space. Amongst other things, that procedure shall ensure that entry to confined spaces only occurs when the following criteria have been satisfied:

- A Hazard Assessment form has been completed by a Competent Person; and
- An Entry Permit has been completed and issued by an Authorised Person; and
- Those personnel who enter a confined space have the appropriate training in confined space operations and meet the definition of Competent Person in this standard.

The Council will also ensure that training for Authorised Persons and supervisors in respect of confined space entry will be arranged and conducted as and when required.

Procedure

The procedure to be followed for work in a confined space is that set out in the attached flow chart headed Procedure for Work in a Confined Space (Attachment 1).

Responsibilities under the Procedure

Works Manager

To approve and register Authorised Persons under this standard.

The Authorised Person

- To ensure all hazards associated with the proposed work in the confined space have been identified, assessed and controlled.
- To be familiar with the intended task(s) involved.
- To outline how the work is to be undertaken (e.g. procedures, precautions, equipment, location, start time, duration) – verbally, and where necessary, in writing.
- To ensure that any necessary tags and signs are prominently displayed so that personnel are aware if equipment or plant is isolated/not to be operated.
- To ensure that Entry Permits are cross-referenced with any other relevant permits (e.g. Hot Work Permit).

Supervisors

- To understand the work for which an Entry Permit has been sought and understand isolation and tagging procedures.
- To ensure that no work commences before an Entry Permit is granted.
- To ensure that the person(s) doing the work in a confined space are Competent Persons as defined in this standard.
- To ensure that all necessary PPE is available, fit for purpose and is used for that purpose and as needed and appropriate.
- To ensure that relevant people are informed of changes of shift, job suspension and/or job completion to ensure that the Entry Permit is cancelled or transferred as appropriate.

The Competent Person (undertaking the work)

- To satisfy themselves that they understand the requirements of the Entry Permit.
- To be skilled, qualified, trained and competent to perform the work, including the use of any PPE or rescue equipment.
- To adhere to the Entry Permit requirements.
- To ensure that the work is performed in a safe manner.
- To be aware of the hazards that could exist and have the necessary controls in place.
- To use all necessary PPE for the purpose for which it is provided as needed and appropriate.
- To make the work area safe and seek immediate advice if in doubt or if circumstances or conditions change.
- To make equipment and area safe on completion of the task.

The Stand-by Person

Stand-by Persons are required to maintain constant attention on the person working in the confined space and to act effectively in perceived emergencies.

Standby Persons will:

10. Assist in assembling, checking and preparing the work and any safety gear, PPE and equipment to be used.
11. Agree upon and confirm the communication system or method before the worker enters the confined space.
12. Monitor the employee's entry into the confined space to ensure that it occurs safely, and that any lines and hoses do not foul or tangle.
13. Ensure that equipment that is being used to support the worker operates effectively.
14. Check that airlines are supplying a flow of clean air to the wearer at all times.
15. Remain at his/her position while the person is in the confined space, unless a substitute stand-by person is in position.
16. Maintain continuous visual and/or other communication (as previously confirmed) with the employee in the confined space.
17. Assist the employee to exit and vacate the confined space when requested to do so.
18. Bring the employee out of the confined space immediately in the event of perceived danger, raise an alarm and take further appropriate emergency actions.

Documentation

- Procedure for Work in a Confined Space (Attachment 1)
- Confined Space Risk Assessment (Attachment 2)
- Confined Space Entry Permit (Attachment 3)

Variation of Standard

The General Manager reserves the right to review, vary or revoke this procedure at any time.

General Manager

Appendix 3 – Sample Confined Space Entry Permit

Confined space entry permit

General

Location of work _____

Description of work

Control measures

Isolation

Space needs to be isolated from:

Location/method

Water/gas/steam/chemicals _____

Mechanical/electrical drives _____

Auto fire extinguishing systems _____

Hydraulic/electric/gas/power _____

Sludge/deposits/wastes _____

Locks and/or tags have been affixed to isolation points Yes No

Atmosphere:

The atmosphere in the confined space has been tested:

Result of tests:

Oxygen _____ %

Flammable gases _____ % LEL

_____ % LEL

Other gases

_____ ppm (less than ppm)

_____ ppm (less than ppm)

Other airborne contaminants: _____

SAMPLE ONLY

The conditions for entry are as marked below:

1. With supplied air breathing apparatus Yes No
2. Without respiratory protection Yes No
3. With escape unit Yes No

Hot work

Area clear of all combustibles including atmosphere Yes No

Type of appropriate fire prevention equipment available: _____

Suitable access and exit Yes No

Hot work is permitted Yes No

Personal protective equipment

The following safety equipment must be worn:

	Type
Respiratory protection	_____
Harness/lifelines	_____
Eye protection	_____
Hand protection	_____
Footwear	_____
Protective clothing	_____
Hearing protectors	_____
Safety helmet	_____
Communication equipment	_____
Other	_____

Other precautions

Warning notices/barricades Yes No

All persons have been trained Yes No

Is continual air monitoring required Yes No

Emergency response

Procedures/Equipment

Standby person

Standby personnel requirements:

Authority to enter

The control measures and precautions appropriate for the safe entry and execution of the work in the confined space have been implemented and persons required to work in the confined space have been advised of and understand the requirements of this written authority.

Signed (*person in direct control*):

Date: _____ Time: _____

This written authority is valid until:

Date: _____ Time: _____

Persons authorised to enter confined space

I have been advised of and understand the control measures and precautions to be observed with the entry and work in the confined space.

Entry			Exit		
Name	Date	Time	Name	Date	Time

Withdrawal of written authority

All persons and equipment accounted for

Yes No

Equipment checked and stored correctly

Yes No

Signed (*person in direct control*):

Date: _____

Time: _____

Remarks or comments about the work:

Appendix 4 – Sample Rescue Procedures

RESCUE - CONFINED SPACE

OBJECTIVE: To ensure the health and wellbeing of workers who enter a confined space for the purpose of rescue or training for a confined space rescue.

PROCEDURE:

1. Preparation

- Only personnel who are currently competent are to undertake confined space rescue;
- All confined space rescue equipment must be checked prior to a confined space rescue.

2. Assessment

- Conduct approach assessment;
- Undertake resource assessment and implement an incident command structure for the incident;
- Complete confined space rescue permits.

3. Pre entry operations

Make the incident scene safe

- Establish and mark/ flag safety and hazmat zones;
- Commence and maintain atmospheric monitoring;
- Eliminate all potential ignition sources (where safe to do so).

Make the rescue area safe

- Perform lockout tag out procedures and isolations;
- Where appropriate to do so ventilate the confined space;
- Conduct a pre-entry brief to all rescuers.

4. Undertake the entry and rescue operations

- Ensure all personnel that enter the space have a harness and safety line attached;
- Maintain communications between rescuers;
- Extricate casualty in consultation with medical personnel.

5. Terminate rescue operations

- Undertake team welfare check
- Restore any Tag outs, lockouts or isolations

NOTE:

All confined space rescue training and operations will comply with AS 2865-2009 and the Code of Practice for Confined Space.

RESCUE -TRENCH RESCUE

OBJECTIVE: To ensure immediate, safe and effective workers response to an emergency involving trench collapse.

SAFETY CONSIDERATION:

- One team member of the Trench Rescue Team will be appointed safety officer to watch for further signs of collapse and supervise safety requirements for personnel at the rescue site;
- Minimum protective clothing with safety helmets;
- Safety precautions include:
 - Never use heavy plant equipment to excavate the victim;
 - Never enter an unprotected trench, remove other workers;
 - Place walk boards around trench;
 - Secure area from unauthorised personnel;
 - Ascertain the reason for the trench [beware of explosives and services]
- Safety Hazards include - oxygen deficient atmospheres, flammable or explosive, poisonous or toxic, electrical and/ or mechanical hazards.

PROCEDURE:

- On arrival the Incident Controller will size up the scene and request additional resources as required.
- While awaiting resources, observe safety precautions and :
 - Appoint or act as Safety Officer until relieved by a qualified person,
 - Act to stabilise the incident area and protect any trapped victim,
 - Halt vibrations from plant or passing traffic, check for heavy loads near trench and/or seepage [water or soil] into trench,
 - Utilise on-site contractors for shoring materials and access specialist assistance
- Monitor the casualty and atmosphere in the trench until specialist help arrives.

NOTE:

All confined space rescue training and operations will comply with AS 2865-2009 and the Code of Practice for Confined Space.