Management Procedure

Confined Space Management

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Contents

1 Purpose

Seqwater is committed to the health and safety of all people at the workplace. The purpose of this procedure is to define a systematic process to manage work health and safety (WHS) risks associated with undertaking work in confined spaces across Seqwater.

This procedure supports the requirements of Element 9 – Operational Control of Seqwater's WHS Management System Framework.

This procedure adopts, and is consistent with, the requirements outlined in:

- AS/NZS 2865: Safe Work in Confined Space
- AS/NZS 60079.29.2:2008 Explosive atmospheres - Gas detectors - Selection, installation, use and maintenance of detectors for flammable gases and oxygen
- Confined Spaces Code of Practice 2011.

2 Scope

This procedure applies to all Seqwater workers, business groups and work activities.

3 Definitions

Term	Definitions
Airborne contaminant	Any contaminant present in the air that may be harmful to persons.
Atmospheric monitoring	The conducting of a gas test with a calibrated gas detector to determine the presence of any airborne contaminants.
Bump Test	The process to confirm that a gas detector is functioning and is capable of responding to gas by exposing the instrument to a concentration of target gas high enough to initiate an alarm situation while the instrument is in operating mode.
Confined space	An enclosed or partially enclosed space that is not designed or configured for continuous worker occupancy, within which there is a risk of one or more of the following: • An oxygen concentration outside the safe oxygen level. • A concentration of airborne contaminant that may cause impairment, loss of consciousness or asphyxiation. • A concentration of flammable airborne contaminant that may cause injury from fire or explosion. • Engulfment in a stored free-flowing solid or a rising level of liquid that may cause suffocation or drowning.

Term	Definitions
Confined space entry team	The team who will manage and perform the confined space entry. As a minimum the team must consist of three workers. Roles of individual workers in the team are: • a permit recipient • a standby person • an entrant. All members of the confined space entry team must be confined space entry trained in the role they are performing.
Confined space medical	Medical assessment of a Seqwater worker by a medical practitioner to determine if they are capable of performing work in a confined space.
Containment	Any dust, fume, mist, vapour, biological matter, gas or other substance in liquid or solid form, the presence of which may be harmful to persons.
Double valve isolation	The use of two valves, in series, on the same feed-in pipe line to isolate a potential source of engulfment. A penstock valve or gate valve is considered to be a double valve isolation.
Enclosed or partially enclosed space	Enclosed or partially enclosed spaces may include, but are not limited to, the following: • valve pits • pump wells (wet and dry) • water mains • manholes.
Engulfment	The immersion or envelopment of a person by a solid or liquid (e.g. grain, sugar, flour, sand, coal, fertilizer or other substances in a powder or granular form), that is stored within the confined space.
Exposure standard	An acceptable exposure level of an airborne concentration for a particular substance in a workers' breathing zone, which should not cause adverse health effects. Details of exposure standards are available in the *Workplace Exposure Standard for Airborne Contaminants*.
Facilities or operational site	A defined Seqwater workplace – e.g. water treatment plant, corporate office, recreation site.
Fit for work	A person is in a state (physical, mental and emotional) that enables them to perform assigned tasks safely, competently and in a manner that does not threaten or compromise the safety or health of themselves or others.
Flammable airborne contaminant	Any dust, fume, mist, vapour or gas present in the air at concentrations that can propagate a flame on contact with an ignition source.
Hazard	A situation that has the potential to harm a person and/or the environment and/or damage property.
Hazardous area	A hazardous area is an area in which an explosive atmosphere is present, or may be expected to be present, in quantities that may require special precautions for the construction, installation and use of potential ignition sources.
Hazardous services	A service including electricity, gas, sewer, water main/lines.

Term	Definitions
Hierarchy of controls	Identify the risk control actions and responsibilities by identifying controls in the following specific order: • Eliminate the hazard. If elimination of the hazard is not reasonably practicable, minimise the risk so far as reasonably practicable by: • substituting (wholly or partly) the hazard giving rise to the risk with something that gives rise to a lesser risk • isolating the hazard from any person exposed to it • implementing engineering controls. If a risk then remains, then minimise the remaining risk, so far as is reasonably practicable, by implementing administrative controls. If a risk then remains, then minimise the remaining risk, so far as is reasonably practicable, by ensuring the provision and use of suitable Personal Protective Equipment (PPE).
Ignition source	A source that produces spark or heat having the potential to ignite a flammable airborne contaminant.
Incident	An event or circumstance that could have or did lead to unintended and/or unnecessary harm to a person and/or loss or damage or adverse consequences. This definition of an incident includes near misses.
Job Safety and Environment Analysis (JSEA)	A step-by-step method of identifying hazards, evaluating the risk, implementing control measures and providing a safe system of work.
Line Supervisor	A Line Supervisor is a person with day-to-day supervisory responsibilities for workers within a functional area of the business. A Line Supervisor includes, but is not limited to, Team Leaders, Coordinators and Level 4 or 5 Supervisors. A Line Supervisor is also considered a worker, but has additional responsibilities for the implementation of the WHS Management System as identified in the WHS Management System and/or position description.
Lower Explosive Limit (LEL)	The concentration of a flammable contaminant in air below which the propagation of a flame does not occur on contact with an ignition source.
Manager	A person with the responsibilities for managing a functional area of the business including the workers within the relevant functional area. This includes, but is not limited to, Level 3 Managers, General Managers and Project Managers. A manager is also considered a worker, however managers may have additional responsibilities for implementation of the WHS Management System as well as any additional responsibilities as an officer of the business.
Notifiable incident	An incident which involves: • the death of a person • a serious injury or illness of a person • a dangerous incident.
Reasonably practicable	The following criteria must be applied in determining what is reasonably practicable: • What the person knows or ought to reasonably know about the hazard and ways of eliminating or minimising the hazard. • Availability and suitability of ways of eliminating or minimising the hazard. The cost associated with the availability and suitability of ways of eliminating or minimising the hazard, taking into account the cost if it is grossly disproportionate to the risk.

Term	Definitions
Risk	Risk is the likelihood and consequence of injury or harm occurring when exposed to a hazard.
Risk control	Means taking action to eliminate health and safety risks so far as is reasonably practicable, and if that is not possible, minimising the risks so far as is reasonably practicable. Eliminating a hazard will also eliminate any risks associated with that hazard.
Safe Work Method Statement (SWMS)	A SWMS sets out steps to enable supervisors, workers and any other persons at the workplace to understand the requirements that have been established to carry out the high risk construction work in a safe and healthy manner. It sets out the work activities in a logical sequence and identifies hazards and describes control measures.
Safe oxygen level	A concentration of oxygen in the atmosphere having a minimum of 19.5% by volume and a maximum of 23.5% by volume, under normal atmospheric conditions. NOTE: At pressures significantly higher or lower than normal atmospheric pressure, expert advice should be sought.
Training Needs Analysis (TNA)	The identification of all training needs required by workers at Seqwater.
Upper Explosive Limit (UEL)	The concentration of a flammable contaminant in air above which the propagation of a flame does not occur on contact with an ignition source.
Worker	Worker means a person who carries out work in any capacity for Seqwater, including work as: • an employee • a contractor or subcontractor • an employee of a contractor or subcontractor • an employee of a labour hire company who has been assigned to work at Seqwater • an outworker • an apprentice or trainee • a student gaining work experience • a volunteer • a worker of a prescribed class.
Workplace	A place where work is carried out by Seqwater and includes any place where a worker goes, or is likely to be, while at work.

4 Roles and Responsibilities

Role	Responsibility
Manager	• Provide adequate resources to comply with this procedure. • Ensure a current confined space register is maintained for every Seqwater workplace within their area of responsibility.
Line Supervisor	• Implement a systematic process to identify confined spaces on Seqwater workplaces within their area of responsibility. • Communicate, consult, instruct and supervise workers involved in confined space activities. • Ensure all workers involved in confined space activities have current and appropriate levels of training. • Regularly monitor and review the effectiveness of risk controls and implement corrective actions and treatment plans where required. • Report incidents related to confined space activities.
Learning and Organisational Development (LOD) Unit	• Develop and implement a training schedule for confined space entry and management in accordance with the requirements of this procedure. • Develop and maintain a Training Needs Analysis (TNA) which includes training requirements for confined space entry and management.
WHS Team	• Ensure a systematic process is in place to identify confined spaces on Seqwater workplaces. • Maintain a current confined space register for each Seqwater workplace. • Provide advice, procedures, tools and templates to support systematic identification and management of confined spaces. • Provide advice on confined space training requirements to LOD Unit. • Analyse and report trends associated with confined space hazards and incidents. • Complete workplace monitoring activities to verify the hazard identification and WHS risk management processes associated with confined spaces.
Permit recipient	• Responsible for developing the Job Safety and Environmental Assessment (JSEA)/Safe Work Method Statement (SWMS), High Risk Work Rescue Plan (TEM-00027) and Confined Space Entry Permit (FRM-00107). • Responsible for the safety of workers undertaking the confined space entry and associated work activity. • NOTE: The permit recipient cannot perform the role of standby person whilst acting as the permit recipient.

Standby person	• A confined space entry trained worker assigned to remain on the outside of, and in close proximity to, the confined space entrance. They must be capable of being in continuous communication with and, if practical, observing those inside. A standby person must never enter the confined space. • Where necessary, the standby person may operate and monitor equipment for the safety of personnel in the confined space and initiate emergency response. • Ensure equipment to be used for the confined space entry is checked prior to use confirming it is in a good condition and in a serviceable condition. • Ensure adequate communication is implemented and is effective with the entrant. • NOTE: The standby person cannot perform the role of permit recipient whilst acting as the standby person.
Entrant	• Signs onto a JSEA/SMWS prior to entry. • Implements controls as per the JSEA/SWMS and Confined Space Entry Permit (FRM-00107). • Supports the development and rehearses the High Risk Work Rescue Plan (TEM-00027) prior to entry. • Ensures equipment to be used for the confined space entry is checked prior to use confirming it is in a good and serviceable condition. • Ensures atmospheric monitoring is being conducted prior to and during entry. • Ensures adequate communication is implemented and is effective with standby person. • Sign onto the Confined Space Entry Permit (FRM-00107) prior to entry. • Signs off from Confined Space Entry Permit (FRM-00107) upon exiting the space.
Workers	• Comply with the requirements of the Confined Space Management Procedure (PRO-00443). • Comply with the requirements of the Confined Space Entry Permit (FRM-00107) and the JSEA/SMWS associated with the activity.

5 Procedure

5.1 Overview

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

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, sand, or water.

In order to manage the risks associated with working in confined spaces, specific processes and risk controls must be implemented. This procedure details the minimum requirements for undertaking work in confined spaces at Seqwater workplaces.

5.2 Eliminating the need to enter a confined space

Alternate work methods should be considered, where practicable, to eliminate the need for a person to enter a confined space to undertake an activity.

The following are examples of work methods that eliminate the need to enter confined spaces:

- Extending valve spindles or raising valve actuators to the top of valve pits.
- Using remote cameras or a mirror attached to a probe for internal inspection of vessels.
- Using remotely operated rotating flail devices, vibrators or air purge devices to clear blockages in silos.
- Installing fixed or temporary cleaning devices e.g. spray balls using high-pressure hoses inserted through an access hatch to clean the inside of a tank.
- Using a hook, long-handled clasp or magnet on a string to retrieve an object dropped into a confined space.

5.3 Fit for work

Due to the nature of the risks associated with work in a confined space, all workers who are required to work as part of a confined space entry team at a Seqwater workplace must undertake a confined space medical examination. If a worker does not pass a confined space medical, a review and risk assessment will be completed to determine if they are fit and able to perform a strictly non-entrant role i.e. standby person.

To work as part of a confined space entry team, it is mandatory that a confined space medical be undertaken every two years. Refer to the Health Monitoring and Immunisation Procedure (PRO-00020) for specific requirements.

In addition, all workers should undertake a self-assessment of their capacity to effectively participate in a confined space entry team. Workers who are fatigued, affected by alcohol or medication etc. must notify their line manager and be excluded from participating in confined space entry work until they are capable of fulfilling their role in a confined space entry team.

- different risk to WHS that the existing measures may not effectively control
- when a new hazard or risk is identified
- when consultation suggests a required is required
- if a Health and Safety Representative requests a review
- every 5 years.

5.4 Identification of a confined space

The identification and assessment of a confined space is a critical step in the safe management of work at Seqwater workplaces. Workers must confirm if a space they are intending to enter is, or is not, a confined space, before they enter the space.

ANY SPACE THAT IS ENCLOSED OR PARTIALLY ENCLOSED MAY BE A CONFINED SPACE – STOP AND ASSESS.

5.4.1 Methods of identification

At Seqwater workplaces, confined spaces may be identified by one or more of the following:

- A confined space sign located at the entrance to the space.

- The space is listed in the confined space register for the site.
- The space is assessed by a worker trained as a member of a confined space entry team and the outcome is reviewed by a line supervisor who has appropriate knowledge of the site.

Confined space signage

All identified confined spaces at Seqwater workplaces, where practicable, must have a sign attached to the space in clear view of each entrance point.

Confined spaces with entrances in roadways or other areas where a sign would be regularly damaged may not be signed. Alternate methods of identification (i.e. painting) should be investigated for these types of confined spaces.

Confined space signs must conform to the signage specifications included in Appendix A of this procedure.

Confined space register

All confined spaces identified at Seqwater workplaces must be recorded on a confined space register.

A confined space register must be developed for each Seqwater workplace utilising the Confined Space Register Template (TEM-00155). The confined space register must be stored in Q-Pulse and be made available at all sign-in facilities for the workplace.

Confined space registers must be audited at least every five years or when any significant changes to structures occur at the workplace. The audit must be facilitated by the WHS Team.

Confined space assessment process

Where an enclosed or partially enclosed space is not signed as a confined space and is not listed in the confined space register, an assessment of the space must be made prior to entry.

IF IN DOUBT DO THE CONFINED SPACE ASSESSMENT

Confined space assessments must be undertaken by a worker trained as a member of a confined space entry team and the outcome must be recorded in Parts A and B of the Confined Space Entry Permit (FRM-00107).

The confined space assessment flowchart is included at Appendix B of this procedure. The flowchart defines a step-by-step process to be implemented when assessing if a space is a confined space.

A confined space is defined as an enclosed or partially enclosed space that is not designed or configured for continuous worker occupancy, within which there is a risk of one or more of the following:

- An oxygen concentration outside the safe oxygen range.
- A concentration of airborne contaminant that may cause impairment, loss of consciousness or asphyxiation.
- A concentration of a flammable airborne contaminant that may cause injury from fire or explosion.
- Engulfment in a stored free-flowing solid or a rising level of liquid that may cause suffocation or drowning.

Where a confined space assessment deems that a space **is** a confined space:

- the confined space entry process defined in section 4.5 of this procedure must be implemented before any worker enters the space
- if required, a corrective action must be raised by the worker undertaking the assessment to ensure that the confined space is appropriately signed and the details of the confined space are recorded in the confined space register for the site.

Where a confined space assessment deems that a space **is not** a confined space:

- approval must be given by a line supervisor who has appropriate knowledge of the space, before any workers enter the space

- Parts A and B of the Confined Space Entry Permit (FRM-00107) must be attached to the relevant work order documentation and saved in CIS.

Declassification of a confined space

Where a confined space register audit or other assessment results in a recommendation to de-classify an existing confined space, the recommendation must be accompanied by a documented risk assessment that justifies the reasons for the declassification.

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

The declassification of any confined spaces must be approved by the Manager, WHS. Following declassification, any confined space signage must be removed from entrances to the space and the details of the space must be removed from the confined space register.

5.5 Confined space entry process

Entry to a confined space is considered to have occurred when a person's head or upper body enters the space.

The confined space flowchart included in Appendix C of this procedure defines the process to be implemented when working in confined spaces on Seqwater workplaces.

The key steps in the confined space process are:

1. Assess if work can be undertaken without entering the confined space.
2. Conduct a risk assessment of the confined space entry and the work to be undertaken using:
    - Part B of the Confined Space Entry Permit (FRM-00107) to assess the space
    - a JSEA/SWMS (TEM-00013) to assess the work to be undertaken.
3. Apply physical controls around the space (i.e. barriers, signage, etc.).
4. Isolate the confined space.
5. Prepare the space for entry (i.e. draining, cleaning, purging, etc.).
6. Prepare access to confined space.
7. Confirm the membership of the confined space entry team
8. Prepare confined space entry equipment (i.e. Self-Contained Breathing Apparatus (SCBA), gas detector, tripod, harnesses, Personal Protective Equipment (PPE), etc.).
9. Complete and review the High Risk Work Rescue Plan (TEM-00027).
10. Confirm communications protocols.
11. Confirm emergency procedures
12. Test the atmosphere.
13. Complete and activate Confined Space Entry Permit (FRM-00107).
14. Enter the confined space.

Once work has commenced in a confined space, continual monitoring of the atmosphere must be undertaken and a standby person must monitor work in the space for the duration of the confined space entry.

At the completion of the confined space entry, the following activities must be completed:

- Removal of all tools and equipment from the confined space.
- Confirm that all workers have exited the confined space.

- De-activate the Confined Space Entry Permit (FRM-00107) after confirmation all workers out of confined space.
- Return asset to service.

The requirements and processes to be implemented for each of the above steps, is defined in detail in the following sections of this procedure.

5.6 Confined space entry risk assessment

New risk assessment

Prior to entering a confined space, a confined space risk assessment must be undertaken to determine the hazards present, and the controls required, to allow the work to be undertaken safely. The permit recipient must undertake the confined space entry risk assessment and the outcome of the risk assessment must be documented in a JSEA/SWMS.

Confined space risk assessments must be undertaken in accordance with the Hazard Identification and Risk Management Procedure (PRO-00657). In conducting a confined space risk assessment the following five (5) steps must be used:

- STEP 1 – Hazard identification
- STEP 2 – Risk assessment: inherent risk
- STEP 3 – Control risks (select using the hierarchy of controls)
- STEP 4 – Risk assessment with risk control measures: residual risk
- STEP 5 – Monitor and review risk control measures.

When undertaking a confined space entry risk assessment, the following must be considered:

- The nature of the confined space – its size, shape, location, surroundings, access, available lighting, temperature, etc.
- Available entry and exit points.
- The substances last contained or stored within the space.
- The ability to drain, clean, purge and ventilate the space.
- The ability to positively isolate the space from inflows, energy sources and potential contaminants.
- The work to be undertaken and the method of undertaking the work within the space.
- The plant and equipment to be used in the space.
- The number of people who will enter the space.
- The number of people who will be outside the space to maintain equipment used for entry into the confined space.
- The duration people will be in the space.
- The methods of communication to be used.
- The medical fitness and training for workers involved in the confined space entry.
- The availability of rescue equipment and first aid equipment.
- The availability of required PPE.
- The availability of signs and barricades.

Existing risk assessment

An existing risk assessment may be used for a confined space entry, provided a thorough review is undertaken by the permit recipient, and any amendments are documented. In reviewing the risk assessment, the following elements must be considered:

- Have all of the risks been identified?
- Do the proposed risk controls still apply?
- Do the proposed risk controls still control the risk?
- Are there changes to the workplace that have introduced new or different risks?
- Has the confined space been changed which has introduced new or different risks?
- Was a risk not considered in the previous assessment?

As a minimum a confined space risk assessment must be reviewed and revised:

- following an incident
- where there is evidence that the risk control is no longer effectively controlling the risk
- when a change is made at the workplace that is likely to give rise to a new or different risk to WHS that the existing measures may not effectively control
- when a new hazard or risk is identified
- when consultation suggests a required is required
- if a Health and Safety Representative requests a review
- every 5 years.

Outcomes of a confined space risk assessment

The outcome of a confined space risk assessment must be used to inform the following:

- The size and make-up of the confined space work team (i.e. are more entrants / confined space entry trained workers required to undertake the work).
- The equipment required to enter and exit the space safely.
- The recovery and emergency equipment required.
- The requirements for isolating and preparing the space.
- Atmospheric testing and monitoring requirements.
- The method for communication during work.
- The method of monitoring the work.

5.7 Preparing a confined space for entry

5.7.1 Apply physical controls to work area

Signs and barricades

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

Signs must warn against entry by people other than those who are actively involved in the confined space entry 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.

The signage required for managing access to a confined space entry work area is shown in Appendix A of this procedure.

Traffic management

Traffic movements in the vicinity of confined space activities significantly increase the risks associated with the work. In addition to the risks associated with workers or equipment being struck by a moving vehicle, exhaust emissions contain hazardous gasses which, if the gasses enter the confined space, significantly increase the risk to workers within the space. Risks associated with vehicle movements must be considered and appropriate risk controls developed and implemented before any worker enters a confined space.

Where a confined space is in or adjacent to a roadway, appropriate traffic controls must be implemented to prevent vehicles entering the work area.

Traffic control may include:

- full road closures
- partial road closures utilising barricades
- partial road closures utilising barricades and traffic control contractors.

Traffic controls must remain in place for the duration of the confined space entry and when packing up on completion of the work.

Any traffic control plans required to undertake the confined space entry must be developed by an appropriately qualified person.

5.7.2 Isolating the confined space

Isolations

Prior to entering a confined space to undertake work, the confined space must be prepared and made as safe as practicable. A key element in making the confined space safe is to ensure that all potentially hazardous services and sources of energy are isolated prior to any person entering the confined space.

Isolations must be made to prevent:

- the introduction of contaminants or conditions through piping, ducts, vents, drains, conveyors, service pipes and fire protection equipment
- the activation or energising of machinery in the confined space
- the activation of plant or services outside the confined space that could adversely affect the space (e.g. running a generator with the exhaust gasses entering the space)
- the release of any stored or potential energy in plant
- the inadvertent use of electrical equipment.

If liquids, gases or vapours have the potential to enter the confined space, the pipe work delivering these contaminants to the confined space must be physically isolated. The preferred method for isolating liquids, gasses or vapours at Seqwater workplaces is through the use of a double valve isolation.

Where practicable, double valve isolations must be implemented where there is a risk of engulfment in a confined space.

Isolation instructions

All isolations required to facilitate work within a confined space must be documented using the Isolation Instruction Template (TEM-00077). An isolation instruction provides explicit instructions relating to:

- the identification of isolation points
- the method of achieving positive isolation
- the method of discharging stored energy

- how positive tag and lock out will be achieved
- the process for testing and proving the isolation
- the process for de-isolating equipment
- the process for inching and testing
- the process for returning equipment to service.

Isolation instructions must be developed and documented on the Isolation Instruction Template (TEM-00077). Isolation instructions must be developed by workers with discipline specific knowledge (e.g. electricians for electrical isolations).

An existing isolation instruction may be used to undertake an isolation, provided a thorough review is undertaken by a worker with discipline specific knowledge, and any amendments are documented on the isolation instruction.

Energy tag and lockout

All isolations undertaken to facilitate work in a confined space must be appropriately locked and tagged. Tagging and locking out equipment must be undertaken in accordance with the Energy Tag and Lockout Procedure (PRO-00014).

5.7.3 Emptying, cleaning, purging and ventilation

A safe work environment must be maintained, so far as reasonably practicable, during work in a confined space. This can be achieved within the confined space by emptying, cleaning, purging and ventilation of the space.

Emptying the space

Once the confined space is positively isolated, any material (solid or liquid) remaining in the space that has the potential to re-contaminate the space or to interfere with the work to be undertaken should be removed.

The design and location of the space will dictate the method of emptying the space. Care should be taken to ensure the materials removed from the space are handled and disposed of appropriately.

A space may not need to be completely emptied, provided the materials remaining in the space do not pose a risk to people or equipment.

Cleaning the space

Where possible, the confined space should be cleaned prior to entry. The following points should be considered for cleaning a confined space:

- The method chosen for cleaning must not create additional hazards (i.e. assess the type of material stored in the confined space and any potential reactions that may result from the cleaning process).
- Wherever practicable, cleaning must be performed from outside the confined space.
- Disposal of contaminants must be undertaken in a manner that will not cause a hazard to any person, equipment or the environment.
- Cleaning equipment must be designed for the purpose in which it is proposed to be used.
- Safety precautions detailed in safety data sheets and plant safety information should be utilised to define safe cleaning practices.

Purging the space

Where required, purging is undertaken using an inert gas, such as nitrogen, to clear flammable gases or vapours before work in a confined space commences.

The confined space must be purged where a risk assessment identifies the potential for the space to contain an unacceptable level of contaminants. Purging should be done in a way that ensures any contaminants removed from the confined space are expelled to a location where they present no further risk.

When flammable contaminants are to be purged, purging and ventilation equipment designed for use in hazardous areas must be used. Workers are to ensure that there are no sources of ignition within 15 metres of purge outlets for the duration of purge activities.

The *Work Health and Safety Regulation 2011* (Qld) prohibits pure oxygen or gas mixtures with oxygen in concentration greater than 21% by volume being used for purging or ventilating a confined space because of the risk of increased flammability.

After purging, the confined space should be adequately ventilated with sufficient fresh air to ensure that the inert gas is removed. Atmospheric testing should be carried out before entry to check that the ventilation has been effective.

Ventilating the space

Ventilation of a confined space with fresh air, by natural, forced or mechanical means, may be necessary to establish and maintain a safe atmosphere and temperature for as long as anyone is in the confined space.

If the confined space has sufficient openings, natural ventilation may be adequate, however in most cases mechanical ventilation is likely to be needed.

Consideration must be given to where the fresh air is drawn from and where the exhaust air is finally vented to, so that the fresh air is not contaminated either by exhaust air or by other pollutants, and the exhaust air does not cause other risks.

Mechanical ventilation may be either local exhaust ventilation (LEV) or dilution ventilation. LEV is effective where the source of contaminant generation is localised, the extraction point can be located close to the source and adequate make-up air is available (for example, capture or extraction of welding fume).

Where dilution ventilation is used, air needs to be introduced in a way that will ensure effective circulation throughout the confined space, taking account of the configuration of the space, the position of the openings and the properties of the contaminants.

During operations likely to generate contaminants, mechanical ventilation equipment may not be adequate or sufficiently reliable to maintain contaminants at acceptable levels or to ensure a safe oxygen level.

Where mechanical ventilation equipment is likely to be necessary to maintain acceptable contaminant levels in a confined space, the equipment must:

- be monitored to ensure continuous operation while the confined space is occupied
- have the controls (including any remote power supply) clearly identified, tagged and protected to guard against unauthorised interference.

5.8 Establishing access points

Access points that will be used to enter a confined space must be identified and any preparation work undertaken to enable safe entry/exit to the space.

The following features must be considered when preparing access points:

- Access points must be large enough to allow people wearing the necessary PPE and equipment to pass through and to permit the rescue of all people who may enter the confined space.
- Where possible fixed ladders or platforms within the confined space should be visually inspected (from outside the space) for signs of deterioration.
- Temporary access ladders must be appropriately installed and secured.
- Access points must be unobstructed by fittings or equipment that could impede rescue and must also be kept free of any obstructions during work in the confined space. If equipment such as electrical cables, leads, hoses and ventilation ducts are required to pass through an access hole, a second access point may be needed.
- Signs and barricades must be installed at access points for the duration of the work.

5.9 Confirming a confined space entry team

As a minimum, a confined space entry team must include three workers, consisting of:

- a permit recipient
- a standby person
- an entrant.

At all times, at least two members of a confined space entry team must be outside of the confined space. This is to ensure that should an incident occur while a team member is in the confined space, there is one team member capable of being in continuous communication with the person, while another team member is able to leave the confined space area to obtain any required support. A standby person must never enter the confined space.

Each member of the confined space entry team must have completed training in the role that they are performing. Training requirements are defined in section 5 of this procedure.

The confined space entry team may be expanded to include additional standby or entrant personnel based on the work to be undertaken and the outcome of the confined space risk assessment.

Where a confined space entry is being undertaken for the purposes of undertaking an asset inspection or condition assessment (i.e. no work is being undertaken in the confined space), the worker undertaking the asset inspection or condition assessment is not considered to be part of the confined space entry team who are managing the entry to the space. In these situations the worker undertaking the asset inspection or condition assessment must:

- follow the directions of the confined space entry team at all times when inside the confined space
- have successfully completed the Safe Work in a Confined Space – Overview training module.

5.10 Preparation of access equipment and PPE

Equipment to be used to enter the confined space must be inspected and, where required, have a current test tag attached. All workers involved in confined space work must be supplied with, and trained in, the use of appropriate confined space access equipment and PPE for the task to be undertaken.

When selecting confined space access equipment and PPE for entering a confined space, the following must be taken into account:

- the work to be undertaken
- the conditions within the space (i.e. wet, slippery, hot)
- the size and location of entry points
- the impacts PPE may have on work in the space and rescue from the space
- the number of workers entering the confined space.

5.11 High Risk Work Rescue Plan

A High Risk Work Rescue Plan (TEM-00027) must be developed and reviewed with the confined space entry team to ensure its relevance and effectiveness prior to any entry to a confined space. A confined space entry trained worker must develop the plan using the High Risk Work Rescue Plan Template (TEM-00027).

All participants in the confined space entry must be briefed on the requirements of the High Risk Work Rescue Plan (TEM-00027) and know their role should an emergency situation occur. Potential problems with the size of entrance and exit points must be addressed when developing a High Risk Work Rescue Plan (TEM-00027). When assessing openings, consideration should be given to moving through the opening whilst wearing breathing apparatus and other PPE. Where openings are found to be inadequate, their size must be increased (e.g. by removing mesh panels covering a pit), or an alternative safe means of entry and exit must be provided.

5.12 Emergency procedures

Confined space incidents and emergencies must be escalated in accordance with the WHS Emergency Preparedness and Response Procedure (ERP-00079).

When establishing emergency procedures for confined space rescue, the following factors must be taken into account:

- The nature of the confined space.
- The location of the confined space.
- Communications from within the confined space to the standby person
- Communications from the location of the work to emergency services.
- Rescue and resuscitation equipment and the availability of trained workers.
- The physical capabilities of rescuers.
- Environmental conditions.
- Appropriate first aid equipment and the availability of trained workers.
- The ability for local emergency services to respond and provide assistance in emergency situations.

Where practicable, a rescue should be performed from outside the confined space. Rescuers must be provided with, and wear, appropriate breathing apparatus if they enter a confined space in an emergency where a hazardous atmosphere has developed within the space.

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

All workers involved in confined space work will be supplied with, and trained in, the use of appropriate emergency and rescue equipment, including:

- rescue tripod, davit, crane jib or fixed anchor point
- retrieval devices – winches or rope systems
- fall arrestors
- gas detection equipment
- intrinsically safe torches
- life lines
- first aid
- communications equipment
- self-contained breathing apparatus.

5.13 Communication and monitoring procedures

In preparation for confined space entry, the permit recipient must assign a standby person to continuously monitor the wellbeing of those inside the space. If practicable, the standby person should observe the work being carried out to provide assistance where required and to initiate emergency procedures when necessary.

The standby person must never leave the confined space entry point under any circumstances whilst workers are in the space.

A communication system must be confirmed prior to entering the confined space to enable communication between people inside and outside the confined space and to summon help in an emergency. Depending on the conditions within the confined space, communication can be achieved by voice, radio, hand signals or other suitable methods.

In providing communication and ongoing monitoring, the standby person should:

- understand the nature of the hazards inside the particular confined space and be able to recognise that the workers in the space are showing unusual signs or symptoms in their behaviour or movement
- remain outside the confined space and do no other work which may interfere with their primary role of monitoring the workers inside the space
- have all required rescue equipment (e.g. safety harnesses, lifting equipment, a lifeline) immediately available
- have the authority to order workers to exit the space if any hazardous situation arises
- activate the High Risk Work Rescue Plan (TEM-00027) if required.

THE STANDBY PERSON MUST NEVER ENTER THE CONFINED SPACE TO UNDERTAKE A RESCUE.

5.14 Atmospheric testing and monitoring

A safe atmosphere must be maintained for the duration of work in a confined space.

A safe atmosphere in a confined space is one that:

- has a safe oxygen level (concentration of oxygen of between 19.5% - 23.5%)
- is free of airborne contaminants or any airborne contaminants are in concentrations below their allowable exposure standard (if any)
- has any flammable gas or vapour in the atmosphere at concentrations below 5% of its lower explosive limit (LEL).

The process for undertaking atmospheric testing of a confined space is defined in the flowchart included as Appendix D of this procedure.

Pre-entry atmospheric testing (from outside space)

Atmospheric testing must be undertaken prior to entry or re-entry of any confined space. Atmospheric testing must be undertaken by a worker trained as a member of a confined space entry team.

The atmosphere within a confined space must be sampled at one metre intervals for the full depth of the confined space to ensure that all strata within the space are tested. Sufficient time must be allowed for an electronic gas detector to sample the atmosphere effectively prior to entry.

As a minimum, the atmosphere must be tested for:

- oxygen concentration
- hydrogen sulphide
- carbon monoxide
- combustible/explosive elements.

The following table defines the safe levels of each element that must be attained prior to entry to a confined space.

	Combustible/ Explosive (LEL)	Oxygen (O_2)	Hydrogen Sulphide (H_2S)	Carbon Monoxide (CO)
Safe atmosphere	<5% LEL	>19.5 up to <23.5%	<10 ppm	<30 ppm

The atmosphere inside a confined space may need to be tested for additional elements depending on what is normally stored within the space. Testing may be required for ammonia gas, chlorine gas, carbon dioxide, etc.

Due to the size and complexity of some confined spaces it is not always possible to ensure that remote regions of a space have a safe atmosphere. In such cases, once the atmosphere adjacent to the entry point has been proven safe for entry, testing of more remote regions within the confined space is to be undertaken. For these monitoring tasks and for work in such large and complex spaces, continuous monitoring via the use of a gas detector must be undertaken at all times while persons are present in the space.

Normal entry to a confined space must only be undertaken when atmospheric testing of the confined space shows that the atmosphere is safe.

Pre-entry atmospheric testing (from inside space)

Where entry into a confined space is required to perform atmospheric testing, the following must be undertaken:

- Adequate cleaning, purging and/or ventilation prior to entry.
- A Confined Space Entry Permit (FRM-00107).is completed to undertake the testing.
- A High Risk Work Rescue Plan (TEM-00027) must be developed and reviewed with the confined space entry work team prior to entry.
- A plan for how and where the testing is to be undertaken must be completed and documented on the confined space entry permit.
- Appropriate PPE must be worn for the duration of the entry.
- Only a confined space entry trained worker can enter the space to undertake the testing.
- Only a confined space entry trained worker can act as the standby person during the testing.
- Where atmospheric testing indicates that safe atmospheric conditions have not been reached, additional cleaning, purging and/or ventilation must be undertaken and the atmosphere re-tested.

All atmospheric testing results must be recorded on the Confined Space Entry Permit (FRM-00107) prior to entry and re-entry of a confined space.

Atmospheric monitoring during occupation of confined space

Continuous atmospheric monitoring must be carried out during occupancy of the confined space.

Should atmospheric testing indicate an unsafe atmosphere during occupancy, the confined space must be immediately evacuated and the incident reported to the Seqwater Incident Hotline (07) 3270 4040.

Entry to a confined space with an unsafe atmosphere

Seqwater workers are prohibited from entering a confined space where a safe atmosphere is unable to be achieved.

If a safe atmosphere cannot be achieved, notify the relevant manager and the Manager, WHS to determine how to proceed with the confined space entry in this instance. Specialist contractors must be engaged to undertake work in a confined space with an unsafe atmosphere.

Atmospheric testing equipment

Atmospheric testing must be carried out with an approved gas monitoring device (compliant with AS/NZS 60079.29.2:2008 Explosive atmospheres - Gas detectors - Selection, installation, use and maintenance of *detectors for flammable gases and oxygen*). Atmospheric testing equipment must be used and maintained in accordance with manufacturers requirements and must have a current calibration sticker visible on the device.

All atmospheric testing equipment, batteries etc. are to be inspected prior to use and verified as being appropriately calibrated and fit for use. This may involve a verification of the last calibration date, battery check, zeroing of the device, bump test of the device, etc.

Atmospheric testing equipment must only be used by a trained worker.

Atmospheric testing equipment must be configured to the alarm settings defined in the following table.

	Combustible/ Explosive (LEL)	Oxygen (O_2)	Hydrogen Sulphide (H_2S)	Carbon Monoxide (CO)
Fresh air reading	0% LEL	20.9%	0 ppm	0 ppm
Instantaneous	Alarm 5%	Low 19.5% High 23.5%	25 ppm	400 ppm
Short Term Exposure Limit 15 min (STEL)	-	-	15 ppm	200 ppm
Time Weighted Average 8 hr (TWA)	-	-	10 ppm	30 ppm

5.15 Confined space entry and work management

5.15.1 Confined Space Entry Permit

The Confined Space Entry Permit (FRM-00107).is a document that is used to record all elements of a confined space entry.

A Confined Space Entry Permit (FRM-00107).must be completed and authorised before any person enters a confined space. Only workers who have completed confined space entry training and permit recipient training are able to authorise a Confined Space Entry Permit (FRM-00107).

The Confined Space Entry Permit (FRM-00107) must contain the following information:

- The date, name and location of the confined space to be entered.
- The names and signatures of the Confined Space Entry Team i.e. Permit Recipient, Standby Person, Entrant/s.
- The period of time that the permit is in operation, including time required to complete the work being carried out in the confined space.
- Risk control measures that must be implemented before work commences, e.g. isolation of plant and services, purging, ventilation, atmospheric testing, cleaning and signage.
- Atmospheric test results.
- Risk control measures that must be implemented or continued while work is conducted in the confined space e.g. ventilation, continuous monitoring, respiratory protective equipment and personal protective equipment.
- Any equipment to be taken into the confined space.
- Any exclusions such as ignition sources.
- Any specialist emergency rescue equipment required.

The Confined Space Entry Permit (FRM-00107) and JSEA/SWMS must be kept at the entrance to the confined space for the duration of the work.

A Confined Space Entry Permit (FRM-00107).is valid for 24 hours from the point it is activated.

A new Confined Space Entry Permit (FRM-00107).must be completed and authorised in the following situations:

- If the permit recipient changes or is replaced.
- If atmospheric conditions in the space change (i.e. an unsafe atmosphere develops).

- When a significant break in work continuity occurs e.g. work is suspended whilst additional parts or equipment are sourced from another location (note – fatigue and meal breaks are not considered significant breaks in work continuity).
- If changes are made to the work that introduce hazards not addressed by the current entry permit.
- If new risk controls measures are needed.

A Confined Space Entry Permit (FRM-00107).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, provided the entries are all undertaken in a single shift of work.

5.15.2 Entry procedure

Clear entry and exit protocols must be developed by the permit recipient prior to entry to a confined space. The permit recipient must ensure that entry points are large enough to enable safe entry/exit from the space and that they are not obstructed by plant or equipment.

The standby person must be posted to the entrance of the confined space before any person enters the confined space. The standby person must remain at the entrance of the confined space for the duration of the entry.

Each worker entering the confined space must sign onto the Confined Space Entry Permit (FRM-00107). prior to entry.

5.15.3 Managing work activities in the confined space

All personnel in a confined space must be monitored by, and maintain a line of communication with, the standby person for the duration of entry.

Work or activities within the confined space must be undertaken in accordance with the conditions of the Confined Space Entry Permit (FRM-00107) and the JSEA/SWMS. If during the duration of a confined space entry the work being undertaken changes, all personnel must exit the space and undertake a risk assessment for the new activities to be undertaken. Re-entry to the space can only occur when all identified risk controls are in place and the Confined Space Entry Permit (FRM-00107) and JSEA/SWMS have been amended.

A confined space entry or work within the space must be stopped and the space evacuated if:

- the atmosphere within the space becomes hazardous (i.e. gas detector alarm triggered)
- the personnel in the space are showing unusual signs or symptoms in their behaviour or movement
- the standby person cannot maintain a watch on the space
- there is an emergency outside of the space
- any conditions not captured in the risk assessment or confined space entry permit occur.

Tools and equipment used in the confined space must be fit for purpose and not introduce new hazards into the space (i.e. intrinsically safe torches, lamps, etc.).

Where practicable, sources of ignition must be excluded from entry to a confined space. Where hot work is required in a confined space, a detailed risk assessment must be undertaken and appropriate controls implemented prior to undertaking the hot work in accordance with the Management of Hot Work Procedure (PRO-00009).

Workers must ensure that all tools and equipment are removed from the confined space upon completion of work.

5.15.4 Exit procedure

Upon completion of work in the confined space, all plant and equipment must be removed from the confined space.

All workers who entered the confined space must sign-off the Confined Space Entry Permit (FRM-00107).to confirm that they have exited the space.

The permit recipient must only sign-off and de-activate the Confined Space Entry Permit (FRM-00107).when they have visually confirmed that all persons listed as entering the space have exited the space safely.

5.16 Reinstatement of the confined space

Once all work has been completed in the confined space and all workers, plant and equipment have been removed from the space, the permit recipient must notify relevant operational and/or maintenance staff that the work is complete and the confined space is ready to be returned to service.

The reinstatement of the confined space to service must be undertaken in accordance with the relevant isolation instruction.

5.17 Maintenance of confined space entry safety equipment

Maintenance of confined space entry safety equipment involves visual checks, inspections, testing of equipment, preventative maintenance and remedial work. Any equipment to be used for the confined space entry must be checked prior to use to ensure it is in a good serviceable condition and has a current test tag attached.

Equipment that must be regularly inspected includes:

- atmospheric testing and sampling equipment
- personal protective equipment including respirators
- SCBA equipment
- ventilation equipment
- tripods, safety harness and long lines
- emergency rescue equipment.

The specific requirements relating to the maintenance of safety equipment can be found in the Safe Work with Plant Procedure (PRO-00867).

5.18 Designers, manufacturers and suppliers

In the design, manufacture or modification of any plant or structure that includes a confined space, the need to enter the confined space should be eliminated, or if that is not achievable, minimised.

Specific features that should be considered during the design, manufacture, supply and modification of plant or structures, in relation to confined spaces are defined in the following:

- ASNS 2865-2009 Controlled Spaces
- Workplace Health and Safety Queensland – Confined Spaces Code of Practice 2011

5.19 Consultation

Line supervisors must consult with workers who undertake work in confined spaces to identify hazards, assess risks and identify risk control measures.

The use of a consultative process will ensure that a range of knowledge and experience is incorporated into the risk assessment process, and that any site specific hazards or risk controls are included in classifying confined spaces and in the development of specific confined space entry procedures.

Where a contractor is engaged to carry out work on a Seqwater workplace that contains confined spaces, Seqwater must ensure that the contractor is aware of:

- the confined spaces located at the site (access to the confined space register)

- their responsibilities in relation to this procedure and in relation to undertaking work in confined spaces
- their responsibilities in relation to other Seqwater procedures i.e. PASS, JSEA/SWMS, etc.

6 Training requirements

Training will be provided in accordance with the Training and Competency Management Procedure (PRO-01574).

Workers and their line supervisors must have the skills and knowledge to understand the hazards associated with working in a confined space, the contents of any Confined Space Entry Permit (FRM-00107), and the risk controls implemented for their protection.

Training must be provided to workers prior to undertaking any of the following tasks or roles:

- entering or working in confined spaces
- undertaking hazard identification or risk assessments in relation to a confined space
- implementing confined space risk control measures
- issuing entry permits
- acting as a standby person or communicating with workers in a confined space
- monitoring conditions while work is being carried out in a confined space
- purchasing equipment for confined space work
- designing or laying out a work area that includes a confined space.

The following table outlines the training requirements for confined space work.

Role	Training required	Refresher
Entrant/standby person/member of Confined Space Entry Team (i.e. Entrant, Standby Person, Permit Recipient)	MSAPMOHS216A Operate Breathing Apparatus	Annual
	MSAPMOHS217A Gas Test Atmospheres*	Annual
	Safe Work in Confined Space (RIIOHS202A – Enter and work in confined spaces) or MSAPMPER205B Enter Confined Space*	Annual
	HLTAID003 - Provide first aid	3 years
	HLTAID001 - Provide cardiopulmonary resuscitation	Annual
Line supervisors of Confined Space Entry Teams	MSAPMOHS216A Operate Breathing Apparatus*	Annual
	MSAPMOHS217A Gas Test Atmospheres*	Annual
	Safe Work in Confined Space (RIIOHS202A – Enter and work in confined spaces) or MSAPMPER205B Enter Confined Space*.	Annual
Contractors	MSAPMOHS216A Operate Breathing Apparatus	As per AS 2865-2009
	MSAPMOHS217A Gas Test Atmospheres*	As per AS 2865-2009
	Safe Work in Confined Space (RIIOHS202A – Enter and work in confined spaces) or MSAPMPER205B Enter Confined Space*	As per AS 2865-2009
	HLTAID003 - Provide first aid	As per AS 2865-2009
	HLTAID001 - Provide cardiopulmonary resuscitation	As per AS 2865-2009
Other** – line supervisor/ manager/project manager/ engineers	Safe Work in a Confined Space – Overview.	2 years

*Note – these courses are generally delivered as a block (over 3 days) initially and then as a block (1 day) for an annual refresher.

**Note – this training is only to be used for workers who enter confined spaces on an infrequent basis. These workers are only authorised to enter into a confined space as part of, and under the supervision of, a confined space entry team.

7 Monitoring and Audit

The application of this procedure shall be audited in accordance with the WHS Audit Schedule and the Integrated Management System Internal Audit Procedure (PRO-00002).

8 References

8.1 Legislation and other requirements

Description	Status	Location
AS/NZS 2865: Safe working in confined space	Active	www.saiglobal.com.au/online
AS/NZS 60079.29.2:2008 Explosive atmospheres – Gas detectors – Selection, installation, use and maintenance of detectors for flammable gases and oxygen	Active	www.saiglobal.com.au/online
Confined Spaces Code of Practice 2011	Active	https://www.worksafe.qld.gov.au/laws-and-compliance/codes-of-practice
How to Manage Work Health and Safety Risks Code of Practice 2011 (Qld)	Active	https://www.worksafe.qld.gov.au/laws-and-compliance/codes-of-practice
Queensland State Archives General Retention and Disposal Schedule for Administrative Records	Active	www.archives.qld.gov.au/Recordkeeping/RetentionDisposal/Pages/GRDS.aspx
Work Health and Safety Act 2011 (Qld)	Active	www.legislation.qld.gov.au
Work Health and Safety Regulation 2011 (Qld)	Active	www.legislation.qld.gov.au
Workplace Exposure Standard for Airborne Contaminants	Active	http://www.safeworkaustralia.gov.au/sites/swa/whs-information/hazardous-chemicals/exposure-standards/pages/airborne-contaminants

8.2 Supporting Procedures, document, forms, checklist

Description	Status	Location
MAN-00211 Corporate Safety – WHS Management System Framework	Active	Q-Pulse & Waternet
PRO-00014 Energy Tag and Lockout Procedure	Active	Q-Pulse & Waternet
PRO-00020 Health Monitoring and Immunisation Procedure	Active	Q-Pulse & Waternet
PRO-00009 Management of Hot Work Procedure	Active	Q-Pulse & Waternet
PRO-00002 Integrated Management System Internal Audit Procedure	Active	Q-Pulse & Waternet
PRO-00867 Safe Work with Plant Procedure	Active	Q-Pulse & Waternet
ERP-00079 WHS Emergency Preparedness and Response Procedure	Active	Q-Pulse & Waternet
PRO-00657 WHS Hazard Identification and Risk Management Procedure	Active	Q-Pulse & Waternet
Confined Space Entry Permit (FRM-00107).	Active	Q-Pulse & Waternet
Confined Space Register Template (TEM-00155)	Active	Q-Pulse & Waternet
High Risk Work Rescue Plan (TEM-00027)	Active	Q-Pulse & Waternet
Corporate Safety – Take 5	Active	Q-Pulse & Waternet

Description	Status	Location
Isolation Instruction Template (TEM-00077)	Active	Q-Pulse & Waternet
Job Safety and Environment Analysis Template (TEM-00013)	Active	Q-Pulse & Waternet
WHS Risk Assessment Guide (GDE-00044)	Active	Q-Pulse & Waternet

9 Record keeping

All records are to be retained, archived and disposed of in accordance with the *Queensland State Archives General Retention and Disposal Schedule for Administrative Records.* This requires that documents relating to high risk hazards must be retained for 80 years after the last action.

Specific recordkeeping requirements for confined space documentation are:

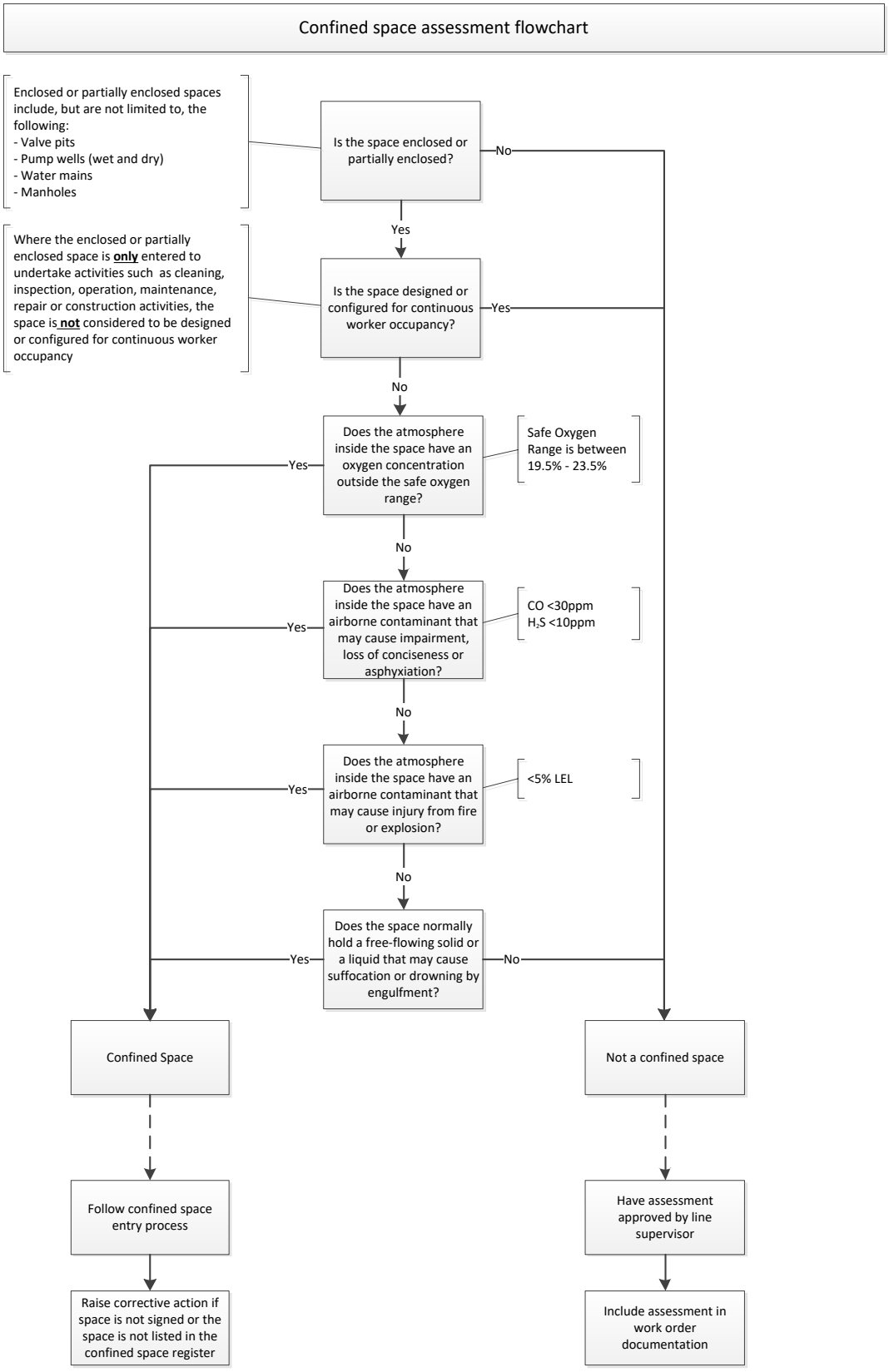
- JSEA/SWMSs which document a confined space risk assessment are to be attached to completed work order packages and scanned to CIS.
- Confined Space Entry Permits (FRM-00107) are to be attached to completed work order packages and scanned to CIS.

Any documents relating to confined space management which are not scanned to CIS must be stored in TRIM.

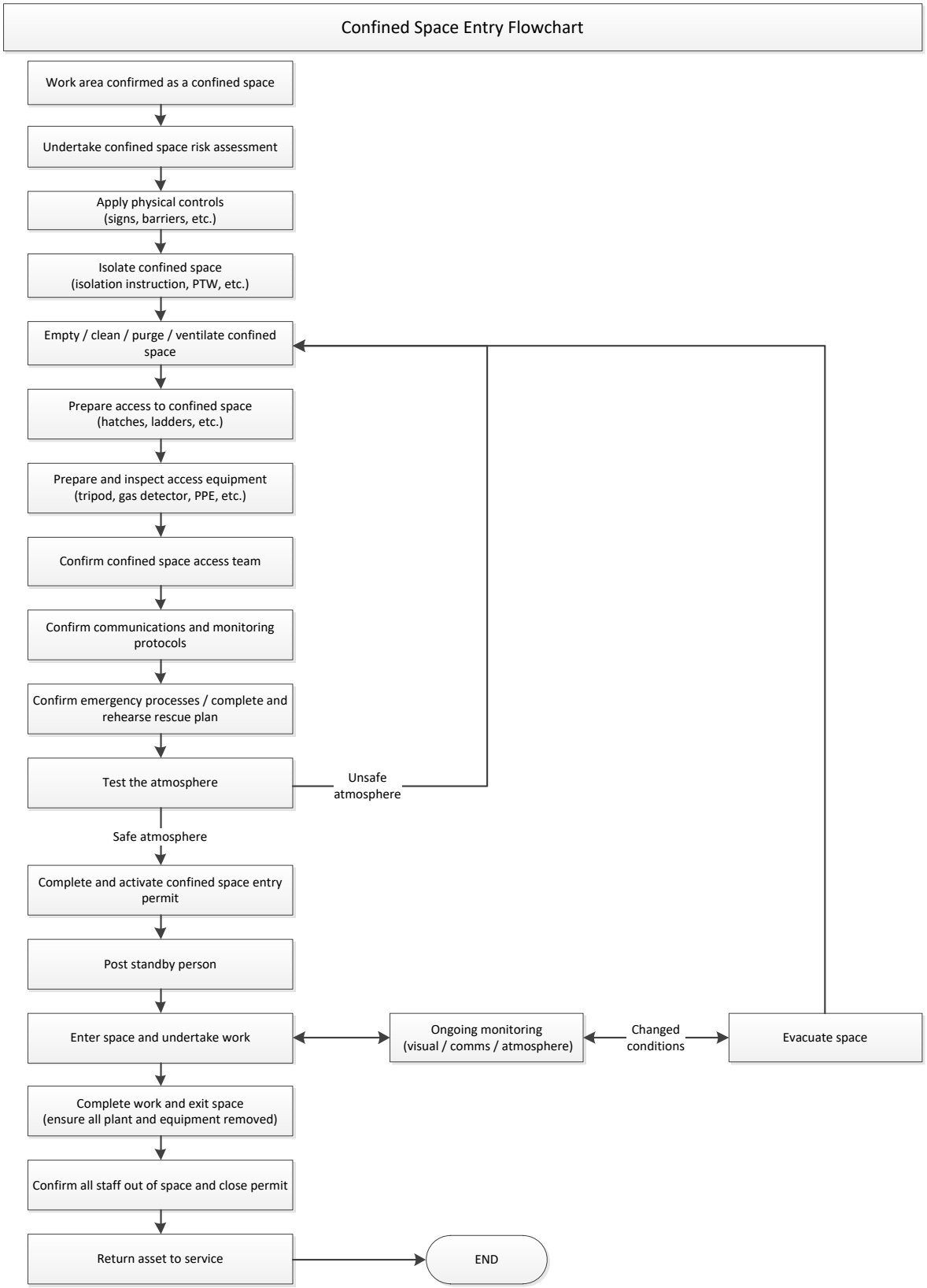
Appendix A – Confined Space sign specifications

Description	Status
Small metal identification sign	 9cm 12.5cm
Large Plastic Sign	 18cm 25cm
Confined space work signage	30cm 45cm  22cm 30cm

Appendix B – Confined space assessment flow chart



Appendix C – Confined Space entry flow chart



Appendix D – Confined space atmospheric testing flow chart