

# **STANDARD CONFINED SPACE**

**Published:** 

**JUNE 2024** 

# CONTENTS

| 1    | Purpose   | . 3 |
|------|---|-----|
| 2    | Objectives  | . 3 |
| 3    | Scope   | . 3 |
| 4    | Lifesavers  | . 3 |
| 5    | Definitions   | . 4 |
| 6    | Roles and Responsibilities                          | . 5 |
| 7    | General Requirements                                | . 5 |
| 7.1  | What is a Confined Space?                           | . 5 |
| 7.2  | Examples of Confined Spaces                         | . 5 |
| 7.3  | Examples of what are Not Considered Confined Spaces | . 6 |
| 8    | Confined Space Classifications                      | . 7 |
| 9    | Evaluating and Classifying Work Spaces              | . 7 |
| 9.1  | Non-Designated Confined Spaces                      | . 8 |
| 9.2  | Confined Space Register                             | . 9 |
| 9.3  | Confined Space Signage                              | 10  |
| 10   | Confined Space Entry                                | 10  |
| 10.1 | Hunter Water Confined Space Entry Permit Process    | 10  |
| 11   | Controlled Space Entry                              | 11  |
| 11.1 | Controlled Space Entry Process                      | 11  |
| 11.2 | Confined Entry Space Procedure                      | 11  |
| 12   | Gas Testing Requirements                            | 12  |
| 13   | Rescue and Emergency Process                        | 13  |
| 13.1 | Rescue – General Requirements                       | 13  |
| 13.2 | Rescue – Notification Protocols                     | 13  |
| 13.3 | Rescue – Hunter Water Rescue Planning               | 14  |
| 14   | Training  | 14  |
| 15   | Related Documents                                   | 15  |
| 16   | Associated Regulations and Standards                | 15  |

# **DOCUMENT INFORMATION**

#### Version history

Document review date is as per the Integrated Management System Standard (HW2013-421/22.002).

| Version | Author                                       | Changes   | Approved By   | Date Approved |
|---------|--|---|---|---------------|
| 1       | Paul Fray – Snr<br>WHS Advisor               | Original Release  | Peter Kembrey<br>– Executive<br>Manager<br>Corporate &<br>Legal | 01/09/16      |
| 2       | Elissa Peattie –<br>WHS Advisor              | Review and update. Updated<br>Restricted Entry Space Details                                    | Megan<br>Brewster –<br>WHS Manager                              | 01/12/18      |
| 3       | Paul Fray –<br>Safety/Risk<br>Assurance Lead | Confined Space Evaluation, Permit updates, new gas detectors                                    | Megan<br>Brewster –<br>WHS Manager                              | 01/06/22      |
| 4       | David Appleby                                | Review, update, add hyperlinks,<br>remove roles and responsibilities and<br>put in new template | Ian Pike –<br>Executive<br>Manager<br>People &<br>Culture       | 04/06/24      |

#### **Document control**

| Document Owner                 | Group Manager SH&W                                  |  |  |  |
|--------------------------------|---|--|--|--|
| Mandatory Reviewer(s)          | SH&W Team   |  |  |  |
| Approvals                      | Executive Manager People & Culture                  |  |  |  |
| Key Document Details           | Public System Critical Legal/Reg Req Board Approval |  |  |  |
| Previous Document<br>Rescinded | Standard – HW2016-407/1/2.012                       |  |  |  |

| Approved By   | Executive Manager People & Culture | TRIM No    | HW2020-285/10.007 |
|---------------|------------------------------------|------------|-------------------|
| Approved Date | 04/06/2024                         | Version No | 4                 |

# 1 Purpose

This document describes the standards and procedures within Hunter Water Corporation (HWC) to effectively manage risks associated with Confined Space. It represents the HWC Workplace Health and Safety (WHS) Management System's commitment to compliance with the NSW WHS Act and WHS Regulation.

# 2 **Objectives**

The objectives of this standard are to ensure that all areas, functions, and work processes that may have a Confined Space risk are effectively managed to ensure the health and safety of Hunter Water people, contractors, and the general public.

#### 3 Scope

This Standard applies to all Hunter Water Business Units. This standard covers the requirements associated with Confined Space within HWC.

### 4 Lifesavers

The Hunter Water Lifesavers are a set of minimum behaviours related to high-risk activities.



# I will implement all of the required controls for confined space tasks.

- // Only undertake confined space work if trained and competent
- // Complete a confined space entry permit referencing a Rescue Plan for each confined space entry task
- // Test the atmosphere at the top, middle and bottom of the space, and conduct continuous monitoring
- II Ensure rescue and safe access equipment is set up prior to entry as per Rescue Plan
- // Ensure standby person maintains the entry log and clear communication with entry personnel

# 5 Definitions

| Term                     | Definition  |  |
|--------------------------|---|--|
| Safety<br>Interactions   | Interactions are safety observations where observers engage with workers,<br>understand work completed versus work intended, and verify alignment with the<br>business Lifesavers. Interactions provide an opportunity for positive reinforcement<br>and intervention from a position of care. Interactions gather important safety<br>assurance data.  |  |
| Confined Space           | <ul> <li>A Confined Space is a classification based on the outcome of a Confined Space Evaluation where the space is deemed a Confined Space requiring a Confined Space Entry Permit and confined space trained personnel.</li> <li>A Combined Space: <ul> <li>May be enclosed or partially enclosed; and</li> <li>Is not intended or designed primarily as a place of work; and</li> <li>Is at atmospheric pressure during occupancy.</li> </ul> </li> <li>And at least one of the following: <ul> <li>Have an atmosphere containing potentially harmful levels of contaminant;</li> <li>Have an unsafe oxygen level – less than 19.5% or greater than 23.5%); and</li> <li>Cause engulfment if correct isolation/flow control procedures are followed.</li> </ul> </li> </ul>   |  |
| Restricted Work<br>Space | <ul> <li>A Restricted Work Space (Controlled Entry Space) is a classification based on the outcome of a Confined Space Evaluation form where the space or activity may not be technically deemed a confined space but benefit from specific controls to ensure the activity is safely completed – e.g., some types of excavations and entry to above ground switch rooms at wet well pump stations.</li> <li>A Restricted Work Space: <ul> <li>May be enclosed or partially enclosed;</li> <li>Is not intended or designed primarily as a place of work;</li> <li>Is at atmospheric pressure during occupancy</li> </ul> </li> <li>BUT DOES NOT OR WILL NOT <ul> <li>Have an atmosphere containing potentially harmful levels of contaminant;</li> <li>Have an unsafe oxygen level – less than 19.5% or greater than 23.5%); and</li> <li>Cause engulfment if correct isolation/flow control procedures are followed</li> </ul> </li> <li>Permanent assets deemed Restricted Work Space (Controlled Entry Space) must have a Controlled Entry Space sign at the entrance.</li> <li>The HWC Confined Space Evaluation Form must be used to evaluate and determine if spaces are classified as Confined Spaces or Restricted Workspaces.</li> </ul> |  |
| Energy Source            | Energy-related hazards include but are not limited to:<br>Chemical hazards<br>Electricity – mains, battery, solar, High Voltage<br>Gasses<br>Gravity<br>Heat<br>Hydraulic<br>Hydrostatic<br>Mechanical<br>Pressure – fluids and gasses<br>Pneumatics  |  |

| Term                        | Definition  |
|-----------------------------|---|
|                             | <ul><li>Steam</li><li>Radiation</li></ul>   |
| High-Risk Work<br>Permit    | A permit developed to lower the risk of activities by controlling when and how the high-risk activity is undertaken may include Confined Space, Work at Height, Electrical Live Test, and Electrical High Voltage.                    |
| Isolation – Flow<br>Control | A Flow Control isolation does not have the security of Yellow or Red locks. Flow control shut-offs are typically permitted only for lower-risk sewer and water tasks. Refer to Hunter Water Isolation and Flow Control Risk Standard. |
| Isolation –<br>Lookout      | Isolation that incorporates yellow and red locks. Typically for electrical and mechanical work and higher-risk water and sewer-related tasks. Refer to Hunter Water Isolation and Flow Control Risk Standard.                         |
| Isolation Plan              | An Isolation Plan is the written record of an Isolation Planning process. Depending<br>on the type of Isolation, various kinds of records can be used. Refer to Hunter<br>Water Isolation and Flow Control Risk Standard.             |
| PCBU                        | A 'person conducting a business or undertaking' (PCBU) is a legal term under WHS<br>laws for individuals, businesses or organisations conducting business.<br>A person who performs work for a PCBU is considered a worker.           |

#### 6 Roles and Responsibilities

Roles and Responsibilities can be located in the WHSMA Manual.

Individual guidance booklets are in the Responsibility, Accountability, and Authority Manual HW2021-534.

#### 7 General Requirements

#### 7.1 What is a Confined Space?

A 'confined space' is defined as an enclosed or partially enclosed space that:

- is not designed to be occupied by a person; and
- is intended to be at normal atmospheric pressure while any person is in space; and
- is or is likely to be a risk to health and safety from:
  - o an unsafe oxygen level; or
  - contaminants, including airborne gases, vapours, and dust that may cause injury from fire or explosion; or
  - o harmful concentrations of any airborne contaminants; or
  - o engulfment

#### 7.2 Examples of Confined Spaces

Some examples of potential Confined Spaces requiring confined space evaluation are:

- Sewer
  - Receiving maintenance holes/access chambers;
  - Traversable pipes
  - o **Tunnels**
  - o Wet wells

- o Dry Wells
- Valve pits
- o Aeration tanks
- Treatment
  - o Process tanks and conduits
  - Including enterable grease traps
  - o Water
  - Traversable water mains
  - o Enclosed water distribution reservoirs
- General
  - Vats, tanks, pits, pipes, ducts, flues, chimneys, silos, containers, pressure vessels, underground sewers, shafts, trenches
  - Tunnels or similar enclosed or partially enclosed structures when these examples meet the definition of a confined space in the WHS Regulations

Note: **Trenches** are not considered confined spaces based on the risk of structural collapse alone, but will be confined spaces if they potentially contain concentrations of airborne contaminants that are **harmful** - **may cause impairment**, **loss of consciousness or asphyxiation** and **the risk of engulfment and drowning is not effectively controlled**.

Not all trenches and excavation work in Hunter Water will be deemed confined space. The task could potentially be considered a Restricted Work Space where the risk of a **Harmful** atmosphere is extremely low. However, the work crew may deem continuous gas monitoring and safe egress in the unlikely event of a gas detector alarm. This approach would ensure adequate controls. Hunter Water requires a risk-based approach using the Confined Space Evaluation form and completing the On-Site 3in1 Risk Assessment or equivalent processes for contractors and delivery partners.

#### 7.3 Examples of what are Not Considered Confined Spaces

Some examples of spaces which are not typically confined spaces:

- places that are intended for human occupancy and have adequate ventilation, lighting, and safe means of entry and exit, such as offices and workshops
- some enclosed or partially enclosed spaces that at particular times have harmful airborne contaminants but are designed for a person to occupy, for example, abrasive blasting or spraypainting booths and
- enclosed or partially enclosed spaces that are designed to be occasionally occupied by a person if the space has a readily and conveniently accessible means of entry and exit via a doorway at ground level, for example:
  - $\circ~$  a cool store accessed by an LPG-powered forklift to move stock
  - a fumigated shipping container with a large ground-level opening that will facilitate escape and rescue
  - $\circ$  further examples are shown below
- trenches and other excavations where there is no likelihood of structural collapse, harmful atmosphere, or engulfment and drowning.

|  | Confined space criteria                              |  |  | Confined space?                                  |                           |            |   |
|--|--|--|--|--|---------------------------|------------|---|
|  | Α  | В  | С  |  | D                         |            |   |
|  |  |  | Is the space   | Does the space present a risk from:              |                           |            |   |
| Example of the space and activity  | ls the space<br>enclosed or<br>partially<br>enclosed | Is the space not<br>designed or<br>intended to be<br>occupied by a<br>person | at normal<br>at normal<br>atmospheric<br>pressure while<br>any person is in<br>the space | Harmful airborne<br>or flammable<br>contaminants | An unsafe<br>oxygen level | Engulfment | B, C and at least<br>one of D is yes,<br>then the space is a<br>confined space. |
| Sewer with access via a vertical<br>ladder                                       | ~  | ~  | ~  | ~  | ~                         | ~          | Yes   |
| Dislodging grain from a silo with<br>sole access through a manhole at<br>the top | ~  | ~  | ~  | ~  | ×                         | ~          | Yes   |
| Cleaning spilled cadmium pigment<br>powder in a shipping container               | ~  | ~  | ~  | ~  | ×                         | ×          | Yes   |
| Inspecting a fuel tank in the wing<br>of an aircraft                             | ~  | ~  | ~  | ~  | ×                         | ×          | Yes   |
| Dislodging a sludge blockage in a<br>drain pit                                   | ~  | ~  | ~  | ~  | ~                         | ~          | Yes   |
| Internal inspection of a new, clean<br>tank prior to commissioning               | ~  | ~  | ~  | ×  | ×                         | ×          | No  |
| Internal inspection of an empty<br>cement silo through a door at<br>ground level | ~  | ×  | ~  | ×  | ×                         | ×          | No  |
| Stocktake using an LPG forklift in a<br>fruit cool store                         | ~  | ×  | ~  | ~  | ×                         | ×          | No  |
| Installing insulation in a roof cavity   | ~  | ~  | ~  | ×  | ×                         | ×          | No  |

Source: NSW Confined Space Code of Practice 2019

## 8 Confined Space Classifications

The structure and a specific set of circumstances determine a confined space. The exact 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. The movement of a person's head or upper body below ground level does not trigger a confined space. A confined space classification has to have been established in the first place.

A space may become a confined space if work to be carried out in the space would generate **harmful** concentrations of airborne contaminants (e.g., activate a lower-level gas alarm detection).

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

Temporary control measures such as ventilation/extraction or continuous gas monitoring may assure workers that activities within a restricted workspace do not trigger a condition that may be deemed a confined space classification (e.g., the atmosphere becomes harmful).

The Confined Space Assessment Diagram, included in Appendix A, will assist in determining whether a space is a 'confined space' for the WHS Regulations.

The Hunter Water Confined Space Evaluation form (or equivalent approved contractor/delivery partner process) will assess and classify potential confined spaces.

# 9 Evaluating and Classifying Work Spaces

Responsible Managers must arrange confined space evaluations on permanent assets and routine tasks that may be considered confined spaces.

For facilities, equipment, or tasks where a confined space classification has not been completed, the workgroup leader should arrange a confined space evaluation in conjunction with trained and competent persons.

The outcome of the assessment could be;

- a. **Confined Space** Confined Space Permit, Confined Space Rescue Plan, and Pre-task Risk Assessment.
- b. Restricted Work Space (Controlled Entry Workspace) = Supplementary controls as per Confined Space Evaluation and Pre-task Risk Assessment. Some permanent facilities deemed Controlled Workspaces will have signage and procedures detailing safe access protocols. An authorised and competent person or persons shall undertake a risk assessment before an area is classified as a restricted space. The assessment shall be in writing and consider at least the following:
  - The nature of hazards associated with the confined space/restricted space, which may include:
    - atmospheric hazards;
    - fire hazards;
    - engulfment hazards; or
    - task related hazards
  - The work required to be done, including the need to enter the confined space/restricted space
  - $\circ$   $\,$  The range of methods by which the work can be done
  - The hazards involved and associated risks involved with the actual method selected and the equipment proposed to be used
  - Emergency response procedures
  - The competence of the persons to undertake the work

Risk assessments shall be reviewed and revised whenever there is suspicion or evidence to indicate that there may be a change in the risk(s) posed to employees.

c. Ordinary Work Space - Pre-task Risk Assessment

#### 9.1 Non-Designated Confined Spaces

Suppose a planned job or breakdown occurs, and a potential confined space has not been previously assessed. In that case, workers must use the Confined Space Evaluation Form on the Hunter Water Intranet. The following assessment tool can also be used to assist in the determination of whether it is or is not a confined space.



NSW Code of Practice - Confined Space 'Assessment Diagram'

#### 9.2 Confined Space Register

Confined Spaces and Permanent Restricted Work Spaces (Controlled Entry) must be recorded in the Hunter Water Confined Space Register and Ellipse.

The Hunter Water Confined Space register will contain a combination of specific confined spaces, i.e., Sewer pump station wet wells, reservoirs, water storage tanks, treatment plant tanks, etc., and also groups of common confined space assets such as the hundreds of sewer rising and gravity mains around the Hunter Water network.

The confined space register should be available to Hunter Water employees and contractors via the Hunter Water Safety Intranet. <u>Confined Space Register.</u>

#### 9.3 Confined Space Signage

Wherever practicable, confined spaces should have a "Danger – Confined Space. Entry by Permit only" sign displayed at the entrance point or in the work area.

It must be noted that it is not practicable to place signage at most sewer access chambers (manholes) across the network. It is well understood by Hunter Water personnel and approved contractors that these assets are confined spaces, and entry permits are required. The general public is restricted from entry due to the design and limited keys/tools needed to open the maintenance hole covers.

Buildings and facilities containing confined spaces must be secured to prevent unauthorised access.



### **10** Confined Space Entry

#### 10.1 Hunter Water Confined Space Entry Permit Process

The HW confined space entry permit is completed in conjunction with the Pre-Task Risk Assessment (On Site 3in1) and is available for download from the HW Safety Intranet page. Note – HW is migrating the PTRA and high-risk work permits to the "Protecht Pre-Task Risk Assessment (PTRA)" register.

- All persons entering or working in a confined space, acting as standby persons, or supervising confined space work must have received the appropriate confined space entry training and be competent in confined space entry.
- All persons entering the confined space must wear an appropriate harness.
- Identify all hazards associated with the job, assess the risk, and ensure appropriate risk control measures are developed and adopted.
- The person in charge of the job shall complete a Confined Space Entry Permit before any person entering a confined space
- All workers are prohibited from entering a confined space where a safe atmosphere cannot be achieved. Atmospheric testing using an approved serviceable gas monitor must occur before anyone enters or conducts hot work in a confined space. The atmospheric testing results must be recorded on the Confined Space Entry Permit. The confined space atmosphere should be tested at the top, middle, and bottom, and peak readings should be documented on the Confined space permit within the PTRA.
- Persons working in a confined space or conducting hot work in a confined space shall ensure that the atmosphere is continuously monitored while any person is in the confined space or conducting hot work on the confined space using an approved serviceable gas monitor
- Ensure appropriate personal protective equipment is worn at all times
- Consideration should be given to how the entry persons will safely access and egress the confined space. This will be reflected on the permit.
- When hot work is to be carried out in or around a confined space, a Hot Work Permit must be completed before the work commences (refer to WHS Standard Hot Work). This permit is also completed within the PTRA for the task being undertaken.

- Energy sources and other sources of potential air contamination or engulfment should be isolated with a "hard Isolation" lock-out
- Ensure least one standby person must be present directly outside the confined space and in communication with the person(s) in the confined space whenever the confined space is occupied
- At least one standby person must be present directly outside the confined space and in communication with the person(s) in the confined space whenever the confined space is occupied
- Rescue method must be planned and recorded on the entry permit.
- Office-based staff who have occasional need for entry to confined spaces and who have undertaken the necessary training shall arrange such entry with an experienced Field Supervisor who shall ensure that trained and experienced staff provide onsite assistance
- On completion of confined space work, all completed Confined Space Entry Permits and Hot Work Permit, if applicable, must be forwarded to the relevant Supervisor and must be stored for a minimum of two years after the date of entry
- Gas detectors must be within the calibration period and have a periodic bump test completed
- Suitable signage and barricades must be erected to wear and protect other workers and the general public from hazards associated with the confined space work, including open pits or voids

# 11 Controlled Space Entry

#### 11.1 Controlled Space Entry Process

Hunter Water's Controlled space entry permit is now completed as part of the "Protecht Pre-Task Risk Assessment (PTRA)".

- There are some buildings and stations that have a confined space within the facility usually below ground level (i.e., wet/dry wells). Waste Water Pump Stations often contain electrical switchboards and other assets at the ground, which require periodic access for maintenance and inspections but are not necessarily within a confined space. Under certain conditions (flood, fault, high levels of organic matter), the confined space could influence the atmosphere at the ground level within the facility. Therefore, protocols need to be developed to restrict unauthorised entry and specify steps to be followed to test and ventilate the above-ground level section of the facility before entry. These environments will be classified as a Controlled Entry space in the confined space register and have a Controlled Entry Space sign at the building entry point.
- Controlled Entry Spaces have been designated where we believe there is no risk of an unsafe atmosphere, but to err on the side of caution, a gas monitor is to be used for the duration of the job.
- Within a facility with a combination of a Controlled Entry Space and a Confined Space, the access point at which the space is designated Confined Space should contain a Confined Space sign and ideally have another access designation, i.e., chain or safety gate.

#### 11.2 Confined Entry Space Procedure

To enter a Controlled Entry Space, you must:

- Gain Authorisation (asset owner/phone Hunter Water Dispatch)
- Conduct on Site PTRA
- Open the facility doorway
- Test the atmosphere at the doorway with a confined space gas detector. Smell and visually check the conditions inside the space from the doorway
- Switch on ventilation and extraction fans (where fitted) wait 10 minutes
- Re-test the atmosphere at the doorway with a confined space gas detector

- If the conditions are safe, enter that level of the building only, maintaining continuous gas monitoring
- There is no access beyond the confined space designated point without proper confined space procedures
- If the Gas detector alarms, all personnel will retreat from the space, which will be treated as a regular confined space.
- Confined Space Permits and Rescue Plans are not required to enter Controlled Entry Spaces.
   Space Permits and Rescue Plans are not required to enter Controlled Entry Spaces.
- Confined Space Training is not required to enter a Controlled Entry Space. However, the entrant
  must be competent in using the gas monitor, know what to do if it alarms, and be aware of the risks
  associated with confined spaces.
- If any activities alter the atmosphere (i.e., hot work), consider completing a confined space permit.

# **12 Gas Testing Requirements**

The atmospheric testing requirement of the PTRA - confined space entry permit must be completed before entry to confirm the space is safe to enter.

Continuous gas monitoring when persons are in the space must occur via a personal gas monitor and a static gas monitor on a drip line positioned at the breathing zone level of workers when completing the task.

If an incident includes an unsafe atmosphere (gas detector alarm), all persons must immediately exit the space.

The following gasses are typically experienced across the drinking water and wastewater industry.

For confined space entry involving sewer (wet well, maintenance hole, deep live sewer excavation) or other scenarios where there is a potential for Volatile Organic Compounds (VOCs), a 5-gas monitor (including VOC sensor must be used).

**Note:** Lower Explosive Limit (LEL) is typically set for Methane but will detect other Flammable Airborne Contaminants.

**Note:** Volatile Organic Compounds (VOCs) can be present in sewer and stormwater assets due to compounds/chemicals disposed of in the sewer system. Be especially vigilant around industrial areas and notify dispatch if any VOC alarms are recorded for future reference. The type of VOC sensor should be selected based on Environmental and Trade Waste data analysis.

| Gas /<br>Contaminant                 | Specific Gravity                     | Risks  | Permissible Entry Gas Detector<br>Level Alarm Level  |                  |
|--------------------------------------|--------------------------------------|--|--|------------------|
| Oxygen                               | 1.1 – will generally<br>mix with air | Air mix<br>incompatible,<br>Supports<br>combustion | >19.5 to <23.5%  | <19.5 and >23.5% |
| Hydrogen<br>Sulphide                 | 1.27 will settle in<br>low areas     | Explosion, Air contamination                       | <10 ppm  | Ten ppm          |
| Carbon Monoxide                      | 0.06 – is lighter<br>than air        | Air contamination                                  | <50 ppm 50 ppm   |                  |
| Flammable<br>Airborne<br>Contaminant | Varies                               | Fire, Explosions,<br>Air contamination             | Gas detectors are typically set for 5% of<br>the Methane Lower Explosive Limit<br>(LEL), which provides detection for a<br>range of possible substances. |                  |
| Volatile Organic<br>Compounds        | Varies                               | Fire, Explosions,<br>Air contamination             | Dependent on the VOC being investigated  |                  |

## 13 Rescue and Emergency Process

#### **13.1 Rescue – General Requirements**

- Any gas monitor alarm requires persons to egress from the space immediately.
  - Stop and assess the situation determine the source of gas.
  - o Gas monitor peaks should be reset, and space retested before considering re-entry.
- Standby person cannot enter the confined space for any reason.
- If a rescue person is required to enter a confined space, this would constitute at least a 3-person work crew.
- If an entry person detaches from the safety line while in the space and there is a risk of hazardous atmosphere, the rescue person must have access to Breathing Apparatus or an Oxygen Self Rescuers (e.g. ELSA Unit), depending on the rescue plan.
- Rescue equipment must be set up before entry, as Hunter Water Safe Access and Rescue Plans support safe access and egress into some spaces (fall protection). Setting up rescue equipment can be complicated and time-consuming. In an emergency, personnel could rush and make mistakes, putting others at risk.
- Where there is a risk of a hazardous atmosphere, the Rescue Process must be able to be completed within 5 minutes due to preservation of life considerations. Consider providing SCBA or ELSA units for entry persons where routine rescue would take longer than 5 minutes
- Emergency Services should always be called to a confined space rescue.
- Emergency Services should never be relied upon as the primary rescue team, as they will often take longer than 5 minutes to respond. Rescue plans must enable site personnel to rescue entry personnel. There must not be primary dependence on emergency services for rescue.
- In some cases, i.e. rescues not involving an unsafe atmosphere or engulfment, where first aid treatment can safely be provided within the confined space, Emergency Services are often better placed to stabilise, immobilise and safely extract an injured patient.

#### 13.2 Rescue – Notification Protocols

Implement rescue plan, phone Emergency Services, Notify Hunter Water dispatch / Activate the Emergency GPS Transponder - in this order.

When safe to do so, call the Supervisor and the SHW Team.

If Emergency Services are required to attend, the standby person (or other delegates on site) call Emergency Services as per the following process;

- Telephone 000 ask for Fire and Rescue
- Provide the following information:
  - o What town
  - Address and GPS, if available
  - Nearest cross street or landmark
  - Nature of emergency
  - Number of casualties
  - Contact phone number

Request assistance from despatch if required. If necessary, activate the man-down GPS transponder. Call the Supervisor and report the incident.

If possible, have someone meet and direct emergency services if access is complex or unclear.

When emergency services arrive, quickly explain the situation and ensure officers know about hazards.

Continue atmospheric monitoring while personnel are inside the confined space.

Confined space standards apply during the rescue

When the situation has been effectively controlled, complete any additional notifications and incident recording.

#### 13.3 Rescue – Hunter Water Rescue Planning

Hunter Water shall risk assess and identify the routine scenarios/locations where Rescue Plans can be created, published, and accessible to work crews.

Rescue equipment must be available and support the rescue methods prescribed in the Rescue Plans.

Rescue plans shall be periodically rehearsed to ensure personnel are familiar with the plan and equipment.

A task-specific rescue plan must be developed if the confined space task is new or unique. If required, the work group leader may consider engaging an external Confined Space specialist contractor.

Hunter Water's current Confined space rescue plans can be located on the Hunter Water intranet <u>Hunter</u> <u>Water Confined Space Rescue Plans.</u>

# 14 Training

Hunter Water must provide training in Confined Space Entry.

The training must include the following topics:

- Enter and Work in Confined Spaces;
- Work by an Issued Permit;
- Gas Test Atmospheres

Specific practical training on the Hunter Water Gas Detectors and bump test procedures should be completed.

Records of all training must be kept while the worker is carrying out the work, and for five years after the day, the worker stops carrying out the work. These records must also be available for inspection by the regulator.

# **15 Related Documents**

| Document ID | Document Title   |
|-------------|--|
| Assessment  | Pre-Task Risk Assessment PTRA - Protecht                         |
| Permit      | Confined Space Entry Permit - Protecht                           |
| Form        | Confined Space Evaluation Form                                   |
| Standard    | Consultation, Cooperation, Participation and Coordination        |
| Booklet     | Hunter Water Lifesavers – Confined Space                         |
| SWMS        | Hunter Water SWMS – Confined Space                               |
| Plan        | Hunter Water Confined Space Rescue Plans                         |
| Register    | Confined Space Register  |
| Form        | Confined Space Evaluation Form                                   |
| Manual      | WHSMA  |
| Manual      | Responsibility, Accountability and Authority Manual (HW2021-534) |

# **16** Associated Regulations and Standards

| Document ID      | Document Title  |
|------------------|---|
| Act              | WHS Act 2011 (NSW)  |
| Regulation       | WHS Regulation 2017   |
| Code of Practice | Code of Practice – Work Health and Safety Consultation        |
| Code of Practice | Code of Practice – How to manage work health and safety risks |
| Code of Practice | Code of Practice – Confined Spaces                            |