



Confined Space Entry Procedure

Health & Safety

1 Purpose and Scope

The purpose of this Procedure is to ensure the health & safety of employees, contractors and visitors by providing guidance and standards that protect personnel from the hazard of working in a confined space.

This Confined Space Entry Procedure provides mandatory requirements to support sustained conformance with Roy Hill Holdings HSES Performance Standard PS16 – Safety Processes.

This procedure applies to all persons entering Roy Hill operations, other workplaces or any area which Roy Hill has accountability.

2 General Requirements

A confined space is an enclosed or partially enclosed space which:

- a) Is at atmospheric pressure during occupancy;
- b) Is not intended or designed primarily as a place of work;
- c) May have restricted means for entry and exit; and
- d) May -
 - i. Have an atmosphere which contains potentially harmful levels of contaminant;
 - ii. Not have a safe oxygen level; or
 - iii. Cause engulfment.

Entry to a confined space is any case where, as a minimum, insertion of the head up to the shoulders occurs.

Where possible, alternatives to the work scope or method should be considered to avoid the need to enter a confined space.

No person shall enter a confined space unless they have been trained as competent to do so.

Only personnel who have been authorised in writing by the relevant Area Manager responsible for the work area are permitted to issue Confined Space Permits in the work location associated with the permit. In all cases, entry to a confined space is subject to a Confined Space Entry Permit.

2.1 Identification


An initial site survey shall be conducted where all confined spaces at each site and/or work area are identified and the inherent risks analysed and risk assessed.

All identified confined spaces shall be allocated a unique identification number and registered in the Confined Space Register.

Any new construction or modification to structures, purchase or modification of plant or equipment shall be assessed to identify any creation of, or impact to, confined spaces.

Each entry point to identified confined spaces shall be signposted (refer to appendix 1 for an example of confined space signage) to identify the Confined Space and that no entry is permitted without an authorised Confined Space Entry Permit.

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2.2 Hazard Identification and Risk Assessment

Each confined space shall have a risk assessment conducted to identify any hazards associated with the confined space and controls to mitigate those hazards. The risk assessments shall consider activities where hazards may be exacerbated by a confined space (eg hot work, noise).

A generic risk assessment may be appropriate where multiple similar confined spaces are present.

A task specific risk assessment (JHA) shall be conducted as a minimum for any work to be performed within a confined space.

In all cases, Emergency response personnel shall be consulted to assist in developing emergency rescue plans prior to entry to a confined space.

2.2.1 Risk Assessment / JHA

A task-specific Job Hazard Assessment shall be completed by the work team at the time of planning work to be conducted in a confined space. The JHA shall take into consideration the specific hazards associated with that confined space and the nature of the proposed work. The first consideration in a JHA for all confined space tasks shall be the proving the atmosphere as safe.

Other factors to be considered in developing the JHA include:

- The information obtained during the initial risk assessment and evaluation regarding the hazards of the confined space and the control measures identified
- The work to be done and the range of methods available to do the work.
- The hazards and associated risks involved with the actual work method selected and equipment proposed
- Emergency response and rescue considerations
- The competence of the work team
- The need for cleaning and purging of the confined space
- The atmospheric testing and ventilation requirements for the confined space
- The need for and types of PPE or safety equipment required
- Any other factors appropriate to the confined space and the nature of work.

3 Cleaning and Purging

Cleaning and purging of a vessel or confined space may be required to safely remove all flammable, explosive or toxic gases and materials.

Initial cleaning should be performed (where practicable) from outside the confined space.

Initial cleaning should continue until the hazard of atmospheric contaminants (if any) has been reduced as far as practical.

If entry is required for cleaning purposes, a JHA shall be completed to assess the hazards specifically associated with the cleaning task and the confined space.

Each person entering the confined space shall be issued with, and wear, appropriate Personal Protective Equipment as identified in the JHA as a control measure to eliminate or reduce the risk of injury.

Hoses and hose couplings shall be inspected for damage, replaced as necessary and secured against accidental dislodgment during operation.

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Safety precautions must also reference Safety Data Sheet (SDS) and specific equipment safety data.

The space shall be adequately illuminated to ensure good visibility for the duration of work.

3.1 Purging of a Confined Space

Purging is generally conducted for vessels that have a potential to contain an explosive and/or toxic atmosphere such as fuel tanks and chemical storage vessels. Purging is conducted by introducing an inert gas, such as nitrogen, or flushing with water to displace the explosive or toxic contaminant. The following shall be in place for the purging of a confined space:

- Purging of any vessel/confined space cannot commence without the approval of the Manager or Superintendent of the work area
- The purging activity shall be conducted from outside of the vessel/confined space
- The pre-task assessment (JHA) and planning process must assess the risks associated with the presence of persons working nearby. Potential impact on other activities and the environment. Environmental impacts may arise due to wind factors or exhaust fumes
- The location of exhaust were required shall be far enough away from personnel so that no risk to health results
- The Manager or Superintendent shall determine the extent of the area to be restricted and barricaded to ensure only authorised personnel gain entry for the duration of purging
- For purging activities where an inert gas is to be used, there shall be an escape / rescue plan in place, including the availability of suitable respiratory protection devices that could be used in the event of an emergency
- Any vessel/confined space has been purged by the use of an inert gas shall verified as free of the explosive and/or toxic contaminant through gas testing by an authorised gas tester
- Once verified as free of contaminants the vessel/confined space shall then be ventilated with air until the atmosphere within the vessel/confined space is consistent with the natural ambient air with a safe oxygen range between 19.5 % and 23.5% by volume.

Personnel shall not enter the vessel/confined space under any circumstances while purging is taking place.

3.2 Hydro-Jetting

Where practical, Hydro Jetting shall be conducted with the operator remaining outside the confined space. Should the task need to be conducted within the confined space, the requirements set out in section 4 of this procedure including a Confined Space Entry Permit and rescue plan shall be in place.

- The pre-task assessment (JHA) and planning process must assess the hazards associated with the presence of persons working nearby and potential impact on other activities and the environment
- Hydro-jetting shall only be performed by trained, competent personnel
- Controlled areas and signage shall be implemented to clearly identify the hazards and to restrict unauthorised entry to the work area
- If there is the potential for a flammable environment, the nozzle of the hydro jetting equipment shall be earthed to decrease the possibility of the generation of static electricity (refer AS1020)
- There shall be direct communication between the nozzle operator and the pump operator
- Fluids shall be continuously removed from the confined space, especially when carrying out this work in fuel tanks

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- If Hydro Jetting from inside the confined space the high pressure/low volume gun shall be used intermittently rather than continuously to allow adequate replacement of air.

3.3 Steam Cleaning

Where practical, steam cleaning shall be conducted with the operator remaining outside the confined space. Should the task need to be conducted within the confined space, the requirements set out in section 4 of this procedure including a Confined Space Entry Permit and rescue plan shall be in place.

Steam can become an asphyxiate by displacing oxygen in a Confined Space environment, therefore continual atmospheric monitoring shall be in place for any steam cleaning activities performed by personnel from inside the confined space.

- Steam Cleaning shall only be performed by trained, competent personnel
- Controlled areas and signage shall be in place to clearly identify the hazards and to restrict unauthorised entry to the work area
- If there is a possibility of a flammable environment, the nozzle of the steam hose shall be earthed to the confined space enclosure to decrease the possibility of generating static electricity (refer AS1020).
- AT the completion of steam cleaning the space shall be ventilated with air until the atmosphere within the vessel/confined space is consistent with the natural ambient air with a safe oxygen range between 19.5 % and 23.5% by volume.

3.4 Abrasive Blasting

Where practical, abrasive blasting shall be conducted with the operator remaining outside the confined space. Should the task need to be conducted within the confined space, a Confined Space Entry Permit shall be in place.

- Abrasive Blasting shall only be performed by trained, competent personnel
- Any abrasive blasting is to be conducted in accordance with the WorkSafe Code of Practice: Abrasive Blasting, as a minimum

Blasting materials shall be approved via the Chemical approval process and contain less than 1% free silica

- Controlled areas and signage shall be implemented to clearly identify the hazards and to restrict unapproved entry to the work area
- Abrasive Blasting shall only be undertaken where suitable, approved air-supplied respirators are used in accordance with statutory requirements

Operators shall be trained in the use and limitations of the airline respirator.

Airline respirators shall have a regular maintenance and testing programme in place.

- The air-line to the respirator shall be raised off the ground wherever possible to ensure that there is no possibility of disruption to airflow. Where this is not possible, the line must be adequately guarded to prevent accidental interruption of flow.

The airline intake shall be in fresh air with no risk of contamination

- The space shall be adequately illuminated to ensure good visibility
- Actuating devices requiring positive effort by the operator (hand or foot) to keep the blasting apparatus supply valve open shall be fitted with a Dead Man Control.
- Escape/Rescue equipment as identified in the JHA & Rescue Plan shall be readily available for the duration of the task.

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3.5 Cleaning Equipment

All equipment used for use in a confined space shall be maintained in good condition.

- Actuating devices requiring positive effort by the operator (hand or foot) to keep the supply valve open shall be fitted to all high pressure cleaning equipment used in confined spaces (eg Dead Man Control)
- Hoses used for high pressure cleaning shall have a bursting pressure of at least twice the intended operating pressure
- High pressure hoses shall be tagged, indicating working pressure and age
- Any damaged hose shall be disposed of immediately
- Hoses shall be inspected periodically during operation to ensure that there is no damage from pulsation either on the ground or against structure at corners.

4 Confined Space Entry

4.1 Training, Competency and Awareness

All persons required to enter a confined space and/or perform the duties of a confined space Standby, shall have received and have been deemed competent in Confined Space Entry training.

All confined space entry training shall be accredited to the Australian Quality Framework and conducted by a Roy Hill approved Registered Training Organisation (RTO).

Personnel shall be trained and assessed competent in confined space entry at periodic intervals not exceeding two years.

Information, instruction and awareness concerning confined space hazards, risks and control measures identified during the risk management process, should be provided to those undertaking the confined space entry work. Primarily, it should help them to understand the following:

- The hazards to which they are exposed;
- The risk of injury associated with the task;
- The reasons for control measures and how they are to be used correctly;
- Actions to be taken if there is an incident.

Tasks involving complex work procedures or control measures will require more comprehensive training.

4.2 Confined Space Entry Permit

A Confined Space Entry Permit shall be completed and approved prior to commencing work within a confined space.

The Confined Space Entry Permit shall be prominently displayed adjacent to the entry point and shall have a job-specific JHA with a Rescue Plan attached.

The Confined Space Entry Permit shall contain the following minimum information:

- Location of work and equipment identification.
- Nature and clear description of the proposed work.
- Atmospheric testing requirements and results.
- Control measures in place to address identified risks.

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- Period of Permit validity.
- Names of personnel involved in the work.
- Names of nominated Stand-by persons.
- Any special instructions that may be required.
- The authority to enter signed by the authorised person.
- The acceptance of the permit signed by the Permit Holder.
- Provision for signing in and out of the work team.

For information regarding completion of work and return to service, refer to section 6: Return to Service.

4.3 Standby Person

An appropriate Standby Person shall be in place in all cases of confined space entry.

The Standby Person's is required to be trained and competent to perform the following duties:

- Ensuring that an authorised and approved Confined Space Entry Permit is displayed at the entry point.
- Ensuring that people entering the space record their name and time of entry and exit on the Confined Space Entry/Exit Log.
- Checking the condition and status of any safety equipment being worn or radios carried by anyone entering the space.
- Ensuring that the required standby rescue equipment is held near the point of entry in a secure, accessible position.
- Initiating emergency and rescue responses as needed.
- Being aware of the location of fire and safety equipment in the vicinity.
- Maintaining communication with those entering the space.
- Being alert for any deteriorating conditions, internally or externally - if conditions deteriorate, advise those inside to evacuate the space to a safe position until conditions have improved.
- Monitoring air supplies and regulators if an airline BA system is being used and ensure that the air hose does not become kinked or tangled - if the air pressure varies beyond safe limits, evacuate personnel.
- Remaining in attendance at all times unless relieved -- if it is necessary to leave the position unattended, ensuring that everyone exits the confined space first.
- Monitoring tie-off points of lifelines when in use.

4.4 Access / Egress

Access openings into the confined space shall be adequate to allow rescue of all personnel who enter the confined space in the event of an emergency. Access ways into and out of the equipment and surrounding area must be kept clear of any obstructions.

It may be necessary to provide scaffold platforms and stairs or ladders to the access levels to gain safe convenient access for work and for rescue purposes.

Signs and barriers shall be erected at all access points to restrict entry of any personnel not engaged in the work.

The Stand-by person shall be in line of sight of the designated entry point to the confined space at all times while persons are in the space.

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The designated entry shall be barricaded with no entry signage during breaks when there are no personnel within the confined space or Stand-by person available at the entrance point.

4.5 Atmospheric Requirements for Entry

No entry to or work shall be carried out within a confined space or upon the outside surface of a confined space if there is any other risk to the health and safety of persons inside or outside the space. For example:

- If the external atmosphere is not free of toxic materials.
- If the atmosphere or equipment is excessively hot or cold.
- If the confined space is receiving ionising radiation from any irradiating apparatus or radioactive substance.
- If a risk of fire or explosion exists.

Before any person enters the confined space, it must be ensured wherever technically possible that:

- The confined space contains an oxygen level within the safe oxygen range between 19.5 % and 23.5% by volume
- The level of atmospheric contaminants in the confined space is below the relevant exposure standards
- Concentrations of flammable gases or vapours in the atmosphere are below 5 % Lower Explosive Limit (LEL).

Where it is not technically feasible to ensure an oxygen level greater than 19.5% or the atmospheric contaminants cannot be reduced to below the relevant exposure standards, no person shall enter or remain in the confined space unless Self Contained Breathing Apparatus (SCBA) is used.

Except in case of emergency response, entry will not be permitted where the concentration of flammable contaminants in the atmosphere is 5% of its LEL or greater, or where the oxygen content of the atmosphere exceeds 23.5%.

Where persons are already working in a confined space and the concentration of flammable contaminants is found to be greater than 5% LEL and less than 10%LEL, continuous monitoring shall be used.

Where the concentration of flammable contaminants is found to be 10% LEL or greater, all personnel shall exit the confined space.

Continuous gas monitoring shall be in place for any hot work such as welding and oxy cutting.

4.5.1 Atmospheric Testing

Once cleaning and purging of the confined space has been completed an accurate atmospheric test reading shall be taken.

Atmospheric testing and monitoring shall be consistent with the hazards identified in the confined space risk assessment and proposed activity JHA. (Note: considerations should include changes in wind direction, changes in mobile plant and equipment eg. new generator).

Testing of the atmosphere of a confined space shall be carried out immediately prior to entry. The confined space permit shall not be authorised until the completion of the testing. The authorised gas tester details and the results of the test shall be recorded on the Confined Space Entry Permit.

Any vessel that has actually or potentially contained a toxic or hazardous gas must be continuously monitored. Continuous monitoring may also be required based on the activities being performed within the confined space and/or near the confined space.

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4.5.1.1 Authorised Gas Tester Training

Atmospheric testing shall only be performed by trained and competent persons authorised to do so. A register of competent Atmospheric Testers shall be kept and maintained on each site.

4.5.1.2 Calibration of Gas Monitors

Combustible atmospheric substances detectors shall comply with AS/NZS 61779.

Instruments should be calibrated in accordance with the manufacturer's instructions and results kept in the asset register.

All units shall be challenge "bump" tested before each use and the results recorded in the log for each unit.

All units shall be fully calibrated and recertified as per the manufacturer's instructions or every six months by trained and competent persons.

4.5.1.3 Performing the Gas Test

The equipment manufacturer's instructions must be adhered to in addition to the following:

- Ventilation of the vessel/confined space should cease for a minimum of 5 minutes before testing commences.
- The full space should be tested from the outside whenever possible.
- Persons performing testing should always stand "up wind" and never positioned directly over the opening.
- The area above the opening of the confined space should be included in the test.
- The unit or probe should be lowered from the top of the space to the bottom of the confined space (for vertical entry) allowing time for an effective sample to be tested.
- For all areas that require horizontal testing a risk assessment shall determine a safe method for performing the sampling and may include the use of breathing apparatus.

4.5.2 Ventilation of a Confined Space

Ventilation of a confined space is performed in order to ensure that the atmosphere within the confined space is consistent with the natural ambient air. The process of ventilation is carried out after the confined space has been verified as free of contaminants as confirmed by the gas test.

Ventilation of the confined space should cease for a minimum of 5 minutes before testing commences.

Ventilation may be by natural, forced or mechanical means as identified in the preliminary and job-specific Risk Assessments. The following shall be considered to ensure adequate ventilation is maintained for the duration of work:

- Ensuring all manholes and hatches remain opened.
- Pipe spools are removed where practical.
- Mechanical ventilators are fitted to continuously ventilate the confined space.

The actual method of ventilation shall be confirmed when raising the Confined Space Entry Permit.

Where mechanical ventilation is required it shall be isolated in the 'on' position, as a part of the isolation procedure for the task.

All ventilation equipment shall be effectively earthed.

Gas mixtures containing greater than 21% by volume of oxygen shall not be used for ventilating due to the increased risk of flammability.

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Pure oxygen shall not be used for ventilation under any circumstances.

Ventilation of the confined space shall continue for the duration of the work being performed. Under no circumstances shall ventilation cease while personnel remain inside the confined space.

Should any interruption to the ventilation occur, work shall immediately cease and all personnel shall exit the space until ventilation can be restored. In this case, re-testing of the space shall be performed.

4.5.2.1 Control of Fumes

The safety of the atmosphere must be confirmed prior to entry and the following measures must be taken to control fumes:

- Areas should be continuously ventilated and fumes extracted by mechanical means during hot work in confined spaces.
- Fume extraction must exhaust into areas where adjacent personnel are not affected and where contaminants cannot be recirculated into the confined space.
- Planning hot work the rate of air flow calculated must take into account the rate of change required to:
 - Exhaust the fumes.
 - Provide cooling.
 - Maintain good quality breathing air.

Addition of section

Thermal Stress – determine what the temperature, velocity prior to confined space entry

Additional PPE and equipment will place a thermal work load on the body, increasing the risk of thermal stress

Implement appropriate actions to decrease the risk such as;

Regular work rotation, in and out of the confined space. Rest areas should be air conditioned and have access to cool drinking water.

Introducing a cooled air supply into the confined space.

Specific Gravity urine testing prior to confined space entry

Utilise the Basic Thermal Risk Assessment tool – AIOH or App “Thermal Risk” to risk assess prior to confined space entry

4.6 Electrical Equipment

It is preferable to use air driven tools in Ignition Risk Areas and Confined Space Entry work.

If electrical equipment must be used within the confined space the following precautions shall be taken:

- LEL of confined space to be maintained at less than 5 %.
- Only extra low voltage lighting 32v shall be used.
- Only metal braided extension leads shall be used within a confined space.
- Test and locate Residual Current Devices (RCD's) outside the space, if not fitted elsewhere in the circuit.
- Ensure all leads that enter vessels and tanks are routed through a nozzle or opening other than the access or hatch, wherever possible. Where this is not possible controls shall be identified and implemented to protect the leads from damage.
- Ensure all leads that enter vessels and tanks are protected to prevent abrading.

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- Ensure all electrical equipment and leads carry the current colour coded Inspection tag and are inspected prior to use for cracks, cuts and breaks in insulation.
- Check all welding leads for cracks, cuts and breaks in insulation by an authorised person and faults rectified if any doubt of the condition exists. Refer to the Welding Procedure [050RH-0000-HS-PRO-0021] for further information
- Ensure isolation/shutdown switches for all equipment is readily available for the Standby person to use from outside the confined space without having to leave the entry point.

4.7 Hot Work

Caution must be exercised at any time hot work is required in a confined space as the work process itself may render the atmosphere hazardous even though initial tests were satisfactory.

The following requirements must be met before performing any hot work in a confined space:

- Careful analysis of the safety requirements and precautions pertaining to each Confined Space Entry Permit taking into account:
 1. Type of work involved.
 2. Materials used to manufacture the Confined Space and their potential to evolve toxic fumes during heating or agitation.
 3. Previous contents of the confined space and its potential to evolve toxic fumes following heating or agitation.
- Both a Hot Work Permit and a Confined Space Entry permit shall be in place and approved.

In addition to the normal precautions associated with Confined Space Entry and Hot Work the following conditions also apply:

- Concentrations of flammable gases or vapours in the atmosphere must be verified as sustainable below 5 % Lower Explosive Limit (LEL).
- Continuous gas monitoring must be in place for any hot work.
- Adequate ventilation must be ensured to reduce welding fumes and where necessary provide additional Personal Protective Equipment. Fume extraction should be located as close to the source as practicable, not obstruct the entry/exit point and with the outlet located in a position outside of the confined space where there is not the potential for the fumes to re-enter the space
- Identification of the flammability and thermal decomposition products of coatings, scale, sludge and metals (alloys) in the work area.
- Removal of all liquid and solid residues that may contribute to the release of flammable vapours or gases raising the concentration above the 5 % LEL limit.
- Switching off power source to equipment when arc welding is suspended for crew breaks or at the completion of each shift. All electrodes must be removed from holders and placed so that accidental arcing or contact cannot occur.
- Closure of the torch and cylinder valves, depressurise and removal of the whole torch and assembly hose when oxy acetylene cutting, heating or welding is suspended for breaks or at the completion of each shift.
- Compressed gas cylinders or associated manifolds, other than those used for breathing apparatus, shall not be used inside the confined space.

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4.7.1 Welding in Confined Spaces

All confined spaces shall be classified as a Category B Environment for any welding activity. As a minimum controls identified in the Welding Procedure for Category B Environments shall be implemented. Additional controls shall also include:

- Welding to be performed in line of sight to a stand-by person to allow the welding circuit to be quickly broken in event of an accident. This shall be done by switching off primary power to the welding machine either at the supply outlet or on the welding machine or by using a suitably located in line dead man switch.
- There may be the need for additional stand-by personnel to ensure the duties of Fire Watch, welding spotter and confined space sentry can be met. This shall be considered in the task assessment for the activity.
- Welding leads entering confined spaces should be suitably protected to prevent damage.

4.8 Personal Protective Equipment

PPE and Safety equipment should be selected according to standard site rules and the risk assessment for the proposed work. This may include:

- Use of an approved personal gas detector to monitor flammables, toxic gases and oxygen levels; and/or
- Use a fixed monitor for regular or continuous monitoring.
- Use of suitable supplied-air respiratory protection equipment that conforms to AS/NZS 1716.
- Full- face shields in addition to goggles where both the face and eyes are exposed to a hazard.
- Gloves and clothing made of materials providing appropriate protection against toxic or irritating substances as required.
- Harness designed as suitable for confined space entry activities should be worn by all personnel entering a confined space. Unless the pre-task hazardous assessment has identified wearing a harness as potentially hazardous due to the activity being performed. This decision shall be made in consultation with the ESO to ensure the rescue plan allows for the fact that persons within the confined space are not wearing harnesses.

5 Rescue Considerations

A rescue plan shall be in place prior to a Confined Space Entry Permit being authorised.

The Rescue Plan shall be developed in consultation with the Emergency Services Personnel on site and shall take into account the following factors:

- Features of the confined space, such as size, structural integrity and shape.
- Nature of the task to be performed.
- Obstacles within the space and the feasibility of their removal.
- Access and egress.
- Maximum number of persons occupying the space.
- Number of persons necessary outside the confined space required to maintain work equipment.
- Communication with and observation controls of personnel in the confined space.
- Evacuation routes.
- Number of Confined Space Rescue trained and available personnel.

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- Protective clothing in use.
- Rescue equipment available.

In the event of the need to initiate a rescue from a Confined Space, the Emergency Response personnel must not enter the space without being made aware of the current conditions inside the space.

A copy of the rescue plan shall be available at the entry point with the Confined Space Entry Permit at all times while personnel are within the space. A copy shall also be made readily available for the Emergency Response Team.

All personnel involved in the confined space activity shall be fully briefed on the Rescue Plan.

6 Return to Service

The following steps must be taken prior to equipment going back into service:

- All work on the specified equipment must have been completed.
- Equipment has been left in a clean and safe condition ready for restart and this has been verified by the Confined Space Entry Permit Holder.
- Permit Holder inspects the Confined Space prior to closure and de-isolation.
- All equipment guards refitted.
- All signs and barricading removed.
- The Confined Space Entry Permit must be signed by the Permit Holder and the Permit Issuer to confirm that return to service is permitted.

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7 Accountabilities

Role	Responsibility
Area Manager	Approve, in writing, all Permit Issuers prior to them issuing confined space permits.

Table 1: Accountabilities

8 Definitions

Term	Definition
Bump Testing	Onsite testing of the gas detector when exposed to a known concentration of gas, to ensure the detector alerts audibly and visually. Sensor filters are checked for contaminants and external housing are checked for any cracks. Conducted onsite.
Calibration	When gas detectors are serviced by a trained professional and a calibration certificate is issued. Completed every six months or according to the manufacturer's instructions.
Competent Person	A person who has, through a combination of training, education & experience, acquired knowledge and skills enabling that person to perform correctly specified task.
Confined Space	An enclosed or partially enclosed space that is not intended or designed primarily for human occupancy, within which there is a risk of one or more of the following: (a) An oxygen concentration outside the safe oxygen range. (b) A concentration of airborne contaminant that may cause impairment, loss of consciousness or asphyxiation. (c) A concentration of flammable airborne contaminant that may cause injury from fire or explosion. (d) Engulfment in a stored free-flowing solid or a rising level of liquid that may cause suffocation or drowning.
Confined Space Entry	Entry to a confined space is any case where, as a minimum, insertion of the head up to the shoulders occurs.
Explosive (flammable) Limit	The range of flammable vapour or gas-air mixture between the Lower Explosive Limit (LEL) and the Upper Explosive Limit (UEL).
Exposure Standard	An airborne concentration of a particular substance in the person's breathing zone, exposure to which, according to current knowledge, should not cause adverse health effects nor cause discomfort to nearly all persons.
Authorised Gas Tester	A competent person trained and authorised in the use of gas testing equipment.
Gas Testing	Testing the confined space with a calibrated gas detector, prior to and during the work activities, to ensure the area is safe to enter with no presence of flammable gas, toxic gas or an oxygen deficient atmosphere.
Permit Holder	A competent person who accepts the responsibility as the person in charge of the work being conducted within the confined space.
Permit Issuer	A person authorised in writing by the relevant Area Manager to issue permits
Safety Data Sheet (SDS)	A document which contains all the chemical details, safety and relevant information specific to a substance, presented in a standard format which the user can easily read to seek information desired to satisfy a particular need. Formerly called a Safety Data Sheet or SDS.
Shall	Use of the term Shall indicate that the requirements are mandatory under current Health and Safety Legislation.
Standby Person	A competent person trained in the roles and responsibilities of the Standby Person.

Table 2: Definitions

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9 References

Document number	Title
	Bow Tie PH-16 Confined Space and Asphyxiation
	Occupational Safety and Health Act WA 1984
	Occupational Safety and Health Regulations WA 1996
	Mines Safety and Inspections Act WA 1994
	Mines Safety and Inspections Regulations WA 1995
	Safe Work Australia Confined Spaces Code of Practice
AS 2865: 2009	Confined spaces
AS 1716:2012	Respiratory Protective Devices
OP-PLN-00185	Roy Hill Thermal Stress Management Plan
OP-FRM-00571	Confined Space Entry Permit Form
OP-FRM-01248	Confined Space Risk Assessment & Evaluation - Form
OP-PRO-00993	Guarding, Barricading, Demarcation & Signage Procedure
OP-REG-00005	Confined Space Register Template
OP-STD-00244	Roy Hill Operations HSES Performance Standard - 02 Working at Heights Roy Hill Operations HSES Performance Standard - 16 Safety Processes

Table 3: References

10 Appendices

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Appendix 1 – Confined Space Signage



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