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MANILDRA GROUP

SAFETY MANAGEMENT PROCESS

1.0 TITLE:	CONFINED SPACE	
2.0 PURPOSE:	The purpose of this process is to detail the systems of work and the responsibilities relating to work in Confined Spaces.	
3.0 SCOPE:	This process applies to all operations and areas within the Manildra Australian sites.	
4.0 REFERENCES:	<p>Applicable Australian State Confined Space Code of Practice and Legislation Applicable Australian State Work Health and Safety Regulations AS 1674.2 - 2007 Safety in Welding and Allied Processes AS 1715 - 2009 Selection, Use and Maintenance of Respiratory Protective Devices AS 2865 - 2009 Safe Working in a Confined Space Confined Space Code of Practice – Safe Work Australia (https://www.safeworkaustralia.gov.au/system/files/documents/1705/mcop-confined-spaces-v3.pdf) FMSA178 Confined Space Entry and Exit Log FMSA254 Confined Space Rescue Plan FMSA247 Portable Electrical Equipment Permit FMSA252 Confined Space Entry Permit FMSA253 Confined Space Risk Assessment FMSA070 Confined Space Determination FMSA255 Confined Space Atmospheric Testing Sheet MG-OHS-0032 Barricading and Tagging MG-OHS-0100 Work Risk Management Procedure MG-OHS-0101 Isolation and Locking MG-OHS-0103 ATW Process MG-OHS-0401 Hot Work Process MG-POL-0030 Confined Space Policy SA-P-300 Confined Space Entry Procedure Template WHS Regulation 2011 Workplace Exposure Standards for Airborne Contaminants located at: (https://www.safeworkaustralia.gov.au/system/files/documents/1705/workplace-exposure-standards-airborne-contaminants-v2.pdf)</p>	
5.0 DEFINITIONS:	Competency	All tasks involving Confined Space activities require competent people to perform and supervise the work.
	Confined Space	<p>The WHS Regulation 2011, defines a Confined Space as an enclosed or partially enclosed space that:</p> <ul style="list-style-type: none"> • is not designed or intended primarily to be occupied by a person; and • is, or is designed or intended to be, at normal atmospheric pressure while any person is in the space; and • is or is likely to be a risk to health and safety from: <ul style="list-style-type: none"> ○ an atmosphere that does not have a safe oxygen level; or ○ contaminants, including airborne gases, vapours and dusts, that may cause injury from fire or explosion; or ○ harmful concentrations of any airborne contaminants; or ○ engulfment, but does not include a mine shaft or the workings of a mine. <p>Confined Spaces are commonly found in vats, tanks, pits, pipes, ducts, flues, chimneys, silos, containers, pressure vessels,</p>

		<p>underground sewers, wet or dry wells, shafts, trenches, tunnels or other similar enclosed or partially enclosed structures, when these examples meet the definition of a Confined Space in the WHS Regulation 2011.</p> <p>Examples of Confined Spaces at Manildra plants include but are not limited to:</p> <ul style="list-style-type: none"> • storage tanks, process vessels, boilers, pressure vessels, silos and other tank like compartments, • open topped spaces such as pits and degreasers, • pipes, sewers, shafts, ducts and similar structures,
	SCBA	Self-Contained Breathing Apparatus
	Standby Person	A Standby Person is defined as a competent person assigned to remain on the outside of, and in close proximity to, the Confined Space and capable of being in continuous communication with and, if practical, to observe those inside.
	Person in Charge	The person who supervises and/or carries out the maintenance and engineering work as described in the ATW process (MG-OHS-0103)
	Confined Space Responsible Person (CSRP)	The CSRP is a person authorised by the Operations Manager to identify, plan and prepare for work in Confined Spaces.
	Person(s) Entering	A person who has completed a Confined Space entry training as a minimum and has been informed about all the hazards present within the space and the control measures that have been put in place to manage those hazards.
6.0 RESPONSIBILITIES:	Site Manager	<p>The Site Manager shall be responsible for the application of this procedure by:</p> <ul style="list-style-type: none"> • Defining the boundaries of ownership • Defining the Operations Manager's boundary of operations and ownership • Ensuring this procedure is effectively applied within the boundaries of ownership
	Operations Manager	<p>The Operations Manager shall be responsible for the application of this procedure within his/her area of control by:</p> <ul style="list-style-type: none"> • Maintaining a Confined Space register with the department (this register may be in an electronic form provided it is accessible to the relevant departmental personnel). • Nominate suitable persons to assess people as competent to perform the role of CSRP within their department. • Maintaining a list of accredited CSRPs competent to identify, plan and prepare work in Confined Spaces. • Routinely audit the application of this procedure.
	Plant Owner	The Plant Owner shall be responsible for previewing the preliminary JSEA and ensure all documents are available prior to issuing an ATW Permit.
	Confined Space Responsible Person (CSRP)	<p>The CSRP is responsible for the application of this procedure to the work within his/her control by:</p> <ul style="list-style-type: none"> • Conducting or reviewing Confined Space Risk Assessment, involving all relevant personnel. • Classifying the work area as being either a Confined Space or normal places of work. • Develop or review the entry procedure. • Identifying critical steps in the work plan where specialist skills and knowledge may be required.

		<ul style="list-style-type: none"> • Complete the Confined Space Entry Permit. • Conduct pre-entry review with all persons involved with the initial entry to the Confined Space and ensure that all people present complete the Confined Space Entry and Exit Log FMSA178. • Initiates entry into the Confined Space once: <ul style="list-style-type: none"> ○ Satisfied that all isolations have been completed. ○ All entry controls defined in the entry procedure are implemented. ○ Gas monitoring shows that the atmosphere is safe to enter. • Conduct pre-entry review with work crew. • Maintain a list of persons authorised to enter the space on the Confined Space Entry Permit • Ensure the work crews follow all the requirements of the entry procedure. • Following all the requirements of the entry procedure. • Be contactable at all times whilst work in the space is being carried out and being available to provide assistance when required. This does not mean that the CSRP has to be at the Confined Space site, unless identified as being necessary during the risk assessment. • Cancel the entry permit and raise an incident report if the Confined Space has been evacuated. Once satisfied that it is safe to do so, a new entry permit may be issued to allow re-entry of the space. • Ensure all members of the work crew are adequately trained to work in Confined Spaces.
	Standby Person	<p>A standby person is required for all work carried out in Confined Spaces and their responsibilities include:</p> <ul style="list-style-type: none"> • Denying entry into the Confined Space until the CSRP has authorised entry to the space. • Denying entry to the Confined Space to any person whose name is not approved by the CSRP. • Monitoring the atmosphere in and around the Confined Space, and any other conditions specified in the entry procedure. • Maintaining the Confined Space entry / exit log & ensuring only authorised persons enter the space. • Maintaining communication with persons in the Confined Space, as described in the entry procedure. • Initiating evacuation of the Confined Space, if required. • Contact the CSRP and notify them that the space has been evacuated and the reason for the evacuation. Do not allow re-entry to the space until approval is given by the CSRP. • Initiating Manildra emergency response procedures in the event of an emergency by notifying the Plant Owner.
	Person(s) Entering	<p>Person(s) entering must:</p> <ul style="list-style-type: none"> • Follow all directions provided by the CSRP or Standby Person. • Comply with all requirements included in the JSEA and the entry procedure. • Participate in a pre-entry review and review the JSEA

7.0 PRINCIPLES

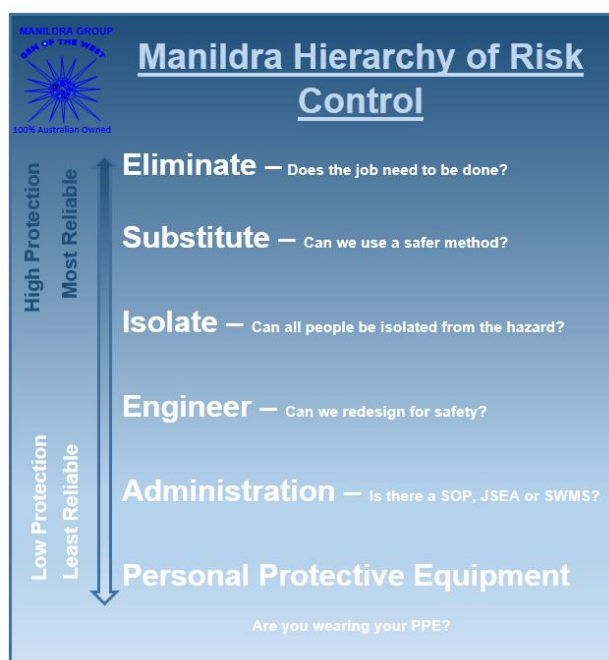
Confined Space principles are based on the Confined Spaces Policy (MG-POL-030). The following principles are used to govern all Confined Spaces:

- a) All Confined Spaces work shall have a written and authorised work pack detailing the safe method of work including a risk assessment, an entry procedure, any isolation procedures, a rescue and first aid plan, and documentation of any other specific control measures.
- b) All personnel shall be trained and competent to understand and manage the hazards associated with working in Confined Spaces.
- c) The level of supervision for Confined Space work shall be appropriate for the level of risk.
- d) All Confined Space entry shall be authorised via the Authority To Work process (MG-OHS-0103) and the Confined Space Entry Permit issued for the relevant area of the plant.
- e) A written risk assessment shall be conducted for all Confined Space work and the hazards managed by applying the hierarchy of controls.

8.0 THE HIERARCHY OF CONTROLS

Hazards identified during the Confined Space risk assessment process shall be controlled, taking into consideration the level of risk and the hierarchy of control as below:

- Elimination
- Substitution
- Isolation
- Engineering Controls
- Administration
- PPE



8.1 Elimination

First consideration should always be given to avoid, where possible, the need for the Confined Space or the need for entry into a Confined Space.

8.2 Substitution

Where hazards cannot be eliminated consideration should be given to substituting a hazard for lesser hazards. For example using a different piece of equipment or a different substance to perform a particular task.

8.3 Isolation

All energy sources and potentially hazardous services such as process mains and services (gas, water, steam, acids, base etc.) normally connected to the space shall be positively isolated in order to prevent:

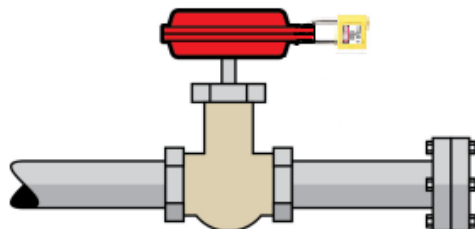
- a) the introduction of any materials, contaminants, agents or conditions harmful to persons occupying the Confined Space; and
- b) the activation or energizing in any way of equipment or services that could pose a risk to the health or safety of persons within the Confined Space.

All isolations shall be carried out in accordance with Manildra Isolation and Locking Procedure [MG-OHS-0101](#).

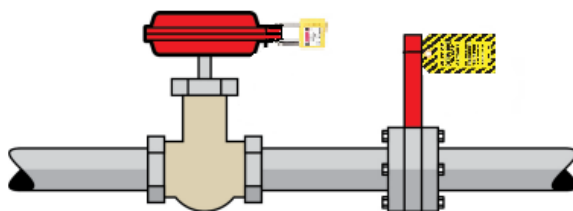
8.3.1 Positive Isolation

Positive isolation is a method used in Confined Spaces that isolates in such a way that leaks into the isolated section are impossible. Positive isolation must be employed for hazardous materials that are connected to a Confined Space. Methods include;

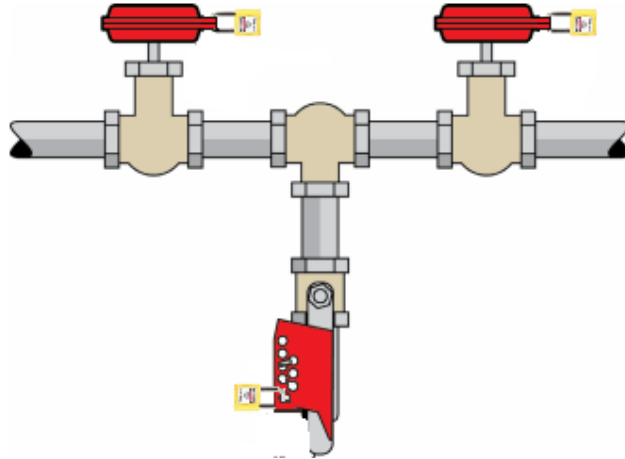
- the physical disconnection of a pipe and blanking of the open end



- the insertion of a slip plate between flanges



- closing and locking at least 2 valves in the pipe leading to the Confined Space and opening and locking of a drain or bleed valve to atmosphere between the 2 in line valves (or double block and bleed).



An alternative method of isolation that ensures positive isolation can be developed by conducting a risk assessment.

Where a source or service (other than gas) is unable to cause a rapid or undetected engulfment of the Confined Space, such as a small bore water supply to a large vessel, this service may be isolated using methods other than positive isolation.

8.4 Engineering Controls

Engineering Controls may include reducing the risk by modifying the design of the space or the work to be done. Alternatively it may include the use of temporary guards, scaffolding, improvement to access or barricading and signposting. Other engineering controls such as purging, fume extraction, and ventilation maybe used to ensure a safe entry into a space.

Where practicable Confined Spaces are to be designed so that;

- a) Openings for entry and exit to a Confined Space are of adequate size and shape to permit safe entry and exit and permit rescue of all persons who may enter the Confined Space.
- b) The openings are not obstructed by fittings or equipment that could impede rescue or where this is not practical, that a suitable alternative means of rescue is provided.
- c) An access path that provides secure foot and hand holds with no obstruction.
- d) Openings to provide through flow ventilation.
- e) Drain holes to prevent the build-up of liquids or gases.
- f) Internal shape that does not cause material hang up.
- g) An internal coating system that does not generate harmful contaminants under the action of cleaning solvents or heat.
- h) Double skinned walls are clearly identified or removed.

8.5 Administrative Controls

8.5.1 Classification Of Confined Spaces

The flowchart on the Confined Space Determination Form [FMSA070](#) is to be used to determine if a space is confined or not. This form also assists in the formulation of a Confined Space Pack that contains all of the required documentation to enter the Confined Space. It may be used and kept as a Confined Space determination.

8.5.2 Risk Assessment

A written Risk Assessment (FMSA253) shall be conducted for all Confined Space work and the hazards managed by applying the hierarchy of controls.

The CSRP shall carry out the Risk Assessment with a Risk Assessment Team, ensuring that the Risk Assessment team have the appropriate knowledge and experience to identify and assess all relevant hazards e.g. for risk assessments involving significant gas hazards specialist gas safety expertise may be required such as the services manager or a process engineer.

The Risk Assessment process is broken up into three sections; plant and process related hazards, task related hazards and introduced (interaction) hazards.

Plant and Process Related Hazards are those hazards that are directly associated with, and hence may be affected by, the current process conditions of the plant, such as toxic gases, explosive dusts, hot metal, moving process equipment, chemicals, etc.

Task Related Hazards are those hazards that are directly associated with doing the task, such as the use of tools and equipment, manual handling, working at heights, etc.

Introduced (Interaction) Hazards are those hazards not related to the plant or process, but which are introduced onto the site by the interaction with plant, process and other tasks, for example, use of mobile equipment, sparking tools, oxygen/acetylene equipment, excavation, chemicals etc.

8.5.3 Entry Procedure

Once the Risk Assessment of all plant and process hazards, task related hazards and introduced (interaction) hazards has been completed the CSRP shall obtain or prepare an entry procedure. The confined space entry procedure [template](#) may be used (SA-P-300) to assist. The entry procedure and other procedures that may be required shall address all of the hazards identified in the Risk Assessment by detailing how each specific control measure is to be carried out.

The entry procedure shall be checked by another CSRP, the Services Engineer or the designated area process engineer.

8.5.4 Job Safety & Environmental Analysis and Pre-entry Review

The CSRP and the Person in Charge, in consultation with their work crew, shall review the preliminary JSEA for the task, the entry procedure and any

other documentation provided, and modify the JSEA as required. All identified hazards and the specific control measures will be explained and discussed.

At the crew pre-entry review the CSRP shall record the names and signatures of all of the people who have received and accepted the information presented to them on the JSEA.

8.5.5 Confined Space Entry Permit

Prior to work commencing within a Confined Space a Confined Space Entry Permit ([FMSA252](#)) shall be completed by a CSRP. The entry permit will contain the list of names that shall be given to the Stand-by Person as the only people who are allowed to enter and work in the Confined Space (see section 9.0). The CSRP shall provide final clearance into the Confined Space once all control measures have been put in place and any atmosphere monitoring required has been completed to ensure entry is safe.

8.5.6 Confined Space Rescue Plan

A Confined Space Rescue Plan ([FMSA254](#)) will be completed by the Confined Space Responsible Person prior to entry. See section 16.1.

8.5.7 Confined Space Entry and Exit Log

A Confined Space Entry and Exit Log ([FMSA178](#)) will be maintained by the Standby Person while the Confined Space is active. The Standby Person will ensure that the Person(s) entering the Confined Space sign on and off as they enter and exit the space. This log will also include an equipment inventory and the Standby Person will sign equipment in and out of the space in a similar manner.

8.6 Personal Protective Equipment (PPE)

PPE should not be used as the only control measure for any particular hazards. There should be other forms of control. PPE should be considered as an inferior and secondary layer of protection. The entry procedure and/or the JSEA shall nominate the PPE requirement necessary for entry and work in the space. PPE should be cleaned, stored and maintained in accordance with the manufacturers' recommendations.

9.0 ENTRY INTO CONFINED SPACES

All Confined Space entry shall be authorised by a Confined Space Entry Permit issued for the relevant area of the plant. All documents required in the Confined Space work pack are to be included with the permit.

The CSRP shall ensure that all isolations are completed, the initial atmospheric check has proved the atmosphere to be safe and any other precautions as detailed in the Confined Space entry procedure are completed. The CSRP shall record the relevant information on the Confined Space Entry Permit and sign in the spaces provided. The Confined Space Entry Permit is then authorised and displayed or made available along with the Confined Space entry procedure and other associated documentation at the entry point or access control point of the Confined Space. The Standby Person then maintains the Confined Space Entry and Exit Log ([FMSA178](#))

The Confined Space shall be set-up accordingly to the instructions in the Entry Procedure and no step shall be omitted. If every step in the procedure cannot be followed completely, or if unforeseen hazards emerge, then work must cease and be reassessed. The Entry Procedure will then be modified to reflect the change and both CSRPs will initial and approve the change. If the change is related to the job tasks the JSEA must also be updated.

When work is complete and all persons have left the Confined Space the CSRPs shall be contacted and the Confined Space Entry Permit returned to the CSRPs. The inventory list is to be completed. The Confined Space is to be made safe to prevent unauthorized or inadvertent access. The CSRPs shall then complete the permit and return it to the relevant department representative for record keeping purposes.

10.0 SAFETY OF THE ATMOSPHERE

10.1 Atmospheric Conditions

Contaminants within a Confined Space may be categorised as toxic, flammable, explosive, or asphyxiants.

The atmosphere of a Confined Space shall conform to the following requirements:

- Oxygen level within the Confined Space shall be maintained between 19.5% and 23.5% when workers enter without respiratory assistance
- The instantaneous concentration of all atmospheric contaminants is less than the concentration stated as the relevant Time Weighted Average (TWA) and the Short Term Exposure Limits (STEL) exposure standards identified in the Safety Data Sheet (SDS).
- Freedom from extremes of temperature.
- Concentration of flammable contaminant less than 5% of the Lower Explosive Limit (LEL).

Notes for atmospheric conditions:

- If the atmosphere within the Confined Space cannot be controlled below 5% of the LEL by mechanical means such as those described in section 11.0 and the atmosphere is below 10% of LEL then work may continue only if there is continuous monitoring of the atmosphere inside the Confined Space in the location where work is being carried out.
- If the atmosphere within the Confined Space is greater than 10% of LEL then all persons shall leave the Confined Space and no entry is permitted under any circumstances.
- For information on exposure standards for common gases refer to Workplace Exposure Standards for Airborne Contaminants (<https://www.safeworkaustralia.gov.au/system/files/documents/1705/workplace-exposure-standards-airborne-contaminants-v2.pdf>). Where an atmospheric contaminant is present for which no relevant TWA or STEL exposure standards are available then Work Health and Safety should be consulted.

- If the atmospheric conditions are outside of the conditions as described above and the Confined Space Entry Procedure does not describe how to control the conditions then evacuate the Confined Space immediately and contact the CSRP and the Plant Owner.
- If it is suspected that there could be an unknown source of atmospheric contamination affecting the atmosphere in the Confined Space then contact the Services Engineer immediately.

10.2 Atmospheric Monitoring

The requirements for testing of the atmosphere inside each individual Confined Space shall be identified in the risk assessment process and detailed in the relevant entry procedure and Confined Space Entry Permit. This will involve specifying:

- The method that will be used to conduct the initial atmosphere testing and this should include ways that the atmosphere inside the space can be tested as much as possible without the need to enter the space.
- If it is necessary to enter the space to complete the initial atmosphere testing then this is to be detailed in the entry procedure and conducted under the direct supervision of the CSRP.
- An initial test of the atmosphere (including prior to re-entry to the space following a work break) and either:
 - Continuous monitoring of the space by placing a suitable monitor inside the space with periodic recording of the monitor readings, or
 - Re-testing at pre-determined intervals including prior to re-entry to the space following a work break.

Because contaminants can settle at different levels, each part of the Confined Space should be tested (i.e. side to side and top to bottom). The initial atmosphere testing results are to be recorded on the Confined Space Entry Permit [FMSA252](#). If periodic readings are required this must be recorded on the Confined Space Atmospheric Testing Sheet ([FMSA255](#)).

Monitors are to be calibrated every six months.

10.3 Atmospheric Contaminating Work

Atmospheric contaminating work can be a specific source of atmospheric contamination and should be given due consideration during the risk assessment process when identifying the task or introduced hazards. Contaminating work could involve the use or generation of any dust, fume, mist, vapour, gas or other substance in liquid or solid form, the presence of which may be harmful to health and safety. Examples of contaminating work include; hot work, grit blasting, painting, the use of solvents or adhesives, fibre glassing, epoxy coating and any other process or activity with the potential to produce atmospheric contamination. One control for contaminated atmospheres is respiratory protective devices.

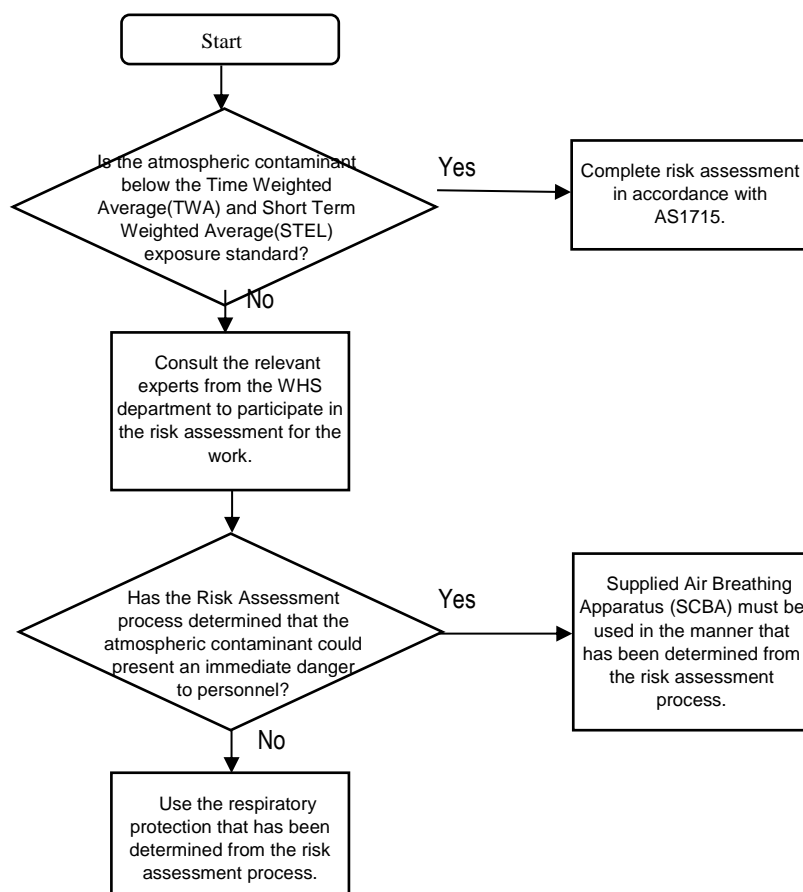
Note: Hot work such as welding, thermal or oxy cutting, heating, grinding and any other fire or spark producing operation is a particular type of atmospheric contaminating work that requires specific control measures to manage the risk of atmospheric contamination and the risk of fire or explosion. See [MG-OHS-0401](#) Hot

Work process for further details on how to control hot work hazards and section 12.0 for specific instructions for welding in a confined space.

10.4 Respiratory Protective Devices

If a situation arises where a particular atmospheric contaminant is present or being generated in the Confined Space then the use of ventilation and/or fume extraction (see section 12.0) shall be applied to control the concentration below the requirements of section 11.0 of this procedure.

If this cannot be achieved then the process described in the flow sheet below shall be used to determine the appropriate level of respiratory protection (refer to AS 1715 for further guidance).



SCBA equipment will be centrally located in the first aid room. The Manildra firecrews are responsible to ensure the equipment is stored properly, cleaned, serviced and inspected on a regular basis. An accident/incident book is located in the first aid room to ensure that any faults are quickly repaired. Firecrews are to engage contractors to inspect, replace and repair the equipment as required.

In all cases appropriate respiratory protection must be worn where an atmospheric contaminant may be present.

11.0 VENTILATION AND FUME EXTRACTION

Ventilation of Confined Spaces can be achieved by natural draught or some form of forced ventilation system. Where natural draught is employed any hatches or man ways that are essential to maintain a draught shall be secured open such that they cannot be inadvertently closed while people are occupying the Confined Space. One option is to use a yellow equipment lock in a hatch bolt hole as part of an isolation

which ensures the hatch cannot be replaced.

Often natural draught will not provide sufficient ventilation (e.g. for vessels and other equipment with few openings) and forced ventilation is required to provide a comfortable and breathable atmosphere. The term “forced ventilation” refers to the use of fans, air movers and other mechanical means to increase the rate of air movement through a space. When determining the capacity of forced ventilation consider the following factors:

- The size of the space to be ventilated.
- The nature of the work inside and around the space.
- Any fume, vapour or dust generated by the work.
- Cooling requirements for the personnel inside the space.

Note: In particularly dusty spaces too much ventilation can stir up enough dust to present an additional atmospheric hazard to personnel.

Fume extraction systems can also be used in conjunction with ventilation systems, particularly if the task being performed will generate large amounts of fume, dust or vapour that could create a hazard if dispersed throughout the entire space. Tasks such as welding, grit blasting, the use of solvents and bonding agents may suit the use of fume extraction as an additional control measure to the ventilations system used.

Often the location of forced ventilation and/or fume extraction can have an impact on its effectiveness. If there are a number of hatches or man ways available it is important to arrange the ventilation so that there is sufficient air movement past the work location. This may sometimes require closing some hatches and opening others or relocating the point of forced ventilation and/or fume extraction as work proceeds to different locations in a Confined Space.

Perhaps the most difficult types of Confined Space to ventilate are those with only one hatch or manway. Simply positioning a fan to blow air into the manway may not provide much air circulation inside the space. In this situation flexible, lightweight hoses can be used to direct the airflow to a position inside the space away from the manway to improve air circulation.

In all cases of ventilation and fume extraction the exhausts must be directed to a safe location such that they do not impact on personnel in the area.

12.0 WELDING IN A CONFINED SPACE

When welding in a Confined Space the following requirement must be met:

- A Standby Person must keep the welder in sight at all times or be in communication with an addition safety observer who keeps the welder in sight at all times.
- Do not take gas cylinders inside the Confined Space.
- Remove cutting hand pieces from space when not in use.
- Turn off gases at the cylinder when not in use.

- Only Voltage Reduction Device (VRD) protected machines can be used.
- Wooden Duck Boards/ rubber matting, or other insulation type material should be used to keep the welder from contacting the steelwork/ walls of the vessel.
- An appropriate Fire Extinguisher shall be located with the Standby Person at the access/entry point. (see section 17.0)
- Adequate Ventilation or Exhaust Systems in place.

As well as your everyday standard welding specific PPE, the following precautions must be adhered to when welding inside a Confined Space:

- Flame retardant, cotton drill clothing only to be worn.
- Clothing soiled with oil or grease is not to be worn.
- Clothing to be kept dry at all times.
- Gauntlets/gloves to be hole free & kept dry at all times. - AS1674.2 also promotes the use of cotton glove liners.
- All PPE, including clothing, gauntlets/ gloves, etc. Should be changed frequently, pending environment conditions – to eliminate situations where perspiration could create a hazard and increase the chance of electrocution.

13.0 BARRICADING AND SIGNPOSTING

Barricading shall be erected and sign posted to prevent entry of unauthorised persons to a Confined Space. Barricades shall be constructed in accordance with the Manildra Barricading and Tagging Procedure [MG-OHS-0032](#).

Permanent Confined Spaces that could be entered at any time (i.e. those that are not secured against casual entry) shall be identified as such by a sign at all entrances. These signs shall be erected so that they are visible at all times. During entry to a Confined Space a temporary Confined Space sign shall be displayed if there is no permanent sign.

Sign posting of Confined Spaces for new equipment, machinery or infrastructure is to occur prior to them being commissioned. Below is an example of a Confined Space sign.



14.0 ELECTRICAL EQUIPMENT IN A CONFINED SPACE

The selection and use of electrical equipment within a Confined Space must be assessed prior to use to ensure risks can be adequately controlled and equipment is suitable for the work conditions at all times. AS2865 clauses 3.4.44 -3.4.48 should be consulted for guidance. Consideration should be given to the use of battery-powered tools to reduce the risk of electric shock. If battery powered tools cannot be used then a Portable Electrical Equipment Permit ([FMSA247](#)) is required. The following requirements must be met:

- Portable electrical equipment must either be extra-low voltage or low voltage with supply protected through a residual current device (RCD) located outside the Confined Space.
- Switchboards or outlets providing supply to the Confined Space shall be readily accessible, clearly identified and provide means of isolation.
- Leads shall be arranged and protected to prevent mechanical damage, contact with wet areas and/or contact between leads and conductive parts which may result in the space becoming live.
- Equipment shall have suitable durability and IP rating for the work conditions, double-insulated equipment is preferred. Ensure equipment requirements are captured in the risk assessment (e.g. double insulated, IP54).
- All equipment shall be visually inspected and RCDs trip tested prior to use.

Electric shock hazards are greatly increased under wet conditions or work environments which expose people to large contact areas. Controls to maintain dry conditions, or use of additional insulating barriers and mats may be required.

Use of electrical equipment in some environments may not be safe, seek assistance if you are unclear.

15.0 COMMUNICATION

Processes are to be put in place to ensure that communication, and where practicable observation, between those in the Confined Space and the stand-by person(s) are capable of being constantly maintained (this may require more than one person). Communication can be achieved, dependent on the conditions existing in the Confined Space, in a number of ways including line of sight, voice, radio, hand signals and other appropriate means. For example, where visual or verbal communication is not possible, then a system of rope signals could be devised.

The specific communication systems for a Confined Space shall be tested before the job/task commences.

16.0 EMERGENCY CONTROLS

During the Risk Assessment the Risk Assessment team shall identify any emergency controls that may be necessary to mitigate any unforeseen incidents. Examples of emergency controls include and are not limited to; fire extinguishers, SCBA, consultation with emergency services, and emergency services on-site.

In an emergency the standby person will either phone, radio or use a break glass alarm to contact emergency services. Intrinsically safe radios are available. During

the emergency the CSRP may work out and carry out steps to make the system safe.

16.1 Confined Space Rescue Plan

A Confined Space Rescue Plan ([FMSA254](#)) is to be used for all entries into Confined Spaces. All personnel entering a Confined Space, and the Standby Person, are to be instructed in the Rescue Plan and any equipment that may need to be made available.

16.2 Injury Response

If someone is injured or requires first aid while in a Confined Space, call 000 immediately and activate a break glass alarm to initiate an emergency response from the Manildra internal/external emergency service providers.

Attempts should be made to assist the person to exit the space from outside the space. If this is not possible and it is safe to do so (i.e. the atmosphere is safe to enter), care should be given to the person in the Confined Space while waiting for specialist rescue responders to arrive. At all times there must be someone acting in the role of the standby person while people are in the space.

16.3 Rescue General

All rescue activities at Manildra are to be carried out by trained responders. This means that in almost all cases rescues will be carried out by the external services (Police, Fire Brigade or Ambulance). Under no circumstances shall any person (including the standby person) put themselves at risk while attempting to assist a person from a Confined Space.

16.4 Rescue in a Contaminated or Gaseous Environment

Within Manildra the aim is to not have people work within areas where the atmosphere is contaminated or potentially gaseous. All efforts should be made to remove any air contaminants so that the area is safe to work in without the need for respiratory protective devices. The use of SCBA or other similar devices should only be used to rescue or self-rescue. If the nature of the Confined Space is one in which a contaminated environment could exist, personnel within the space should have appropriate respiratory protective devices to enable them to safely work in the space and leave the space safely if the situation becomes unsafe. Refer to section 11.4 of this document for guidance on the selection of appropriate respiratory protective devices.

If it is necessary to work within a contaminated atmosphere and someone becomes injured and unable to exit from the space, internal emergency service providers shall be called and the nature of the event relayed to them. Where it is safe to do so breathing gear may be given to the person trapped in the Confined Space but at no time is the rescuer to put themselves at risk by doing this.

17.0 Fire Safety

Selection of portable Fire Extinguishers shall be dependent upon the Risk Assessment and the nature of the Confined Space and class of fire.

Dry Powder extinguishers should generally not be used in Confined Spaces as they obscure visibility and may cause respiratory difficulties.

CO2 Fire extinguishers will displace O2 in the atmosphere, this should be considered as part of the Risk Assessment.

Fire Class	Suitable Fire Extinguisher	Band Colour
B, E	Powder	White
A, B	Foam	Blue
B, E	CO2	Black

A class fire = Carbonaceous solids e.g. wood paper cloth B class fire = Combustible liquids E class fires = Electrical

It should be noted that portable fire extinguishers are not provided to undertake firefighting. They are provided for initial first response fire attack should fire break out while working within a Confined Space.

After an extinguisher has been discharged all personnel should vacate the Confined Space immediately. If the fire cannot be immediately put out evacuate the Confined Space and call 000 for assistance and notify the Plant Owner.

18.0 COMPETENCY TRAINING AND ACCREDITATION REQUIREMENTS

18.1 Training

The nationally recognised unit of competency is *RIIWHS202D Enter and Work in Confined Spaces* from a Recognised Training Organisation (RTO) is the minimum requirements for any person entering a Confined Space. An assessment of competency is required for some roles such as CSRP and Standby Persons. Where required additional modules for First Aid, Self-Contained Breathing Apparatus (SCBA) and harness training maybe provided. All personnel shall be trained and competent to understand and manage the hazards associated with working in Confined Spaces.

A person shall be trained and assessed as competent to perform a role through a combination of training education and/ or experience, acquired knowledge and skills, which enables that person to perform a specific task correctly.

The following table shows the Confined Space training requirements for the various roles defined in this document.

Table 1: Manildra Confined Space training requirements

	Enter and Work in a Confined Space RIIWH5202D	Supervise Work in a Confined Space RIIWH5401D	Manildra Competency Assessment (FMSA261)
Site Manager	Recommended		
Operations Manager	Recommended		
Confined Space Responsible Person (CSRP)	Required	Required	Required
Standby Person	Required		
Person Entering a Confined Space	Required		

Note: Where the Risk Assessment identifies specialist safety equipment all persons using this equipment shall be trained and assessed competent prior to using the equipment.

18.2 Accreditations

18.2.1 Confined Space Responsible Person (CSRP)

The CSRP shall be accepted by the Operations Manager (or their nominated representative) to perform this role within the department where the Confined/ Space is located.

The CSRP shall be assessed as competent in planning and initiating work in Confined Spaces. [FMSA261](#) Confined Space Responsible Person Theory Assessment shall be used by Manildra approved assessor to assess that the person as competent to perform this role.

18.2.2 Additional Training

Depending on the hazards identified in the risk assessment, the Work Owner or the CSRP may require the Standby Person be trained in the following (but not limited to) optional units of competency:

- [MSAPMPER300C Issue work permits](#)
- [DEFWHS012 - Test confined space environment](#)
- [PRMPFES05B Use of portable firefighting equipment](#)
- [MSAPMOHS216A Operate Breathing Apparatus](#)
- [PUASAR025A Undertake Confined Space rescue](#)
- [MSAPMOHS212A Undertake first response to fire incidents](#)
- [HLTAID001 Provide CPR](#)
- [RIIWH5201D Work safely & follow WHS policies & procedures](#)

The Standby Person can receive information for their role as part of the Confined Space entry permit, toolbox, and coaching. The Standby Person will acknowledge their understanding of the procedures for each Confined Space by signing the Confined Space Entry Permit.

18.2.3 Re-Accreditations

The CSRP shall be re-accredited every three (3) years by presenting a record of at least two Confined Space jobs that they have been responsible for in the past two years. Where the re-accreditation process identifies a training need, additional training shall be undertaken prior to re-accreditation.

The Standby Person shall be re-accredited every three (3) years by a Manildra CSRP and be assessed as competent to perform this role or by an RTO. Where the re-accreditation process identifies a training need, additional training shall be undertaken prior to re-accreditation.

19.0 RECORD KEEPING

The Operations Manager shall maintain the following records:

- A register of all Confined Spaces.
- A list of people who can assess the competency of those who perform Confined Space work within the department.
- A list of accredited CSRP who are accredited to perform Confined Space work within the department.

19.1 Confined Space Register

A register shall be kept, listing all of the identified Confined Spaces within a department. The Confined Space register shall contain the risk assessments for the identified Confined Spaces within the department.

19.2 Other Records

The following documentation shall be kept and maintained for the time specified unless longer periods are necessary, as in the case of health surveillance being required, or incident occurred whilst working the Confined Space.

Records for further information on the duration that records shall be kept.

- Confined Space Entry Permit, entry procedure and job pack – twelve months after the job is completed or two years if there is a notifiable incident.
- Confined Space Risk Assessments – the current version should be kept and it shall be reviewed each time the entry procedure is revised.
- Training records – For the term of the person's employment at Manildra.

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