Government of **Western Australia**
Department of **Mines, Industry Regulation and Safety**

Confined space audit – guide

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Introduction

The confined space audit has been developed to promote safety in managing confined space entry in the Western Australian (WA) mining industry.

The audit was trialled a number of times by inspectors from the Department of Mines, Industry Regulation and Safety (DMIRS). The content was then reviewed and updated, and the sections reordered, as part of continuous improvement, and in June 2020 was approved to be a published audit.

DMIRS encourages WA mining operators to use these documents to perform regular confined space audits at their sites.

The confined space audit should be read and utilised in conjunction with the mandatory Australian Standard AS2865 Confined Spaces and the *Mines Safety and Inspection Act 1994* (MSIA) and Mines Safety and Inspection Regulations 1995 (MSIR).

Where, in the intent, the word “verify” is used, this means that it is a regulatory requirement, which is mandatory and has to be complied with. Where, in the intent, the word “ensure” is used, it is not a mandatory requirement, but it does indicate good practice.

List of abbreviations

AS	Australian Standard
c.	clause (of the Australian Standard)
cc.	clauses (of the Australian Standard)
DMIRS	Department of Mines, Industry Regulation and Safety
ISO	International Standards Organisation
JHA	Job Hazard Analysis
MSIA	Mines Safety and Inspection Act 1994
MSIR	Mines Safety and Inspection Regulations 1995
OSH	Occupational safety and health
PPE	Personal protective equipment
r.	Regulation (of the MSIR)
rr.	Regulations (of the MSIR)
s.	Section (of the MSIA)
ss.	Sections (of the MSIA)
SHRep	Safety and health representative
SRS	DMIRS online Safety Regulation System

Glossary

Airborne contaminant

Any contaminant present in the air that may be harmful to persons.

Atmospheric monitoring

The continuous measurement of oxygen concentration or airborne contaminants over an uninterrupted period of time.

Atmospheric testing

The measurement of oxygen concentration or airborne contaminants.

Competent person

Person who is appointed or designated by the employer to perform specified duties which the person is qualified to perform by knowledge, training and experience.

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

When a person's head or upper body is within the boundary of the confined space.

NOTE: Inserting an arm for the purpose of atmospheric testing is not considered as entry to a confined space.

Contaminant

Any dust, fume, mist, vapour, biological matter, gas or other substance in liquid or solid form, the presence of which may be harmful to persons.

Engulfment

The immersion or envelopment of a person by a solid or liquid (e.g. ore, slurry, scale, sand, coal, fertiliser, chemical and other substances in a powder or granular form) that is stored within the confined space.

Hot work

Welding, thermal or oxygen cutting, heating, including fire-producing or spark-producing operations that may increase the risk of fire or explosion.

Self-contained breathing apparatus (SCBA)

A portable respirator that supplies oxygen, air or other respirable gas from a source carried by the user.

Stand-by person (or sentry)

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, observing those inside. In addition, where necessary, the competent person may operate and monitor equipment for the safety of personnel in the confined space and initiate emergency response.

Task-related hazard

In respect to a confined space, exposure to a hazard because of the task being conducted on or in the confined space.

Written authority

A document that gives permission for entry into a confined space and the conduct of tasks associated with the confined space.

NOTE: The written authority is sometimes known as an 'entry permit', 'access authority' or 'permit to work'.

Further information

Documentation referred to in this audit can be found via the links below:

- Acts and Regulations, Department of Justice www.legislation.wa.gov.au
  - Mines Safety and Inspection Act 1994 www.legislation.wa.gov.au/legislation/statutes.nsf/law_a515.html
  - Mines Safety and Inspection Regulations 1995 www.slp.wa.gov.au/legislation/statutes.nsf/law_s4641.html
- Australian Standard AS 2865: *Confined spaces*
- Australian Standard AS 1674: *Safety in welding and allied processes*
- Mining safety publications, Department of Mines, Industry Regulation and Safety (DMIRS), www.dmp.wa.gov.au/Safety/Mining-Safety-publications-16162.aspx
- Confined spaces code of practice, Safe Work Australia, 2016. https://www.safeworkaustralia.gov.au/system/files/documents/1705/mcop-confined-spaces-v3.pdf

1 Confined space

Requirements and standards associated with confined space.

Point	Standard	Guideline
1.1	Confined spaces on the site have been identified using the correct definition within AS2865.	**Intent:** To verify that all potential confined spaces are identified consistently with the current legislation. **Personnel:** Safety and health personnel, safety and health representatives, and relevant employees (operations, maintenance and contractors). **Method:** Review relevant site register/process/procedures, JHA, SWP or SOP's etc. relating to confined space classification. Review if employees and employers use the confined space identification principles outlined in AS 2865 c. 3.2.1. Visual inspection to determine if an enclosed or partially enclosed space is identified as a non-confined space, review the risk assessment that has been completed to validate this determination. Refer to AS 2865 cc. 1.5.5, 3.1.1, 2.9.1, 2.9.2, 2.9.3 and 3.2.1.
1.2	Confined spaces that may be introduced to site as a result of changes in plant, or during construction activities are identified as part of the change management process.	**Intent:** To verify that all new potential confined spaces are identified consistently with the current legislation. **Personnel:** Safety and health personnel, safety and health representatives, and relevant employees (operations, maintenance and contractors). **Method:** Review relevant site process/procedures, JHA, SWP or SOP's etc. relating to confined space classification. Review relevant site processes/procedures relevant to change management relating to introduction of confined spaces. Review if employees and employers use the confined space identification principles outlined in AS 2865 c3.2.1. Refer to AS 2865 cc. 1.5.5, 2.4.5, 3.1.1 and 3.2.1.

2 Confined space hazards

Requirements and standards associated with confined space hazards.

Point	Standard	Guideline
2.1	For any confined space, the hazards associated with conducting tasks in or on the confined space shall be identified.	**Intent:** To verify that all hazards associated with the tasks being conducted in the confined space are identified prior to conducting the tasks. **Personnel:** Supervisors, relevant employees (operations, maintenance and contractors), safety and health representatives, and safety and health personnel and emergency response coordinators and teams. **Method:** Review documents to ensure they identify all hazards associated with the task being carried out within the confined space e.g. • A reduction in the oxygen concentration • Oxygen enriched atmospheres • The use of chemicals • Airborne containments • Noise • Temperature • Radiation within the confined spaces • Unsafe entry and exit or unsafe surfaces • Inadequate lighting • Exposed live electrical conductors • Fall from heights Refer to AS 2865 c3.1.1 and 3.1.2.

Point	Standard	Guideline
2.2	No person shall enter a confined space unless – (a) review of the risk assessment has been completed in accordance with Clauses 3.3.1 and 3.3.5; (b) written authority is provided to, or completed by, the person responsible for direct control of the tasks in the confined space; (c) the written authority includes any risk control measures or precautions necessary, including the number of stand-by persons required, for the safe entry and execution of the tasks; (d) they are advised of, understand and comply with the requirements of the written authority; (e) a record of their presence in the confined space is maintained; (f) signs and protective barriers are erected to prevent entry of persons not involved in the tasks; and (g) appropriate and sufficient arrangements have been made for the initiation of emergency response and, where necessary, rescue of persons from the confined space	**Intent:** To verify that all confined space entries are conducted safely. **Personnel:** Permit-to-work officers, persons conducting tasks associated with confined spaces (including the standby person), supervisors, relevant employees (operations, maintenance and contractors). **Method:** Check that confined space entries are made under the sites permit to work system or a similar system. Inspect that signs and barriers are erected at each entry/exit points to prevent unauthorised access. Inspect that the sentry is aware of their role and the tasks they need to perform and are able to monitor all entry/exit points to prevent unauthorised entry. Interview site personnel or working groups to assess whether they are aware of the confined space permit to work system and understand the requirements before making an entry. Refer to AS 2865 c. 3.4.29.

Point	Standard	Guideline
2.3	A safe system of work is implemented to eliminate or minimise falling from height risks when conducting tasks associated with a confined space.	**Intent:** To verify that the risk of falling from height is identified and managed adequately. **Personnel:** Persons conducting tasks associated with confined spaces (including employees and contractors), supervisors, and permit-to-work officers. **Method:** Review if the risk assessment appropriately identifies the hazard of falling from height and addresses these hazards. Verify that there is a risk assessment when a falling from height hazard is present when working in or around a confined space. Verify that fall protection systems have been implemented and individuals are competent and trained to utilise them when there is a falling from height hazard. Interview site personnel or working groups to assess whether they have read and understood the risk assessment, including identifying and managing falling from height risks associated with the tasks. Inspect if all entry points are barricaded where there is a potential from a falling at heights hazard. Refer to AS 2865 c. 3.4.29. (f) and MSIR rr. 4.4 and 4.5.
2.4	Risk control measures shall require – (a) Provision of a standby person or persons; or (b) Systems of work methods and controls that provide an equal or better safety outcome to that provided by a standby person (see Clause 1.5.20).	**Intent:** To verify the provision and effectiveness of a standby person or persons during a confined space entry; or an equal or better system. **Personnel:** Persons conducting tasks associated with confined spaces (including employees and contractors), supervisors, and permit-to-work officers. **Method:** Verify if a confined space sentry has been assigned as a standby person or persons as required. If a standby person is not assigned, verify that an equal or better system of work method and control has been implemented. Verify that the standby person is able to communicate and monitor continuously all personnel conducting tasks within the confined space. Verify that communication equipment used in the confined space are effective for the task. Verify that personnel are entering and or exiting from ONE designated entry point and that other possible entry/exit points are barricaded and or controlled. Interview the standby person to assess whether he or she understands the sentry role and has the ability to continuously monitor the safety of all personnel inside the space. Refer to AS 2865 c. 3.4.30.

Point	Standard	Guideline
2.5	Before a person enters a confined space, and where it is technically feasible to do so, the atmosphere of the confined space shall have – (a) a safe oxygen range; (b) airborne contaminants that may cause impairment, loss of consciousness or asphyxiation reduced to below the relevant exposure standards; and (c) a concentration of flammable airborne contaminant below 5% LEL	**Intent:** To verify that the space is only entered or occupied when the atmosphere is safe. **Personnel:** Supervisors, relevant employees (operations, maintenance and contractors), safety and health representatives, safety and health personnel, and Ventilation Officer. **Method:** Verify that the risks assessments addresses the requirements for gas testing/monitoring while tasks are being conducted inside the confined space. Review other records/documents such as work permits or procedures provide guidance on how often gas testing should be conducted and when gas monitoring is required. Refer to AS 2865 cc. 3.4.31.

Point	Standard	Guideline
2.6	Where flammable airborne contaminants are present in the atmosphere of a confined space, the following requirements shall apply: (a) Except in case of emergency response, entry shall not be permitted where the concentration of flammable airborne contaminants in the atmosphere is 5% LEL or greater, or where the oxygen concentration of the atmosphere exceeds 23.5%. (b) Where persons have entered or are conducting tasks in a confined space and the concentration of flammable airborne contaminant in the atmosphere of the confined space has been found to be greater than 5% LEL and less than 10% LEL, the persons shall be removed unless continuous monitoring with a suitably calibrated explosive (flammable) atmospheric substance detector is used in the confined space at all times while persons are present. (c) Where the concentration of flammable airborne contaminant in the atmosphere of a confined space has been found to be 10% LEL or greater, no persons shall remain in the confined space.	**Intent:** To verify that adequate control measures are implemented for entries into a confined space with an unsafe atmospheric condition. **Personnel:** Persons conducting tasks associated with confined spaces (including employees and contractors), supervisors, maintenance personnel, and safety and health personnel. **Method:** Verify that site policy/procedure does not allow entry into a confined space when an unsafe atmospheric condition is detected. Inspect and assess that supplied-air respiratory protection systems are available, accessible to relevant personnel and well maintained. Verify that relevant personnel are trained in the use of the supplied-air respiratory protections systems. Refer to AS2865 cc. 3.4.32 and MSIR 9.12

Point	Standard	Guideline
2.7	Where the hierarchy of risk control measures cannot provide a concentration of oxygen in the atmosphere greater than 19.5% or the airborne contaminants that may cause impairment, loss of consciousness or asphyxiation cannot be reduced to below the relevant exposure standards, no persons shall enter the confined space unless they are equipped with supplied-air respiratory protection and where appropriate, personal protective equipment.	**Intent:** To verify that adequate control measures are implemented for entry into a confined space with an unsafe atmospheric condition. **Personnel:** Persons conducting tasks associated with confined spaces (including employees and contractors), supervisors, maintenance personnel, and safety and health personnel. **Method:** Verify that the site has a policy/procedure for the use of protective respiratory equipment whilst in a confined space. Review training competencies for individual utilising protective respiratory equipment (fit test, utilisation etc.) Verify that the supplied-air respiratory protections systems are readily available, accessible to relevant personnel, well maintained and calibrated/certified as per the OEM recommendations. Refer to AS2865 c3.4.33
2.8	Equipment shall be provided as follows: (a) Suitable equipment shall be provided including, where necessary, equipment for – (i) personal protection; (ii) emergencies including rescue; (iii) first aid; (iv) communication; and (v) fire suppression. (b) The equipment shall be appropriate to the tasks to be conducted in the confined space, and maintained in a proper working condition	**Intent:** To verify that suitable and well-functioning equipment is utilised for conducting tasks associated with a confined space. **Personnel:** Persons conducting tasks associated with confined spaces (including employees and contractors), supervisors, and safety and health personnel. **Method:** Verify that gas monitors are regularly tested, calibrated and serviced as per the OEM's recommendations. Verify that the communication equipment utilised such as radios are in good working condition. Verify that the PPE, emergency equipment, first aid kit etc. are available and in good working condition. Verify that the fire extinguishers available are serviced regularly and of the correct type. Refer to AS 2865 c3.4.34 and MSIR r. 4.1.

Point	Standard	Guideline
2.9	Prior to a written authority being cancelled, all tasks in the confined space shall cease and all persons shall be removed from the confined space.	**Intent:** To verify that no person or unauthorised equipment are inside the confined space prior to putting the space online. **Personnel:** Permit-to-work officers, persons conducting tasks associated with confined spaces (including employees and contractors), and supervisors. Permit officer/issuer, persons entering the space, process/maintenance personnel, process/maintenance supervisors, safety advisors. **Method:** Verify that the confined space entry procedure includes the process/requirements of cancelling a confined space entry permit. Verify that confined space are cleaned and empty prior to cancelling the confined space entry permit. Interview site personnel or working groups to assess whether they understand the confined space permit to works system and the requirements to cancel the permit. Refer to AS 2865 c3.4.35.

3 Risk management

Requirements and standards associated with risk management.

Point	Standard	Guideline
3.1	A methodology is established for the management of risks associated with confined spaces.	**Intent:** To verify the site have a system for the identification of hazards and management of risks associated with work in or on confined spaces. **Personnel:** Managers and supervisors, training personnel, safety and health personnel, and employees (operations, maintenance and contractors). **Method:** View the site policies and procedures relating to confined spaces to ensure they cover: • Hazard identification • Risk assessment • Risk control measures • Operational experience • Products and services • Legal requirements • Key roles and responsibilities • Confined space entry requirements • Inspection, calibration and maintenance activities on confined space safety equipment. Refer to AS 2865 cc. 2.7, 2.9.1, 2.9.3 and MSIA s. 9(1)
3.2	Consultation takes place between the stakeholders, or their representatives, when implementing the risk management systems for the confined spaces in accordance with the relevant provisions of the MSIA.	**Intent:** To verify that consultation takes place with appropriate personnel when implementing the risk management systems for the confined spaces. **Personnel:** Relevant employees including: Safety and health personnel, safety and health representatives, operations, maintenance, contractors and supervisory personnel. **Method:** Interview personnel if they have been consulted with or involved in developing risk assessments for work in confined spaces. Interview personnel to determine if there have been communications for any change in procedures or requirements. View confined space permits and JHAs for evidence of review and agreement from those entering the confined space. Refer to AS 2865 c. 2.5.1. MSIA s. 9(1)

Point	Standard	Guideline
3.3	A risk assessment shall be conducted by a competent person or persons before conducting any tasks associated with the confined space. The assessment shall be documented and take into account at least the following: (a) The hazards of the confined space. (b) The tasks required to be conducted, including the need to enter the confined space. (c) The range of methods by which the tasks can be conducted. (d) The hazards involved and associated risks involved with the actual method selected and equipment proposed to be used. (e) Emergency response procedures. (f) The competence of the persons to conduct the tasks.	**Intent:** To verify that competent personnel complete risk assessment for controls to be implemented prior to confined space entry. **Personnel:** Supervisors, relevant employees (operations, maintenance and contractors), safety and health representatives, and safety and health personnel. **Method:** View completed risk assessments and ensure individuals involved hold the competence required e.g. process operators, maintenance, dangerous goods, hygiene, and safety etc. View completed risk assessments to ensure they cover such controls as Some factors to consider when undertaking a risk assessment of a confined space are listed in AS 2865 c. 3.3.2. Refer to AS2865 c. 3.3.
3.4	The risk assessment shall be reviewed and revised whenever there is evidence to indicate that there is a change in the risk.	**Intent:** To verify that a formal procedure exists to review and revise the relevant risk assessments whenever there is evidence to indicate that there is a change in the risk. To ensure that “stop criteria” or “change” is defined to trigger the review process. This can be a change in scope of work, isolations requirements, weather conditions, other adjacent tasks, etc. **Personnel:** Permit-to-work officers, persons conducting tasks associated with confined spaces (including the standby person), supervisors, relevant employees (operations, maintenance and contractors). **Method:** Interview if work crew and supervisor review and revise their risk assessment (JHA or similar) when there is a change in the risk. Inspect and observe if the task being conducted inside the confined space is consistent with the approved permits and JHA (or similar). Review if there are other safety systems (such as permit to work system, supervision, training, etc.) that manage a change in scope or condition. Refer to AS 2865 c. 3.3.5.

Point	Standard	Guideline
3.5	When multiple tasks are being conducted in and around the confined space, a safe system of work is implemented to ensure each task is safe to carry out.	**Intent:** To verify that one task does not detrimentally affect other tasks that occur concurrently in/around the confined space. **Personnel:** Persons conducting tasks associated with confined spaces (including employees and contractors), supervisors, maintenance planners, and permit-to-work officers. **Method:** Review if risk assessments identify hazards from other tasks that may detrimentally affect the tasks being conducted. Inspect if control measures are implemented for the identified hazards. Interview work groups to assess whether they are aware of other tasks occurring that may impact the tasks they are performing and the hazards that may affect their working conditions. Refer to AS 2865 c. 3.3.5.
3.6	If a risk assessment identifies a risk to health or safety arising from the tasks to be conducted in a confined space, the risk shall be eliminated or, if this is not possible, minimized by the implementation of appropriate risk control measures. The risk control measures shall be documented.	**Intent:** To verify that an assessment is made to eliminate the risk of exposing personnel to confined space hazards whenever practicable. **Personnel:** Safety and health personnel, safety and health representatives, and relevant employees (operations, maintenance and contractors). **Method:** View examples of risk assessments/process or procedures that identify and recommend conducting tasks from outside the confined space. View examples of plant or equipment modifications that result in eliminating or reducing the need to enter a confined space. Interview working groups to assess whether they understand the hazards and the required control measures for the task they are performing. Refer to AS 2865 c. 3.4.1.

4 Design, manufacture, supply and modification considerations

Requirements and standards associated with design, manufacture, supply and modification considerations.

Point	Standard	Guideline
4.1	The need to conduct work inside a confined space is minimised.	**Intent:** To verify that the confined space shall be designed and manufactured to minimise – • The need to enter the confined space • The risk associated with conducting tasks within the confined space **Personnel:** Managers, engineers, designers, consultants, purchasing personnel, and safety and health personnel. **Method:** Check if documents such as Engineering or Technical Standards, Procurement standards, Management of Change Procedure or others processes, procedures, SOP, SWP's etc. Consider minimising the need for confined space entry. The design for a confined space should minimise the need to enter the confined space for maintenance or other purposes in alignment to the hierarchy of control. Refer to AS 2865 c. 2.4.1, MSIA ss. 9 and 14 and MSIR Part 6.
4.2	The risks associated with conducting work in a confined space when required are minimised through design and manufacture.	**Intent:** To verify that the means of entry to and exit from the space should be minimized. The safety of entry to and exit from a confined space is increased when openings are large in comparison to the persons and their equipment that have to pass through them. **Personnel:** Managers, engineers, designers, consultants, purchasing personnel, and safety and health personnel. **Method:** Check if documents such as Engineering or Technical Standards, Procurement standards, Management of Change Procedure or others processes, procedures, SOP, SWP's etc. Include the need to risk assess tasks required to be performed in a confined space. Risks involved in conducting tasks in a confined space should be minimized at the design stage and during initial installation of equipment. Maintenance tasks required to be completed in confined spaces are minimised in duration and frequency through equipment design, and understanding failure modes to ensure minimum task exposure (e.g. FMECA). Refer to AS 2865 c. 2.4.1, MSIA ss. 9 and 14 and MSIR Part 6.

Point	Standard	Guideline
4.3	Openings for entry to and exit from a confined space are of adequate size to permit rescue of all persons who may enter the confined space.	**Intent:** To verify (except for boilers and pressure vessels) at least one entry must have an aperture of not less than: • 450 mm long by 400 mm wide, if rectangular, • 450 mm in diameter, if circular, • 450 mm major and 400 mm minor axes, respectively, if elliptical, • or other suitable means of meeting this intent. **Personnel:** Engineering or technical personnel, maintenance personnel or other relevant employees. **Method:** Inspect entry and exit openings, are of an adequate size to permit rescue of all employee's carrying out tasks in the confined space. Refer to AS 2865 c. 2.4.2.
4.4	Any modification made to a confined space does not detrimentally affect the safe means of entry to, exit from, or the tasks being carried out in the confined space.	**Intent:** To verify, that any modifications made to a confined space have not detrimentally affected the safe means of entry to, exit from, or the tasks being carried out in the confined space. **Personnel:** Engineering or technical personnel, maintenance personnel or other relevant employees, such as process employees. **Method:** Check if site has implemented a Management of Change Procedure. Interview process and maintenance workers to determine if modifications have been made. Review past engineering projects that are associated with confined space modifications to ensure risk assessments were completed for the modification. Review maintenance procedures to ensure that work in the confined space ceases if maintenance activities increase the risk associated with entry/exit from the confined space or impedes work in the confined space. Refer to AS 2865 c. 2.4.3 and MSIR Part 6.

Point	Standard	Guideline
4.5	Any confined spaces that are reclassified as a non-confined space have undergone sufficient changes in structure or usage to eliminate (without the need for risk control measures) all possible sources of inherent hazards that define a confined space.	**Intent:** To ensure that any confined space that has been reclassified as a non-confined space, has undergone sufficient changes to make it suitable for human occupancy without the need for risk control measures to be implemented. To verify that hazards are identified and managed for the reclassified space and associated tasks. **Personnel:** Engineering or technical personnel, maintenance personnel or other relevant employees, such as process employees. **Method:** Check if site has implemented a Confined Space Reclassification Procedure. Verify examples of reclassified confines spaces that do not require risk control measures. Interview process and maintenance workers to determine if reclassification of confined spaces occurs in accordance with the procedure and standard. Refer to AS 2865 c. 2.4.6, MSIA s 9.1

5 Training and competency

Requirements and standards associated with training and competency.

Point	Standard	Guideline
5.1	All persons with tasks associated with a confined space have been trained and assessed as competent to conduct those associated tasks in regards to a confined space.	**Intent:** To verify that all personnel assigned tasks have the required training and competency to conduct their tasks relating to confined spaces. **Personnel:** Managers (all levels), training personnel, safety and health personnel, safety and health representatives, and employees (operations, maintenance and contractors). **Method:** Check that all employees including sub-contractors who have job tasks associated with confined space have completed confined space training and been assessed as competent including the sentry and gas tester. Interview personnel conducting tasks associated with confined spaces for their understanding of the confined space entry management system. Verify that the training requirements associated with confined spaces cover: • Design, manufacture, install or modify a confined space. • Participate in confined space risk management process. • Control confined space hazards. • Enter and conduct tasks in or on a confined space. • Participate in confined space stand-by roles (initial rescue procedures). • Participate in emergency response (this includes making persons aware to follow emergency response procedures are all times, and avoid the spontaneous reaction to immediately enter and attempt rescue). Refer to AS 2865 cc. 2.6.1, 2.8.3, 2.9.1, 2.9.3 and Appendix D and MSIR r. 4.13.

Point	Standard	Guideline
5.2	Persons are reassessed at appropriate intervals to maintain their competency to conduct tasks associated with confined spaces.	**Intent:** To verify that all personnel conducting tasks associated with confined spaces maintain their competency in relevant legislation and procedures. **Personnel:** Managers and supervisors, training personnel, safety and health personnel, and employees (operations, maintenance and contractors). **Method:** Check if personnel conducting tasks associated with confined spaces have been retrained and reassessed as per site requirements. Check the site requirements are based on a risk assessment showing reassessment requirements. Check the site requirement defines the maximum time between entries to maintain competence (how often skills associated with confined space work are utilised) Refer to AS 2865 c. 2.6.1 and MSIR r. 4.13.
5.3	Records are maintained of confined space training and competencies achieved.	**Intent:** To verify that the site keeps a record of all training and assessment that is carried out for confined spaces. **Personnel:** Supervisors, training personnel, safety and health personnel. **Method:** View training and assessment records for site personnel involved in confined space related tasks. Refer to AS 2865 cc. 2.6.2, 2.9.3 and MSIR r. 4.13.

6 Isolation and atmospheric requirements

Requirements and standards associated with isolation and atmospheric testing.

Point	Standard	Guideline
6.1	Prior to any person entering a confined space, all potentially hazardous services, (including all process services) normally connected to that space shall, where it is possible to do so, be 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.	**Intent:** To verify that all energy sources have been effectively identified, controlled and managed to eliminate or minimise exposure to personnel. **Personnel:** Permit-to-work officers, operations personnel, maintenance personnel (electrical), and supervisors. **Method:** Review the isolation procedure for the relevant confined space to ensure it includes an effective isolation list that identifies all plant, equipment, and hazardous services for confined space entry, and it recommends adequate method of isolation appropriate to the level of risk involved. Inspect all isolation points listed are isolated and the method of isolation is consistent with the risk assessment/processes or procedure. Interview work groups to assess whether they understand the isolations and permit-to-work systems. Refer to AS 2865 cc. 3.4.5, 3.4.7, 3.4.8 and MSIR r. 6.2
6.2	Where necessary, the confined space shall be cleared of contaminants by use of a suitable purging agent. The purging agent or any gas used for ventilation purposes shall not be pure oxygen or a gas mixtures with an oxygen concentration greater than 21%.	**Intent:** To verify that a safe system of work is implemented to ensure that personnel are not exposed to harmful contaminants. **Personnel:** Permit-to-work officers, maintenance and operation personnel, persons conducting tasks associated with confined spaces (including employees and contractors), and supervisors. **Method:** Review if the risk assessment recommends cleaning the space prior to entry. Inspect if the confined space is cleared of contaminants. Review the risk assessment to make sure purging of flammable/combustible gas systems such as natural gas, LPG, ammonia, or hydrogen lines takes place. Review the purging process to make sure it uses a suitable purging agent. Interview site personnel or working groups to assess whether they are aware of the atmospheric hazards and understand the requirements to purge the space. Refer to AS 2865 c. 3.4.11.

Point	Standard	Guideline
6.3	Ventilation of a confined space should be natural, forced or by mechanical means to establish and maintain a safe atmosphere. This ventilation should be continued throughout the period of occupancy.	**Intent:** To verify that a confined space is only entered or occupied if the atmospheric condition inside the space is safe. **Personnel:** Persons conducting tasks associated with confined spaces (including employees and contractors), ventilation officers, and supervisors. **Method:** Inspect if the ventilation system installed is consistent with the risk assessment. Inspect if the ventilation system installed is adequate for the type of task being conducted inside the space e.g. natural ventilation may be adequate for a person doing an internal inspection of a cleaned tank, but forced or mechanical ventilation maybe required for welding inside a tank. Interview site personnel or working groups to assess whether they are aware of the atmospheric hazards and understand the requirements to implement ventilations control. Refer to AS 2865 c. 3.4.17
6.4	Atmospheric testing or monitoring shall be conducted in a manner consistent with the hazards identified in the risk assessment of the confined space. No person shall enter a confined space to conduct atmospheric testing or monitoring without a written authority.	**Intent:** To verify that atmospheric testing or monitoring is conducted in a manner consistent with the risk assessment. **Personnel:** Permit-to-work officers, persons conducting tasks associated with confined spaces (including the gas tester), ventilation officers, and supervisors. **Method:** Check if the atmospheric test results are recorded and reviewed and if they are done consistently as per the risk assessment. Review that the correct gases are tested (as identified by the relevant risk assessments). Verify that a calibrated type of gas monitor that is suitable for the task is utilised. Check if the site regularly inspects, tests and calibrates their gas monitors as per the OEM's recommendations. Interview site personnel or working groups to assess whether they are aware of the atmospheric hazards and understand the requirements for the atmospheric testing or monitoring. Refer to AS 2865 c. 3.4.22

7 Emergency response equipment

Requirements and standards associated with emergency response equipment.

Point	Standard	Guideline
7.1	The employer has adequate emergency response equipment and resources to meet the requirements of the confined space work being carried out onsite, as per the emergency response plan.	**Intent:** To verify that the emergency response plan can be executed effectively. **Personnel:** Managers and supervisors, persons conducting tasks associated with confined spaces (including employees and contractors), and emergency response personnel. **Method:** Inspect the emergency response facility to ensure the equipment and resources (listed as per the rescue plan) are adequate (personnel and equipment) available and accessible to respond to confined space emergencies. Refer to MSIR r. 4.30(2)(c)(vii).
7.2	Appropriate emergency response and first aid procedures and provisions shall be identified, planned, established and rehearsed.	**Intent:** To verify that emergency response and first aid procedures are in place for the confined spaces being entered, relevant emergency response and first aid equipment is available and the procedures are rehearsed as necessary for their effectiveness. **Personnel:** Emergency response personnel, persons conducting tasks associated with confined spaces (including the standby person), and supervisors. **Method:** Review the risk assessment, rescue plans or other associated documents outlining the emergency response and first aid procedures for confined spaces. View attendance records for personnel involved in rehearsing emergency response and first aid procedures. Refer to AS 2865 cc. 2.8.1, 2.9.1, 2.9.3 and MSIR r. 4.30(2)(c)(iv).

Point	Standard	Guideline
7.3	Those persons involved in an emergency response shall be made aware of the conditions and the number of persons in the confined space prior to any entry.	**Intent:** To verify that a system is in place to make emergency response personnel aware of the specific conditions present in a confined space should an emergency arise. **Personnel:** Supervisors, emergency response coordinators and members. **Method:** View log books, sign in/out sheets, permits, etc. Interview ER department to ensure they are aware when confined space activities occur on-site and what the specific conditions surround each entry are (including the number of people in the confined space) allowing for enough competent personnel and the equipment to be available (as per the rescue plan) prior to any entry. Refer to AS 2865 cc. 2.8.2, 3.4.29(e) and MSIR r. 4.30.

8 Accident / incident investigation

Requirements and standards associated with accident / incident investigation.

Point	Standard	Guideline
8.1	The employer investigates incidents associated with confined spaces.	**Intent:** To verify that reported confined space incidents are investigated within a reasonable time. **Personnel:** Safety and health personnel, safety and health representatives, and employees (operations, maintenance and contractors) who may have been involved in an incident or investigation. **Method:** Interview relevant employees to determine if incidents and near misses are investigated or if incidents are occurring and either not being reported or investigated. View documentations to verify that site has developed and implemented some form of incident management system Review the site's incident logbook or similar system to determine if previous incidents, were investigated appropriately. Review incident reports. Refer to MSIA ss.11 and 11A.

Point	Standard	Guideline
8.2	All actions arising from investigations of confined space entry incidents, have been implemented.	**Intent:** To verify that all recommended actions have been implemented. **Personnel:** Safety and health personnel, safety and health representatives, and employees (operations, maintenance and contractors) who may have been involved in an incident or investigation. **Method:** Field verify if incident investigation recommendations have been implemented. Verify if incident investigation recommendations have been extended to include other similar systems, equipment or scenarios. Interview employees to verify if incident investigation recommendations are promptly addressed. Refer to MSIA s. 9.1(1).
8.3	Confined space incident reports, findings and controls are communicated to all relevant personnel including contactors.	**Intent:** To verify that the relevant personnel have been provided with information to gain a better understanding of the incident and the controls implemented so employees aren't exposed to hazards. **Personnel:** Safety and health personnel, safety and health representatives, and employees (operations, maintenance and contractors) who may have been involved in an incident or investigation. **Method:** Review the available documentation regarding how incident investigation reports are shared with employees. Available documentation may include face to-face briefings, emails or intranet postings to employees, posted hard-copy information, handouts, or minutes of safety meetings. Interview employees ensure they received and understood the information provided. Refer to MSIA s. 9.1(1).