



## Defence People Policy, SafetyMan

### Working in Confined Spaces Policy and Guidance

#### Policy statement

1. Activities requiring entry to or work to be undertaken in a confined space must identify all associated hazards, establish controls to address identified risks and be reviewed regularly in accordance with the *Work Health and Safety Act 2011*; *Work Health and Safety Regulations 2011*; and the Confined Spaces Code of Practice (CoP) to minimise the work health and safety impact on the worker(s).

#### Scope

2. This policy applies to all Defence workers, including ADF members, APS employees, ADF cadets, contractors and other persons.
3. The application of this policy to contractors and sub-contractors is dependent on the degree of control and influence that Defence has over the undertaking and will be defined within the relevant contractual arrangements.
4. Confined spaces include partially enclosed or enclosed spaces that are not designed or intended to be occupied by a person; often with poor ventilation where hazardous atmospheres can quickly develop, especially when the spaces are small.

#### Policy – core elements

5. Defence will, so far as is reasonably practicable, eliminate the need for a person to enter or inadvertently be able to enter a confined space. If not practicable to eliminate then ensure the risk is minimised so far as is reasonably practicable throughout the asset life of infrastructure and the capability life cycle.
6. Defence is to ensure that activities which require entry to, or work being undertaken in a confined space are conducted, as a minimum, in accordance with the Regulations, Part 4.3 – Confined Spaces, regulations 62-77; and the CoP.
7. It is a requirement of the Regulations that all Defence workers and contractors performing confined space entry tasks in Defence controlled areas has a confined space entry management system that meets, or exceeds that described in the Regulations.
8. A *relevant worker* associated with confined space work, which includes the supervisor, must be a *competent person*.
9. Regulation 76(3) states:  
**relevant worker** means:  
(a) a worker who, in carrying out work for the business or undertaking, could:  
(i) enter or work in a confined space; or  
(ii) carry out any function in relation to work in a confined space or the emergency procedures established under regulation 74, but who is not required to enter the space; or  
(b) any person supervising a [confined space] worker.
10. A relevant worker must be a *competent person*, as defined in both the CoP, and the Australian Standard Confined spaces. The Australian Standard defines a 'competent person' as:

A person who has, through a combination of training, education and experience, acquired knowledge and skills enabling that person to perform a specified task correctly (clause 1.5.4).



11. Competencies are discussed further under roles and responsibilities.

### **Roles and responsibilities**

12. **Designer, manufacturer, importer, supplier, installer and constructor.** If an item of plant or a structure includes a confined space, then, pursuant to regulation 64, the designer, manufacturer, importer or supplier; and the installer or constructor must ensure that any need to enter, or the risk of inadvertently entering the space is eliminated, so far as is reasonably practicable. If this is not reasonably practicable, then the need or risk must be minimised, so far as is reasonably practicable, by:
- 12.1. minimising the need to enter;
  - 12.2. designing a safe means of entry and exit; and
  - 12.3. ensuring the risk to the health and safety of any person who enters the space is eliminated.
13. Group Heads and Service Chiefs are responsible for ensuring training that achieves appropriate confined spaces competencies is available for all personnel under their command or direction, whose trade/employment categories may involve confined space work. This includes appropriate refresher training.
14. Defence Estate and Infrastructure Group (E&IG) is responsible for service delivery functions and maintenance of buildings and facilities, which may be relevant to confined spaces where E&IG provides the infrastructure. Where confined spaces form part of a building, E&IG are responsible for providing hazard identification and risk assessment information on any relevant confined spaces.
15. Where a systems project office specifies a maintenance process to be undertaken on equipment, Capability Acquisition and Sustainment Group is responsible for providing hazard identification and risk assessment information on any relevant confined spaces.
16. Commanders/managers and supervisors, as persons with control of a workplace are responsible for:
- 16.1. understanding the hazards and risks associated with confined space entry, to the health and safety of workers under their control, associated with confined space tasks in their respective workplaces;
  - 16.2. understanding that there are specific requirements for emergency procedures relating to confined spaces. These should be considered as part of the risk assessment process.
  - 16.3. consulting with workers to identify, assess and control confined entry space hazards and risks;
  - 16.4. ensuring a risk assessment is undertaken in the first instance when entry to or working in a confined space is required, revalidating the risk assessment for subsequent entry, and implementing risk control measures;
  - 16.5. providing appropriate information, education, training, instruction and supervision to all persons associated with working in confined spaces;
  - 16.6. ensuring that appropriate rescue and first aid procedures relating to confined spaces are planned, established and practiced; and that workers who undertake specific rescue and first aid functions have the required competencies to do so and records thereof are retained;
  - 16.7. implementing improvements to reduce confined space entry related risks, so far as is reasonably practicable to acceptable levels;

- 16.8. ensuring that complete records including risk assessments and entry permits are maintained and reporting requirements are met; and
- 16.9. ensuring that activities associated with confined space entry are considered when reviewing policy and systems, and documents and records available as required for the conduct of audits.
17. Supervisors are responsible for:
  - 17.1. ensuring compliance with all requirements outlined in this policy, and other relevant legislation and Defence policies;
  - 17.2. enforcing compliance with relevant orders and instructions on confined space operations;
  - 17.3. ensuring the frequency of recurring training takes into account how often workers are required to carry out tasks associated with entry to or work in confined spaces, in combination with a task-specific risk assessment;
  - 17.4. ensuring that safety signs and barriers are in place prior to commencement and while the confined space work is being undertaken;
  - 17.5. ensuring that a confined space permit has been issued by a competent person, who has the required training, qualification or experience and knowledge to carry out the task;
  - 17.6. ensuring the confined space entry permit has been authorised by a competent person in accordance with regulation 67;
  - 17.7. ensuring a risk assessment has been completed by a competent person, to assist in determining the controls and risks associated with the work in the confined space, and the confined space is in a safe condition for the work required;
  - 17.8. ensuring that a worker does not enter a confined space to carry out work unless the worker has been issued with a confined space entry permit in accordance with regulation 67;
  - 17.9. ensuring that no person enters the confined space without the support of a standby person;
  - 17.10. ensuring workplace inspections are conducted periodically to identify work health and safety hazards, assess associated risks and apply appropriate risk control measures, in relation to the management of confined spaces;
  - 17.11. ensuring that the site is returned to a safe condition (ie all equipment has been removed from within the confined space and its surrounds; hatches, doors or openings are closed securely; and the site is free of hazards so far as is reasonably practicable) at the completion of the work.
18. All workers have a responsibility to:
  - 18.1. take all reasonable steps to safeguard their health and safety and the safety of others in the workplace;
  - 18.2. understand and follow established safe work practices and procedures, participate in appropriate training and hazard identification, and control risks arising from entry to and work performed inside confined spaces;
  - 18.3. comply with all reasonable instruction and requirements relating to safe work practices and procedure;

- 18.4. advise supervisors of any perceived risk that could increase exposure to injury or illness;
  - 18.5. monitor themselves and their fellow workers, and take action when they observe elevated risks to themselves or others; and
  - 18.6. report all work health and safety incidents;
  - 18.7. ensure all personal protective equipment is used as required, and fitted and worn correctly in accordance with manufacturer's instructions.
19. Contractors must comply with the requirements of this policy and as specified in their contracts to Defence. When contracts for confined space work are developed, consideration is to be given to how these various requirements will be met. In the case of a large project, specific requirements should be addressed in the Work Health and Safety Plan.
20. For audit and investigation purposes:
- 20.1. a record of all training provided must be kept for two years, pursuant to regulation 76; and
  - 20.2. if a notifiable incident occurs in relation to confined space work, then the risk assessment and the confined spaces entry permit must be kept for *at least* two years, pursuant to subregulation 77(3).

### References and related documents

21. [Work Health and Safety Act 2011](#), Part 4 – Authorisations, 41
22. [Work Health and Safety Regulations 2011](#), Part 4.3 – Confined Spaces, 62-77
23. Confined Spaces Code of Practice, via [Comcare](#). This link leads to the Federal Register of Legislative Instruments.
24. Comcare | Safety and prevention, [Contractor Management: Guidance for Commonwealth PCBU's](#)
25. [Workplace exposure standards for airborne contaminants](#)
26. *SafetyMan*:
  - 26.1. [Electrical Safety Policy and Guidance](#)
  - 26.2. [Managing Personnel Exposure to Excessive Heat/Cold Policy and Guidance](#)
  - 26.3. [Noise Management Policy and Guidance](#)
  - 26.4. [Personal Protective Equipment Policy](#)
  - 26.5. [Welding and Allied Processes Policy and Guidance](#)
  - 26.6. [Working in Confined Spaces Procedure 01 – Isolation and De-energisation](#)
  - 26.7. [Working in Confined Spaces Procedure 02 – Safety of the Atmosphere](#)
  - 26.8. [Working in Confined Spaces Procedure 03 - PPE](#)
  - 26.9. [Working in Confined Spaces Procedure 04 – Use of Electrical Devices](#)
  - 26.10. [Working in Confined Spaces Procedure 05 – Selection of Personnel](#)
27. Australian Standards/New Zealand Standards (via [SIA Global](#) under Defence subscription):
  - 27.1. AS 2865-2009 : Confined spaces
  - 27.2. AS/NZS 1020:1995 : The control of undesirable static electricity

- 27.3. AS/NZS 1270:2002 (R2014) : Acoustics - Hearing protectors
- 27.4. AS 1319-1994 (R2018) : Safety signs for the occupational environment
- 27.5. AS/NZS 1337.1:2010 : Personal eye protection - Eye and face protectors for occupational applications
- 27.6. AS 1674.1-1997 (R2016) : Safety in welding and allied processes - Fire precautions
- 27.7. AS/NZS 1715:2009 : Selection, use and maintenance of respiratory protective equipment
- 27.8. AS/NZS 1716:2012 : Respiratory protective devices
- 27.9. AS/NZS 1801:1997 : Occupational protective helmets
- 27.10. AS/NZS 1891.1:2007 : Industrial fall-arrest systems and devices - Harnesses and ancillary equipment
- 27.11. AS/NZS 1891.4:2009 : Industrial fall-arrest systems and devices - Selection, use and maintenance
- 27.12. AS/NZS 2210.1:2010 : Safety, protective and occupational footwear - Guide to selection, care and use
- 27.13. AS/NZS IEC 60903:2020 : Live working - Electrical insulating gloves
- 27.14. AS/NZS 3000:2018 (Amended) : Electrical installations (known as the Australian/New Zealand Wiring Rules)
- 27.15. AS/NZS 3100:2017 : Approval and test specification - General requirements for electrical equipment
- 27.16. AS/NZS 3190:2016 : Approval and test specification - Residual current devices (current-operated earth-leakage devices)
- 27.17. AS/NZS 3191:2008 (R2019) : Electric flexible cords
- 27.18. AS/NZS 3760:2010 : In-service safety inspection and testing of electrical equipment
- 27.19. AS/NZS 60079.11:2011 : Explosive atmospheres - Equipment protection by intrinsic safety 'i'
- 27.20. AS/NZS 61558.2.6:2009 (IEC TEXT) : Safety of power transformers, power supplies, reactors and similar products for supply voltages up to 1 100 V - Particular requirements for safety isolating transformers and power supply units incorporating safety isolating transformers(IEC 61558-2-6 Ed 2, MOD) (Reconfirmed 2020)
- 28. European Standard (via [SIA Global](#) - fee payable), I.S. EN 943-1:2015 : Protective Clothing Against Dangerous Solid, Liquid and Gaseous Chemicals, Including Liquid and Solid Aerosols - Part 1: Performance Requirements for Type 1 (gas-tight) Chemical Protective Suits
- 29. Confined space forms (via Defence [Forms Portal](#)):
  - 29.1. AC 869 - Confined Space Risk Assessment, Desktop eForms (Navy);
  - 29.2. AC 818 - Entry Permit for Confined Spaces, Desktop eForms (Defence);
  - 29.3. AC 870 - Confined Space Entry Permit, Desktop eForms (Navy); and
  - 29.4. AE 566 - Defence Fuel Installation (DFI) - Safe to Work Confined Space Certificate, SmartForm (Joint Capabilities Group).

<b>Document reference</b>	SafetyMan, Working in Confined Spaces Policy and Guidance		
<b>Content owner</b>	Work Health and Safety Branch		
<b>Date published</b>	9 Nov 2020		
<b>Objective ID</b>	AB36412005	<b>Version</b>	2.1



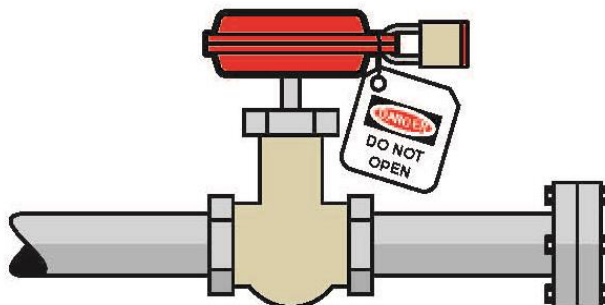
### Working In Confined Spaces Procedure 01 – Isolation And De-Energisation

1. This procedure provides tools, information and/or guidance relating to *SafetyMan - Working in Confined Spaces Policy and Guidance*.
2. Before a qualified person (through training and experience and therefore possessing the knowledge and skills to carry out the required task) enters a confined space, all potentially hazardous equipment, processes and services connected to the confined space are to be isolated and de-energised to prevent the:
  - 2.1. introduction of contaminants or conditions through piping, ducts, vents, drains, conveyors, service pipes and fire protection equipment;
  - 2.2. activation or energising of machinery in the confined space;
  - 2.3. activation of plant or services outside the confined space that could adversely affect the space (for example heating or refrigerating methods);
  - 2.4. release of any stored or potential energy in plant; and
  - 2.5. inadvertent use of electrical equipment.
3. Isolation measures including physically locking and tagging (see Figure 1), closing and blanking (see Figure 2) should be checked at each isolation point. Isolation measures should be supported by systems to ensure that the isolation measures are not removed until all work is complete and all workers have left the space.

**Figure 1** Example of tag and lockout with the padlocks of two workers.



**Figure 2** One example of closing and blanking – Open end of pipe capped. Nearest valve closed locked and tagged.



4. De-energising includes reducing plant/equipment/devices that might hold stored energy to a 'zero energy' condition. Examples of stored energy include: hydraulic and pneumatic equipment that has been energised using pressurised liquid or gas; equipment that contains stretched/deformed components such as springs or diaphragms, equipment that uses gravity/weight for power; and equipment powered using electrical energy, chemical energy (including fuel), thermal (heat) or other types of energy.
5. To ensure current practices and processes of isolation and de-energisation are applied workers must refer to their local instructions before entering a confined space.
6. [Code of Practice: Confined Spaces](#), Section 5, 'How to Control the Risks', paragraph 5.5, 'Isolation' refers to all potential hazardous services that should be isolated prior to any person entering the confined space.
7. The [Australian Standard 2865-2009 Confined Spaces](#) provides additional information to assist in the identification of the particular requirements and risk control measures for the safety of persons entering or conducting tasks associated with a confined space.

<b>Document Reference:</b>	Working In Confined Spaces Procedure 01- Isolation And De-Energisation		
<b>Policy Owner:</b>	Work Health and Safety Branch		
<b>Date Published:</b>	13 July 2018		
<b>Objective ID:</b>	AB36411993	<b>Version:</b>	1.1



## Defence People Policy, SafetyMan

### Working In Confined Spaces Procedure 02 – Safety Of The Atmosphere

1. This procedure provides work health and safety tools, information and/or guidance relating to *SafetyMan -Working in Confined Spaces Policy and Guidance*.
2. Before a qualified person (through training and experience and therefore possessing the knowledge and skills to carry out the required task) enters a confined space:
  - 2.1. an evaluation of the atmosphere should be performed using a remote sensing apparatus; and
  - 2.2. all results to be recorded on the confined space entry permit.
3. In accordance with the *Work Health and Safety Regulations 2011, Regulation 71 - Specific control-atmosphere* (Annex A), no person is to remain in or enter the confined space without air-supplied respiratory equipment where:
  - 3.1. an exposure standard has been or is likely to be exceeded; and/or
  - 3.2. where a safe oxygen level cannot be established and maintained.
4. The *Work Health and Safety Regulations 2011*, (particular regulations identified in Annex A),
  - 4.1. 71 - Specific control-atmosphere;
  - 4.2. 72 - Specific control-flammable gases and vapours; and
  - 4.3. 73 - Specific control-fire and explosion

detail the requirements for safe atmospheric conditions that must be followed before any person enters a confined space. A current list of all declared National Exposure Standards can be obtained from the *Safe Work Australia Hazardous Chemical Information System*.
5. Where atmospheric contaminants in a confined space cannot be reduced to safe levels *Work Health and Safety Regulations 2011, Regulation 71 - Specific control-atmosphere* must be followed and no person is to enter the confined space without air-supplied respiratory equipment.

#### Atmospheric Testing

6. The evaluation of the atmosphere should include testing for:
  - 6.1. oxygen content;
  - 6.2. airborne concentration of flammable contaminants; and
  - 6.3. airborne concentration of potentially harmful contaminants which require the use of suitable personal protective equipment to be worn during entry and occupation of the confined space.
7. Atmospheric testing and monitoring of a confined space must be consistent with the risk assessment based on working in the confined space and in accordance with *Work Health and Safety Regulations 2011, Regulation 71 - Specific control-atmosphere*.



8. After the atmosphere in the entry area of the confined space has been found acceptable an evaluation of more remote regions inside the confined space is to occur. Evaluation of these more remote regions may need to be undertaken by persons wearing air-supplied respiratory equipment.

### Flammable Contaminants

9. When the concentration of flammable contaminants in the atmosphere is between 5 and 10 per cent of the lower explosive limit, *Work Health and Safety Regulations 2011, Regulation 72 - Specific control-flammable gases and vapours* (Annex A) requires that an area must be evacuated by workers or a continuous monitoring flammable gas detector is to be used to monitor the concentration of flammable contaminants in the atmosphere whilst a person is in the confined space. The detector should be fitted with visible and audible alarms which should activate at a contaminant concentration of 10 per cent or more of the lower explosive limit. Where the concentration of flammable contaminants exceeds 10 per cent of the lower explosive limit the confined space must be evacuated immediately.

### Purging Prior to Entry

10. A qualified person is to ensure that where appropriate, the confined space is cleared of contaminants by the use of a suitable purging agent. Pure oxygen or gas mixtures with oxygen in a concentration greater than 21 per cent by volume are not to be used for purging or ventilation. All contaminants removed from confined spaces are to be exhausted to a location where they present no hazard. Where necessary, reference to *Australian/New Zealand Standard 1020:1995 - The Control of Undesirable Static Electricity* should be made to guard against static electricity discharge.
11. When purging of contaminants from the confined space is required, care must be taken to prevent the rupture or collapse of the enclosure due to pressure differentials.
12. When flammable contaminants are being purged, only purging and ventilation equipment designed for use in confined spaces is to be used and precautions must be taken to eliminate all sources of ignition including:
  - 12.1. static electricity where the use of non-conductive materials and anti-static clothing is recommended; and
  - 12.2. exhaust locations where the purging process ensures that any contaminants removed from the confined space are exhausted to a location where they present no hazard.

### Retest or Monitoring

13. Where considered necessary because of the potential for later release of contaminants, arrangements are to be made to monitor or retest (at appropriate intervals) the atmosphere within the confined space. A continuous monitoring flammable gas detector is to be used whilst a person is occupying the confined space.

### Ventilation

14. Confined spaces are to be well ventilated at all times to establish and maintain a safe breathing atmosphere. This can be achieved by:
  - 14.1. natural means such as open doors or windows;
  - 14.2. forced means where air is pumped or blown through the confined space; or
  - 14.3. mechanical means such as fans and baffles.
15. Ventilation is to be continued throughout the period of occupancy and is to take into account the following:

- 15.1. the operations which are likely to generate contaminants (mechanical ventilation equipment may not be adequate or sufficiently reliable to maintain a safe breathing atmosphere);
  - 15.2. if the maintenance of safe breathing atmosphere in a confined space is dependent on mechanical ventilation equipment it should:
    - 15.2.1. be continuously monitored while the confined space is occupied;
    - 15.2.2. have the controls(including any remote power supply) clearly identified and tagged to guard against unauthorised interference; and
  - 15.3. pure oxygen or gas mixtures with oxygen in concentration greater than 21 percent per volume are not to be used to ventilate the confined space.
16. Precautions are to be taken to prevent unauthorised access to or interference with the ventilation equipment or its operation.

### Exhaust Systems Ventilation

17. During operations likely to generate contaminants, mechanical ventilation equipment may not be adequate or sufficiently reliable to maintain a safe breathing atmosphere. In these instances the issue of air-supplied respirators is required. In addition, venting may not be appropriate in the case of flammable gasses. Exhaust systems should be arranged to ensure that any contaminated air removed from the confined space does not present a hazard to persons or equipment outside of the confined space. Combustion engines providing power for compressed air or any other use associated with the work being done at or near the confined space should be located so that their exhaust emissions cannot enter the confined space or contaminate air being supplied to the confined space.

### References and related documents

For further information regarding the safety of the atmosphere refer to:

18. [\*Work Health and Safety Regulations 2011\*](#)
19. [\*Code of Practice: Confined Spaces\*](#)
20. [\*Australian Standard 2865-2009 Confined Spaces\*](#)
21. [\*Safe Work Australia Hazardous Chemical Information System\*](#)

<b>Document Reference:</b>	Working In Confined Spaces Procedure 02 – Safety of the Atmosphere		
<b>Policy Owner:</b>	Work Health and Safety Branch		
<b>Date Published:</b>	13 July 2018		
<b>Objective ID:</b>	AB36412008	<b>Version:</b>	1.1

## **Annex**

A. Work Health and Safety Regulations 2011

Regulation 71 - Specific control-atmosphere

Regulation 72 – Specific control-flammable gases and vapours

Regulation 73 – Specific control-fire and explosion

## Annex A

### Work Health and Safety Regulations 2011

#### Regulation 71 - Specific control-atmosphere

(1) A person conducting a business or undertaking must ensure, in relation to work in a confined space, that:

- (a) purging or ventilation of any contaminant in the atmosphere of the space is carried out, so far as is reasonably practicable, and
- (b) pure oxygen or gas mixtures with oxygen in a concentration exceeding 21% by volume are not used for purging or ventilation of any airborne contaminant in the space.

Maximum penalty:

- (a) in the case of an individual-\$6,000, or
- (b) in the case of a body corporate-\$30,000.

(2) The person must ensure that, while work is being carried out in a confined space:

- (a) the atmosphere of the space has a safe oxygen level, or
- (b) if it is not reasonably practicable to comply with paragraph (a) and the atmosphere in the space has an oxygen level less than 19.5% by volume-any worker carrying out work in the space is provided with air supplied respiratory equipment.

Maximum penalty:

- (a) in the case of an individual-\$6,000, or
  - (b) in the case of a body corporate-\$30,000.
- (3) In this clause,  
"purging" means the method used to displace any contaminant from a confined space.

#### Regulation 72 - Specific control-flammable gases and vapours

(1) A person conducting a business or undertaking must ensure, so far as is reasonably practicable, that while work is being carried out in a confined space, the concentration of any flammable gas, vapour or mist in the atmosphere of the space is less than 5% of its LEL.

Maximum penalty:

- (a) in the case of an individual-\$6,000, or
- (b) in the case of a body corporate-\$30,000.

(2) If it is not reasonably practicable to limit the atmospheric concentration of a flammable gas, vapour or mist in a confined space to less than 5% of its LEL and the atmospheric concentration of the flammable gas, vapour or mist in the space is:

- (a) equal to or greater than 5% but less than 10% of its LEL-the person must ensure that any worker is immediately removed from the space unless a suitably calibrated, continuous-monitoring flammable gas detector is used in the space, or
- (b) equal to or greater than 10% of its LEL-the person must ensure that any worker is immediately removed from the space.

Maximum penalty:

- (a) in the case of an individual-\$6,000, or

(b) in the case of a body corporate-\$30,000.

**Regulation 73 - Specific control-fire and explosion**

A person conducting a business or undertaking must ensure that an ignition source is not introduced into a confined space (from outside or within the space) if there is a possibility of the ignition source causing a fire or explosion in the space.

Maximum penalty:

- (a) in the case of an individual-\$6,000, or
- (b) in the case of a body corporate-\$30,000.



## Defence People Policy, SafetyMan

### Working In Confined Spaces Procedure 03 – Personal Protective Equipment

1. This procedure provides tools, information and/or guidance relating to *SafetyMan -Working in Confined Spaces Policy and Guidance* and is to be read in conjunction with *SafetyMan – Personal Protective Equipment Policy*.
2. Where the elimination of risk is not reasonably practicable, risks are to be controlled using the hierarchy of controls. Personal protective equipment is the last line of protection and should be used in connection with higher level controls.
3. General personal protective equipment requirements for confined space operations are outlined in this procedure. Advice on specific personal protective equipment requirements should be sought from specialist work health and safety staff or environmental health staff.
4. Personal protective equipment must be readily accessible and appropriate to any hazard identified in the risk assessment for work in a confined space. The equipment must be selected and if necessary fitted to the person who is to use it. The equipment must also be maintained in proper working order.

#### Safety belts, harnesses and lines

5. Persons entering or working in a confined space must be trained in the use of safety harnesses, safety lines or rescue lines when:
  - 5.1. there is a risk of falling; or
  - 5.2. the rescue of an incapacitated or unconscious person by haul-out with a safety line is practicable and safe.
6. Safety belts, harnesses and safety lines must comply with *Australian/New Zealand Standard 1891.1.12007 – Industrial Fall-Arrest Systems and Devices – Harnesses and Ancillary Equipment* and must be stored, maintained and inspected in accordance with Part 4 of the standard, 'Selection, Use and Maintenance'.
7. When selecting the most appropriate type of safety harness, safety line or rescue line, consideration must be given to whether the equipment could become a hazard during a rescue operation. If wearing or using the equipment is impracticable or hinders free movement or compromises safety, alternative equipment must be used, or an alternative method of rescue must be devised—eg a rescue and fall arrest system. All workers associated with the particular confined space operation must be competent in the alternative method.

#### Respiratory protective devices

8. Persons entering or working in a confined space must be trained in the use of air-supplied respiratory protective devices. These devices must be worn when:
  - 8.1. the results of the risk assessment or monitoring indicate that a safe atmosphere cannot be established or maintained; or



- 8.2. the nature of the work procedure within the confined space is likely to degrade or contaminate the atmosphere (eg working with hot objects or equipment, or using volatile solvents).
9. Suitable respirators complying with *Australian/New Zealand Standard 1716:2012 – Respiratory Protective Devices* are to be worn when any of the following conditions exist:
  - 9.1. the oxygen level is below 19.5 percent (air-supplied protective respiratory equipment); or
  - 9.2. the capacity to measure contaminant concentrations is not available (Respiratory protective equipment which provides protection against the specific contaminants provided oxygen can be maintained in the range 19.5–23.5%).
10. Appropriate respiratory protective devices complying with *Australian/New Zealand Standard 1716:2012 – Respiratory Protective Devices* are to be worn where the capability to measure contaminant concentrations is available and any reading is at or above the relevant exposure standard. A current list of all declared national exposure standards can be obtained from the *Safe Work Australia Hazardous Substance Information System (HSIS)*.
11. Respiratory protection devices are to be selected, fitted, used, stored, maintained and inspected in accordance with *Australian/New Zealand Standard 1715:2009 – Selection, Use and Maintenance of Respiratory Protective Equipment*. Where respiratory protective equipment is necessary it must be donned and checked by the wearer and checked by another person prior to the wearer entering the confined space.

### Supplied air quality

12. Air delivered to an air-supplied respirator is to comply with *Australian/New Zealand Standard 1715:2009 – Selection, Use and Maintenance of Respiratory Protective Equipment*. Each source of breathing air supply is to carry a current certificate indicating that the air supply has been tested within the previous six months and that the quality of the supplied air is satisfactory.
13. Breathing air supply is to be tested whenever maintenance is conducted on the source. The breathing air supply is to have an automatic backup method of supplying breathing air in the event of a system failure. Alternatively, the prime source of breathing air is to be fitted with a warning device to immediately alert of an interruption to the breathing air supply.

### Work without an air-supplied respirator

14. Working without an air-supplied respirator conforming to *Australian/New Zealand Standard 1716:2012 – Respiratory Protective Devices* is permitted only when the following conditions are present:
  - 14.1. oxygen level is in the range 19.5–23% and is constantly monitored at the work point,
  - 14.2. the contaminant concentration is constantly monitored and the relevant exposure standard is not exceeded or there are no contaminants present,
  - 14.3. a continuous flow of mechanically supplied air is delivered into the confined space,
  - 14.4. no additional harmful chemicals are introduced into the confined space,
  - 14.5. an adequate respirator is available for emergency or rescue operations, and
  - 14.6. air monitoring equipment to monitor oxygen levels and any existing contaminants is available and switched on whenever the confined space is occupied.
15. Self-calibrating monitoring equipment is to be switched on in a clean air environment.

16. Hot work can be carried out without a respirator provided that:

- 16.1. adequate ventilation or exhaust is available, and
- 16.2. exposure standards are not exceeded.

### Body protection

17. **Clothing.** Workers should wear full coverage work clothing as specified by their supervisor. Supervisors are to consider the following guidelines when making an assessment depending upon the nature of the hazards in the confined space:

- 17.1. when a risk of exposure to toxic or irritating substances exists, clothing made of materials providing appropriate protection against toxic or irritating substances must be worn. The *British-Adopted European Standard 943.1:2015: Protective clothing against dangerous solid, liquid and gaseous chemicals, including liquid and solid aerosols. Performance requirements Type 1 (gas-tight chemical protective suits)*.
- 17.2. An equivalent standard may be referred to for guidance; and anti-static clothing is to be worn when the confined space contains or is likely to contain an explosive atmosphere. Clothing and personal items containing wool, silk, nylon or other synthetic materials are not permitted.

18. **Head.** Head protection complying with *Australian Standard 1801:1997 – Occupational Protective Helmets* is to be worn.

19. **Eyes.** Safety goggles or glasses complying with *Australian/New Zealand Standard 1337.1:2010 – Personal Eye Protection – Eye and Face Protectors for Industrial Applications or Other Approved Types of Eye Protection* are to be worn when eye irritation or foreign object lodgment is likely.

20. **Hearing.** Where an assessment indicates that noise levels could exceed the exposure standard, hearing protection that complies with *Australian/New Zealand Standard 1270:2002 – Acoustics – Hearing Protectors* must be worn.

21. **Hands.** Depending on the hazard/s that have been identified, the following hand protection is to be worn:

- 21.1. when hands are exposed to rough surfaces or sharp edges, gloves ranging from canvas to metal mesh gloves;
- 21.2. gloves made of impervious material designed to protect from any contaminant or chemical to which the person is likely to be exposed;
- 21.3. heat protective gloves when handling objects with a temperature greater than 60 degrees Celsius;
- 21.4. (electrically) insulating gloves that have been visually inspected before each use where a current flow through the body of greater than five milliamps may result from contact with energised electrical equipment or there is a risk of a current flow of this strength which is unable to be measured; and.
- 21.5. rubber gloves complying with *Australian Standard 2225:1994 – Insulating Gloves for Electrical Purposes* where there is a risk of a current flow through the body as a result of exposure to high voltages not exceeding 4000 volts.

22. **Feet and knees.** Rubber soled safety shoes complying with *Australian/New Zealand Standard 2210.1:2010 – Safety, Protective and Occupational Footwear – Guide to Selection, Care and Use*, and which have been inspected for exposed metal particles, are to be worn.

23. Kneepads are to be worn if required.

## References and related documents

24. [Australian/New Zealand Standard 1891.1 – Industrial Fall-Arrest Systems and Devices – Harnesses and Ancillary Equipment](#)
25. [Australian/New Zealand Standard 1716 – Respiratory Protective Devices](#)
26. [Safe Work Australia Hazardous Chemical Information System \(HCIS\)](#)
27. [Australian/New Zealand Standard 1715 – Selection, Use and Maintenance of Respiratory Protective Equipment](#)
28. [British-Adopted European Standard 943.1](#) Protective clothing against dangerous solid, liquid and gaseous chemicals, including liquid and solid aerosols.
29. [Australian Standard 1801 – Occupational Protective Helmets](#)
30. [Australian/New Zealand Standard 1337.1 – Personal Eye Protection – Eye and Face Protectors for Industrial Applications or Other Approved Types of Eye Protection](#)
31. [Australian/New Zealand Standard 1270 – Acoustics – Hearing Protectors](#)
32. [Australian Standard 2225:1994 – Insulating Gloves for Electrical Purposes](#)
33. [Australian/New Zealand Standard 2210.1 – Safety, Protective and Occupational Footwear – Guide to Selection, Care and Use](#)

<b>Document Reference:</b>	Working In Confined Spaces Procedure 03 – Personal Protective Equipment		
<b>Policy Owner:</b>	Work Health and Safety Branch		
<b>Date Published:</b>	1 May 2019		
<b>Objective ID:</b>	AB36412007	<b>Version:</b>	1.2



## Defence People Policy, SafetyMan

### Working in Confined Spaces Procedure 04 – Use of Electrical Devices

1. This procedure supplements the *SafetyMan – Working in Confined Spaces Policy and Guidance* to provide information and guidance in relation to working with electrical devices and equipment in confined spaces.
2. All electrical devices and equipment used within a confined space containing a potentially explosive atmosphere are to conform to *Australian/New Zealand Standard 60079.11:2011 Explosive Atmospheres – Equipment Protection* and *SafetyMan - Electrical Safety Policy and Guidance*.
3. Electrical equipment is any apparatus, appliance, cable conductor, fitting insulator, material or wire that is used for controlling, generating, supplying or conducting electricity.
4. A risk assessment must be undertaken prior to working with electrical equipment, devices and insulations in confined spaces. The assessment should consider elements including design and construction as well as any prescribed processes associated with installation, protection, maintenance and testing.
5. An electrical installation is an engineered arrangement of electrical equipment connected to an electrical supply for the purpose of fulfilling a particular purpose group of electrical equipment that is permanently connected together and can be supplied with electricity.
6. A risk minimisation approach must be applied when undertaking electrical installations in the workplace which includes during the processes of design, construction and installation, protection, maintenance and testing. Electrical devices must be installed in accordance with the provisions of *Work Health and Safety Regulations 2011*, Part 4.7 - General Electrical Safety in Workplaces and Energised Electrical Work.
7. Guidance on the use of radar and radio devices associated with confined space entry and work should be provided by the relevant Groups and/or Services Radiation Safety personnel.

#### Mains-operated electrical equipment

8. Electrical devices and equipment used within a confined space which is connected to an external power supply must comply with the provisions of *Work Health and Safety Regulations 2011*, Part 4.7 - General Electrical Safety in Workplaces and Energised Electrical Work. Groups and Services may impose additional requirements.
9. *Australian/New Zealand Standard 3100:2017 – Approval and Test Specification – General Requirements for Electrical Equipment* specifies the general safety requirements for equipment (including fittings, accessories, appliances and apparatus), classes and types that are used in, or intended for use in or in connection with, electrical installations in buildings, structures and premises.
10. *Australian/New Zealand Standard 3000:2018 – Electrical Installations* (commonly called the Australian/New Zealand Wiring Rules) sets the minimum requirements for the design, construction and testing of electrical installations, including the selection and installation of electrical equipment.



### Energised work

11. The relevant Group or Service must ensure, that before work is carried out on electrical equipment, the equipment is tested by a competent person to determine whether the equipment is energised. A competent person is a person who has the skills, knowledge and qualifications to complete the task.
12. The relevant Group or Service must ensure that electrical work on energised equipment is not carried out unless it is necessary in the interests of health and safety that the electrical work is carried out on the equipment.
13. The relevant Group or Service must ensure that only authorised persons enter the immediate area in which energised electrical work is being carried out.
14. A risk assessment must be undertaken when working with, or planning energised electrical equipment.

### Portable electrical equipment

15. Wherever possible all portable electrical equipment is to be:
  - 15.1. connected (individually or collectively) to earth-free extra-low voltage (extra-low voltage is defined in *Australian/New Zealand Standard 3760:2010 – In-Service Safety Inspection and Testing of Electrical Equipment*) supply from an isolating transformer/s complying with *Australian/New Zealand Standard 61558.2:2001 – Safety of Power Transformers, Power Supply Units and Similar – Particular Requirements for Safety Isolating Transformers for General Use*, with the transformer(s) being located outside of the confined space;
  - 15.2. protected through a residual current device complying with Australian/New Zealand Standard 3190:2016 – Approval and Test Specification – Residual Current Devices (Current-Operated Earth-Leakage Devices), with the device being located outside the confined space; and
  - 15.3. fitted with a flexible supply cable not inferior to a heavy duty type complying with *Australian/New Zealand Standard 3191:2008 – Electric Flexible Cords*. The cables are to be located, suspended or guarded to minimise accidental damage.

### References and related documents

16. [Work Health and Safety Act 2011](#)
17. [Work Health and Safety Regulations 2011](#), Part 4.3 and Part 4.7
18. [Code of Practice – Managing Electrical Risks in the Workplace](#)
19. [Code of Practice – How to Manage Work Health and Safety Risks](#)
20. [SafetyMan - Electrical Safety Policy and Guidance](#)
21. [Australian/New Zealand Standards](#):
  - 21.1. AS/NZS 60079.11:2011 Explosive atmospheres – Equipment protection by intrinsic safety 'I'
  - 21.2. AS/NZS Australian/New Zealand Standard 3100:2017 – Approval and test specification – General Requirements for Electrical Equipment
  - 21.3. AS/NZS Australian/New Zealand Standard 3000:2018 – Electrical installations (known as the Australian/New Zealand Wiring Rules)
  - 21.4. AS/NZS Australian/New Zealand Standard 3760:2010 – In-service safety inspection and testing of electrical equipment

- 21.5. AS/NZS Australian/New Zealand Standard 61558.2:2001– Safety of power transformers, power supply units and similar – Particular requirements for safety isolating transformers for general use
- 21.6. AS/NZS Australian/New Zealand Standard 3190:2016 – Approval and test specification – Residual current devices (current-operated earth-leakage devices)
- 21.7. AS/NZS Australian/New Zealand Standard 3191:2008 – Electric flexible cords

<b>Document Reference:</b>	Working In Confined Spaces Procedure 04 – Use of Electrical Devices		
<b>Content Owner:</b>	Work Health and Safety Branch		
<b>Date Published:</b>	February 2020		
<b>Objective ID:</b>	AB36411996	<b>Version:</b>	2.0



## Defence People Policy, SafetyMan

### Working In Confined Spaces Procedure 05 – Selection Of Personnel

1. This procedure provides guidance relating to *SafetyMan - Working in Confined Spaces Policy and Guidance*.
2. Confined space entry is not to be undertaken unless all personnel are trained and deemed competent to risk manage the identified hazards in the confined space. Personnel must have knowledge and experience in all aspects of confined space entry to recognise hazards, use safety equipment and enact emergency and rescue procedures.

#### Training and assessment

3. To be assessed as competent a worker must meet the training requirements specified in the *Work Health and Safety Regulations 2011, Regulation 76 – Information, training and instruction for workers* (Annex A), the approved *Code of Practice - Confined Spaces* and *SafetyMan – Work Health and Safety Education, Awareness and Skilling Policy and Guidance*.
4. Training must be relevant to the specific task and/or procedure to be undertaken and must include, but not be limited to:
  - 4.1. hazard identification, risk assessment and control measure procedures;
  - 4.2. physical, chemical and biological health and safety hazards likely to be encountered (including oxygen deficiency and its effects and symptoms, explosive atmospheres and the toxicological effects of chemicals);
  - 4.3. calibration and operation of atmospheric sampling instruments and interpretation of atmospheric test results;
  - 4.4. ventilation methods and equipment;
  - 4.5. worksite preparation;
  - 4.6. established health and safety work practices in the workplace including lock-out and isolation procedures;
  - 4.7. communications procedures;
  - 4.8. personal protective equipment selection, fitting, maintenance and storage;
  - 4.9. correct use of air-supplied respiratory protective equipment;
  - 4.10. suspension trauma implications;
  - 4.11. fire protection and suppression;
  - 4.12. the provisions of the relevant Regulations, the approved Codes of Practice, Standards and policies;
  - 4.13. emergency entry and exit procedures in the workplace and relating to the confined space, including rescue drills and the use of safety equipment;
  - 4.14. first-aid procedures including cardio-pulmonary resuscitation;



- 4.15. procedures for the raising, authorisation and use of confined space work permits and the contents or any relevant entry permit; and
  - 4.16. any other control measures for confined spaces.
5. A written record of training details and assessment against units of competency deemed necessary or appropriate by managing Groups and Services, is to be maintained for a minimum of two years.

### Selection of personnel

- 6. Workers are to possess the aptitude and physical ability to undertake the type of tasks envisaged, given the nature of the confined space in which work is carried out.
- 7. All workers who may be involved with rescues in a confined space should be trained in first-aid to a level deemed appropriate based on the risk assessment of the work to be undertaken.
- 8. Training should be conducted by suitably qualified persons with knowledge and experience in all aspects of confined space entry including hazard recognition, use of safety equipment and the methods of rescue. In addition to initial/induction training, continuation or refresher training should be carried out at regular intervals and as close as practicable in time to commencing work in the confined space. Competency based training has a currency of two years.
- 9. The competence of workers involved in confined space operations is to be assessed on an ongoing basis as determined by a risk assessment by a confined space entry supervisor and workplace assessor. Particular attention should be paid when assessing the competence of workers who have not engaged in confined space entry work in the preceding 12 months. In such cases, the assessment should be documented and should cover all aspects of the initial training syllabus. This assessment may indicate that the worker needs to undergo further training which must be provided before the worker recommences duties in a confined space.
- 10. If workers undertaking confined space entry remain assessed as competent it may not be necessary to undertake approved competency based training every two years. Instead continual/refresher training undertaken at least annually within a workplace by a workplace assessor may be deemed appropriate.
- 11. Training and education programs should be evaluated and reviewed in consultation with workers or their representatives to ensure that the content is clearly understood and relevant to all persons associated with confined spaces in the Defence environment. Evaluation will determine if the overall objectives of the training programs have been achieved as well as whether further training is required.

### References and related documents

- 12. [\*Work Health and Safety Regulations 2011\*](#)
- 13. [\*Code of Practice - Confined Spaces\*](#)

<b>Document Reference:</b>	Working in Confined Spaces Procedure 05 – Selection Of Personnel		
<b>Policy Owner:</b>	Work Health and Safety Branch		
<b>Date Published:</b>	13 July 2018		
<b>Objective ID:</b>	AB36412002	<b>Version:</b>	1.1

## Annex

- A. Work Health and Safety Regulations 2011, Regulation 76 – Information, training and instruction for workers

Annex A

Work Health and Safety Regulations 2011

**Regulation 76 – Information, training and instruction for workers**

(1) A person conducting a business or undertaking must ensure that relevant workers are provided with suitable and adequate information, training and instruction in relation to the following:

- (a) the nature of all hazards relating to a confined space;
- (b) the need for, and the appropriate use of, control measures to control risks to health and safety associated with those hazards;
- (c) the selection, fit, use, wearing, testing, storage and maintenance of any personal protective equipment;
- (d) the contents of any confined space entry permit that may be issued in relation to work carried out by the worker in a confined space;
- (e) emergency procedures.

Maximum penalty:

In the case of an individual—\$6 000.

In the case of a body corporate—\$30 000.

(2) The person must ensure that a record of all training provided to a worker under this regulation is kept for 2 years.

Maximum penalty:

In the case of an individual—\$1 250.

In the case of a body corporate—\$6 000.

(3) In subregulation (1), **relevant worker** means:

- (a) a worker who, in carrying out work for the business or undertaking, could:
  - (i) enter or work in a confined space; or
  - (ii) carry out any function in relation to work in a confined space or the emergency procedures established under regulation 74, but who is not required to enter the space; or
- (b) any person supervising a worker referred to in paragraph (a).