

**CONFINED SPACE ENTRY - SAMPLE CONTROL MEASURES**

To assess the risks and identify the necessary safety precautions, the University’s [hazard management](#) process should be followed. This process includes the links to the risk assessment template or you can access [RMSS](#).

Examples of hazards associated with confined space entry are provided below for consideration. Please note that they are informative only. Schools/Branches will need to tailor appropriate control measures based on the hazards, nature and location of the activity.

A risk assessment which includes controls must be completed for each confined space entry together with a written authority i.e. a confined space entry permit (an example is provided in [Appendix B](#).)

Examples of hazards	Associated Risk	Examples of control measures. (One or more measures may be appropriate under each heading and should be considered)
Confined space entry (general)	Loss of consciousness, injury or death due to the immediate effects of airborne contaminants  Fire, explosion from ignition of flammable contaminants  Difficulty rescuing and treating an injured or unconscious person  Asphyxiation from atmospheric oxygen deficiency or immersion in stored material (e.g. grain, sand, flour or fertiliser)	Elimination of the need to enter the space <input type="checkbox"/> Redesign the space to eliminate the need for entry <input type="checkbox"/> Install fixed or temporary cleaning devices (e.g. spray balls using high-pressure hoses) inserted through an access hatch to clean the inside of a tank <input type="checkbox"/> Use remote cameras or a mirror attached to a probe for internal inspection of vessels <input type="checkbox"/> Use remotely operated rotating flail devices, vibrators or air purgers to clear blockages in silos; or <input type="checkbox"/> Use a hook, long-handled clasp or magnet on a string to retrieve an object dropped into space.  If elimination is not possible  <u>Substitution</u> <input type="checkbox"/> Use a non-toxic substance instead of a toxic substance <input type="checkbox"/> Apply paints, solvents or surface coatings with brushes rather than aerosols <input type="checkbox"/> Replace flammable substances with non-flammable substances  <u>Isolation and engineering</u> (i.e. modify the workplace) <input type="checkbox"/> Block service lines such as electrical cables, water pipes, air lines <input type="checkbox"/> Guard or secure moving machinery parts such as agitators, fans or blenders <input type="checkbox"/> Enclose machinery to reduce noise <input type="checkbox"/> Thoroughly ventilate the space to ensure a safe oxygen level <input type="checkbox"/> Purge contaminants from the space  <u>Atmospheric testing</u> <input type="checkbox"/> Ongoing testing and monitoring to ensure the atmosphere is maintained at a safe level with the frequency based on the likelihood of a change of conditions.
Confined space entry (general) (continued)		<u>Administration</u> <input type="checkbox"/> Risk assessment/Job Safety Analysis (JSA) <input type="checkbox"/> Competency based training <input type="checkbox"/> Written authority – confined space entry permit <input type="checkbox"/> Signs and barriers <input type="checkbox"/> Records management  <u>Personal Protective Equipment (PPE)</u> <input type="checkbox"/> Hard hats, glasses, gloves, chemical suits, boots <input type="checkbox"/> Respiratory protective equipment

(continued)

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Other considerations		
Safe entry and exit	Falling from a height	<input type="checkbox"/> Erect barriers <input type="checkbox"/> Provide safety harnesses and lifting devices <input type="checkbox"/> Assess competency of person in the use of PPE <input type="checkbox"/> Implement entry and exit procedures to indicate when workers are in the space <input type="checkbox"/> Erect signs and barricades to prevent entry of persons not involved in the work <input type="checkbox"/> Establish a communication system between people inside and outside of the confined space to summon help in an emergency <input type="checkbox"/> Ensure you have the appropriate equipment for the task
Hydrogen sulphide gas	Poisoning	<input type="checkbox"/> Ventilate space <input type="checkbox"/> Monitor atmosphere <input type="checkbox"/> Assess competency of persons in the use of monitoring equipment <input type="checkbox"/> Assess competency of persons to wear respiratory protective devices <input type="checkbox"/> Assign standby person <input type="checkbox"/> Select communications equipment
Services to the confined space	Physical injury	<input type="checkbox"/> Tag out services, lock valves etc as applicable as per HSW Handbook ( <a href="http://www.adelaide.edu.au/hr/hsw/handbook/plant/">http://www.adelaide.edu.au/hr/hsw/handbook/plant/</a> ) <ul style="list-style-type: none"> <li><input type="checkbox"/> to prevent the introduction of contaminants or conditions through piping, ducts, vents, drains, conveyors, service pipes and fire protection equipment</li> <li><input type="checkbox"/> to prevent the activation or energising of machinery</li> <li><input type="checkbox"/> to prevent the inadvertent use of electrical equipment</li> </ul>
Inadequate lighting	Physical injury	<input type="checkbox"/> Provide additional and appropriate safe lighting <input type="checkbox"/> Provide emergency lighting(e.g. torches)
Noise	Hearing impairment	<input type="checkbox"/> Substitute noisy machinery with quieter machinery <input type="checkbox"/> Use sound dampeners or silencers, noise barriers and isolation <input type="checkbox"/> Provide hearing protection and train persons in its use <input type="checkbox"/> Determine appropriate communication methods
Physiological and psychological	Stress and/or physical exhaustion	<input type="checkbox"/> Assess and monitor persons (e.g. at agreed intervals) <input type="checkbox"/> Rest breaks (e.g. at agreed intervals) <input type="checkbox"/> Job rotation
Welding	Fumes	<input type="checkbox"/> Hot work permit <input type="checkbox"/> Provide fume extraction equipment <input type="checkbox"/> Provide fire extinguishers
Flammable atmosphere	Explosion, burns, physical injury	<input type="checkbox"/> Eliminate all ignition sources in the vicinity (e.g. open flames and hot surfaces, spark-producing equipment)
Electrical	Electric shock, burns, scalds, physical injury	<input type="checkbox"/> Provide RCD protection <input type="checkbox"/> Ensure all equipment has been tested and tagged
Unguarded plant and machinery	Entanglement, cutting, crushing	<input type="checkbox"/> Isolate power supply prior to entry and tag out