Working in building cavities - confined spaces

Document no.	Work description
SMS-06-SW-1335	This Safe Work Instruction (SWI) outlines the safe work practices for working in building cavities that have been assessed as a confined space, this includes ceiling spaces and under building floors.
Review date 31/03/2012	**Scope** Applicable to all Communications & Control Systems division staff. The actual work tasks that are carried out are outside the scope of this document. Refer to the relevant SWMS/SWIs.
	References • OHS Act 2000 • OHS Regulation 2001 • AS/NZS 2865: 2001 Safe working in a confined space • AS/NZS 1891.4:2000 : Industrial fall-arrest systems and devices - Selection, use and maintenance • AS/NZS 1715 – 1994 Selection, use and maintenance of respiratory protective devices • AS/NZS 1716 – 2003 Respiratory protective devices • SMS-06-GD-0035 Confined Spaces • SMS-06-FM-0038 Confined Spaces Identification and Assessment Checklist • SMS-06-FM-0037 Confined Space Entry Permit

Responsible supervisor ***Insert name in BLOCK letters***	**PPE and precautions**	**Competencies or qualifications**	**Licences or permits required**
LINE MANAGER	Confined Spaces Harness & Safety Line (where required) Supplied Air or Gas Filter Respirator (where required) Rescue Equipment – Rope, Rope Sling or Chain and Recovery Winch (where required)	Rail Industry Safety Induction (RISI) OHS Construction Induction Training Card Course in Confined Spaces 6223	Entry Permit for Confined Spaces

Tools and equipment required

- Rescue Equipment - Rope, Rope Sling or Chain and Recovery Winch (where required)
- Respiratory equipment (where required)
- Gas Meter
- Ladder

IF CONTROL MEASURES ARE NOT SUITABLE AND MAJOR CHANGES ARE NEEDED, CONDUCT A RISK ASSESSMENT AND DEVELOP NEW CONTROLS ACCORDING TO SMS-06-PR-0104 WORKPLACE RISK MANAGEMENT.

Risk Management	All work performed in confined spaces must be assessed for risk and be approved by a Line Manager. Check Confined Spaces Register. Ensure that precautions specified in the Register for a location are followed.

Atmospheric testing	Where the risk assessment identifies it as necessary, a trained and competent person must conduct atmospheric testing of the confined space. Testing is carried out to ensure: • Safe level of oxygen; • Atmospheric contaminants are reduced to safe level; • The confined space is free from extremes of temperature; • Concentration of flammable gases is below 5% LEL. Monitoring results are to be recorded in the confined space entry permit and made available to all employees that are required to enter the confined space.

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Entering confined space	Entry permit system	An Entry Permit must be completed before entering a confined space. The entry permit must contain at least the following information: • Description of the work that is to be undertaken in the confined space • The names of the workers that will enter the confined space • Confined Spaces Competency Certificate number and date of issue • Entry requirements and conditions • The details of any atmospheric testing conducted in the confined space, including last date the monitoring equipment was calibrated • Control measures, protective equipment required and any other precautions • Line Managers written authorisation • The date and time of entry and exit for each person. The entry permit must be posted outside the confined space and remain so until the work is completed. On completion, the entry permit is then to be filed as per SMS requirements.
	PPE (Respiratory Devices, Safety Harnesses) & Rescue Equipment	Where a safe atmosphere cannot be provided or the work to be carried out within the confined space is likely to degrade/contaminate the atmosphere (eg. hot work), then supplied-air respiratory protection devices must be worn. Gas filter respirators cannot be used in areas of high concentrations of dangerous substances, or in atmospheres with less than 19.5% oxygen. Safety harnesses and safety lines must be worn where there is a risk of falling during ascent or descent; or where rescue by a direct horizontal or vertical route, is possible. Rescue equipment for controlling the descent of a casualty from a ceiling space, which would include a rope sling or chain and recovery winch (where required)
	Continuous atmospheric testing	Prior to entry the atmospheric testing device must be charged, calibrated and fully functional. The atmosphere must be continuously monitored whilst the confined space is occupied.
	Stand-by Person	Stand-by personnel must: • Be stationed at the entrance to the confined space; • Be available at all times while the confined space is occupied; • Ensure that communication is constantly maintained; • Not enter the confined space. In the event of an injury or collapse of the person in the confined space, the stand-by person's primary duty is to summon help and if possible, provide assistance, first aid, resuscitation, etc.

Work in the confined space	The work in the confined space must be carried out as specified in the permit and all required precautions must be strictly followed. The person entering the confined space must be competent and certified working confined spaces. Persons working in the confined space must be constantly alert at all times for any changing conditions within the confined space.	
	Communication	Continuous communication must be maintained with the worker(s) inside the confined space for the duration of the work. The means of communications will be determined by the risk associated with the work to be undertaken and the availability and functionality of the systems themselves. Communications may be achieved using: • Voice; • Radio (intrinsically safe one if used in flammable conditions); • Mobile phone (not to be used if flammable gas or vapour is present in sufficient concentration to cause explosion or fire); • Hand signals; • Hard wired communications; or • Other appropriate means.

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Work in the confined space (cont.)	Changes in conditions in the confined space - evacuation	Workers must immediately leave the confined space under the following circumstances: • In the event of an alarm from monitoring equipment or any other indication of danger • When experiencing any dizziness, light-headedness or difficulties. • When instructed by the stand-by person to evacuate the confined space.

Exiting confined space	When immediately exiting the confined space, report to the stand-by person and note the time of exit in the entry permit. At the completion of work, the confined space entry shall be closed and secured; and the permit returned to the issuer and closed. Records of all confined space permits must be kept.

Rescue and First Aid Procedure	A rescue within a ceiling space or under floor usually requires emergency entry into the confined space and the rescuer to physically remove the casualty. Rescue team members must be physically able to conduct the immediate rescue and be placed on "stand-by status" whilst the confined space is occupied. The rescue procedure must commence when communications ceases with the person in the confined space or when visual checking indicates that the person is disabled. The stand-by person must remain outside the confined space, but may act as the coordinator for the emergency response team. When working in a ceiling space a casualty will be lowered down through a man-hole to safety. Under these circumstances the following procedure must be followed: • A recovery winch must be in place prior to the commencement of work. • Connect rope sling or chain to a suitable anchorage point above the man-hole, such as part of the roof framework (rafters, ceiling joists, support beams). Then connect the recovery winch to the rope sling. • When the casualty arrives at the man-hole, connect the winch to the casualties harness and start lowering gradually to the ground. • During this part of the rescue, the stand-by person should assist the casualty and provide the necessary first aid.	
		***Warning*** Appropriate rescue and First Aid procedures and provisions must be planned, established and rehearsed.

Training	Employees or contractors must be trained in a accordance with AS 2865 Safe working in a confined space, when required: • to enter and perform work in confined spaces; • supervise confined space entry work; issue entry permits; • carry out the stand-by role; • involved in rescue and First Aid procedures; and • Perform confined space assessments. Specialist training, for example, in breathing apparatus shall be provided as appropriate.

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