CONFINED SPACE ENTRY PROCEDURE

***SECTION 4*** *Operational Procedures and Guidelines*

PURPOSE

To ensure that workers required to enter and / or work in a Confined Space can undertake activities without endangering the health and safety of themselves or others.

***PROCEDURE***

The requirements of this procedure apply to operational and construction related work activities.

Where a contractor has been appointed as Principal to control works on site this procedure shall be adopted as a minimum standard (best practice guidance material) if the Principal Contractor does not have an equivalent procedure.

GENERAL REQUIREMENTS

### COMMUNICATION

Adequate means of communication between people inside the Confined Space and a Confined Space Standby are neeeded.

The Standby must ensure that communication with personnel inside the Confined Space is maintained at all times to allow a summons for assistance, including:

 Maintaining visual or verbal contact;

 The use of life line signals;

 An air horn maybe required where high noise levels or the nature of the Confined Space inhibits the ability of entrants to hear the site emergency alarms.

### PERSONAL PROTECTIVE EQUIPMENT

In addition to the company minimum requirements for PPE, personnel working in a Confined Space shall wear an approved safety harness where identified by the risk assessment for entry into the space or when identified on the permit as a requirement for entry. A lifeline shall be attached to the harness where this has been identified by the risk assessment or entry permit.

If the internal atmosphere has the potential to become oxygen deficient or contains toxic gases, proper respiratory protection must be worn. Protective clothing is to be worn where irritating substances may be encountered.

PREPARATION FOR ENTRY

### SAFE ACCESS

Entry and exit to the Confined Space shall be by a designated access opening. Where there is more than one access way / entry to the Confined Space such as manholes flanges, they shall be secured with suitable barricades and “Danger Do Not Enter” signage.

Access ways must permit rescue of all personnel who enter the Confined Space and together with the surrounding area must be kept clear of any obstructions.

It may be necessary to provide stairs or ladders to the access levels to gain safe convenient access for work and provide scaffold platforms externally and internally for rescue purposes.

### ISOLATIONS

In order to prevent the possible inflow of hazardous substances or the release of stored energy into the Confined Space, isolations must be applied to all direct connections to the Confined Space.

All electrical power that may affect safe entry must be isolated.

### SIGNAGE

The Permit Authoriser shall ensure that an appropriate danger sign is located near all entrances into a Confined Space prior to, and throughout Confined Space operations. Signs shall comply with the requirements of AS1319.

### VENTILATION AND PURGING

The Confined Space Entry Authoriser shall define the ventilation requirements for the confined space. Ventilation shall be forced, extraction or natural, depending on the atmospheric hazards presented by the space and the work to be performed inside the space.

Confined Spaces that have contained toxic substances or inert gasses shall be mechanically ventilated and gas tested prior to entry.

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 never be pure oxygen or gas mixtures with an oxygen content greater than 21%.

### ATMOSPHERIC TESTING AND MONITORING

The Confined Space Entry Permit Authoriser shall define on the Confined Space Entry Permit, any atmospheric testing requirements. As a minimum, an atmospheric test prior to entry at the commencement of each shift shall be undertaken and recorded on the Confined Space Entry Permit.

The Permit Authoriser shall identify the necessity of continuous atmospheric monitoring or the frequency of ongoing atmospheric tests if the nature of the Confined Space or the work being performed indicates this is warranted. Atmospheric tests results shall be recorded on the Confined Space Entry Permit.

As an absolute minimum, oxygen content and Lower Explosive Level (LEL) shall be tested at each atmospheric assessment. Other contaminants potentially present shall be tested prior to entry and when any repeat atmospheric tests are required.

Prior to entry, the atmosphere of a Confined Space must meet the following minimum requirements.

 the concentration is 0% of the Lower Explosive Level (LEL);

 the Oxygen (O2) concentration is between 19.5% and 23.5%;

 the concentration of any other atmospheric contaminant is less than the Exposure Standard expressed as a Time Weighted Average (TWA).

ISSUE OF A CONFINED SPACE ENTRY PERMIT

Upon request for a confined space entry permit, the Permit Authoriser shall:

 Discuss the job with the requestor of the permit to ensure the entry is necessary.

 Determine if the confined space can be safely handed over to workers.

 Ensure the work will not conflict with, or be impacted by, other activities.

Once determined that the work may proceed, the Permit Authoriser shall ensure activities are undertaken so that the Confined Space can be entered with all hazards controlled to an acceptable level.

The Permit Authoriser shall ensure that all requirements of entry into the space have been undertaken and all controls have been detailed clearly and concisely on the Confined Space Entry Permit.

Once the Permit Authoriser is satisfied that the space can be safely handed over to the workers, the confined space entry permit shall be authorised. The Permit Authoriser shall issue the permit for a timeframe, either a set duration or the duration of the job. Any changes to the work or conditions shall require that the permit be reissued or amended as required by the Permit Authoriser.

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CONDUCTING WORK

The permit shall be available at the job site along with the JSA / JSEA for the job.

Work shall not commence until all conditions on the permit are met.

Work performed shall comply with the conditions of the permit at all times.

The person entering shall notify the standby of an intention to enter. The person entering shall sign in and out of the confined space by completion of the log in and out section on the entry permit.

Additional monitoring, apart from continuous monitoring, shall be detailed on the back of the permit. Additional monitoring, with the exception of continuous monitoring shall be performed by a competent gas tester.

COMPLETION OF WORK

Upon completion of the work the Permit Holder shall ensure:

 All personnel have exited from the confined space.

 All tools and equipment have been removed from the space and stored in a safe location.

 The entry point to the confined space is appropriately barricaded and confined space signage is clearly visible.

 The work site is left in a clean and tidy state.

Where work has been completed or the duration of authorisation has lapsed then the permit shall be signed off. The confined space entry permit is cancelled upon completion of the sign off.

RECORD KEEPING

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Confined Space Entry Permit and documentation relating to the Confined Space shall be retained by and be readily available upon request.

TRAINING REQUIREMENTS

All persons who are to undertake work associated with Confined Spaces are required to complete training prior to any involvement in this work. It remains the responsibility of the Permit Holder

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to verify the competency of all persons who enter, supervise or control entry to Confined Spaces.

Personnel performing Confined Space Entry work must have completed the appropriate NZQA training and have achieved competency in the following units within the last 12 months:

 18426: Knowledge of Hazards Associated with Confined Space

Personnel supervising Confined Space Entry work and issuing a Confined Space Entry Permit must have completed the appropriate nationally accredited training and have achieved competency in the following units:

 17590: Issue Work Permits

 17579: Plan a confined space entry

 25510: Operate atmospheric testing

### RECORDS OF TRAINING

Persons in control of the workplace shall maintain records of confined space training and make available during inspections and audits.

RESCUE PLANNING

Prior to entry into any Confined Space, a Rescue Plan shall be in place, known by all personnel associated with the Confined Space and rescue equipment must be in place and available at all times during entry. The details of the Rescue Plan shall be determined by risk assessment based on the nature and complexity of the Confined Space.

### SAFETY HARNESSES LINES AND LIFTING EQUIPMENT

Suitable safety harnesses and safety lines or rescue lines, complying with AS/NZS 1891.1, should be worn where—

 there is a risk of falling during ascent or descent; or

 rescue by a direct route, either vertical or horizontal, is possible.

The Emergency Plan shall specify the use of a safety harness, safety line or rescue line and care should be exercised to ensure that such equipment would not introduce a hazard or unnecessarily hinder free movement within a Confined Space.

The selection of the type of safety harness or safety line or rescue line should be in accordance with AS/NZS 1891.4 and should

take account of the possible hazards / evacuation arrangements.

The equipment should be stored, maintained and inspected in accordance with AS/NZS 1891.4. Persons wearing safety

harnesses shall have received training and attained competence in NZQA 23229.

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REFERENCES

### WATER NEW ZEALAND PROCEDURES & GUIDELINES:

#### Health and Safety Procedures:

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 Contractor Health and Safety management

 Job Safety Analysis

 Health and Safety Training Program

### LEGISLATION, REGULATION AND STANDARDS

 Health and Safety at Work Act 2015

 Worksafe New Zealand Guidance: Safe working in a confined space

 Australian Standard; AS 2865:2009 –Confined Spaces

 AS/NZS 1891.4 Industrial fall-arrest systems and devices – Selection, use and maintenance

 AS/NZS 1891.1 Industrial fall-arrest systems and devices - Harnesses and ancillary equipment

 NOHSC: 1003(1995) Adopted National Exposure Standard for Atmospheric Containments in the Occupational Environment