

CONFINED SPACE ENTRY

1. Scope

This standard applies to all Vedanta business units and managed operations, including new acquisitions, admin/corporate offices and research facilities located off site; during exploration, through all development phases and construction, operation to closure and, where applicable, for post closure management.

- 1.1. **Confined space** is an enclosed or partially enclosed space that:
 - 1.1.1. Is large enough for a person to enter; and
 - 1.1.2. May have limited or restricted means of entry or exit; or
 - 1.1.3. Is not designated as a place of work; or
 - 1.1.4. Has been identified as such in a risk assessment; and
 - 1.1.5. May:
 - 1.1.6. Have an atmosphere which contains potentially harmful levels of toxic or explosive atmospheres; or
 - 1.1.7. Not have a safe level of oxygen e.g. following a nitrogen purge; or
 - 1.1.8. Cause entrapment or engulfment.
- 1.2. Entry to confined space occurs when a person's whole body or upper body and head is within the confined space.

2. People

- 2.1. All persons required to work in a confined space; to act as a standby person; or a member of a rescue team must be trained, competent and tested.

3. Process

- 3.1. Confined spaces must be identified, and permanent signage erected at the entry points denoting that a permit is required prior to entry. Where signage is impractical other means of highlighting the dangers need to be used.
- 3.2. Preparation
 - 3.2.1. Before any entry or inspection inside a confined space without supplementary protection such as self-contained breathing apparatus it should be thoroughly washed, drained and ventilated;
 - 3.2.2. All inlets and outlets that could introduce contaminants must be isolated or blanked off, including double block and bleed as appropriate;
 - 3.2.3. Tanks and vessels should be mechanically disconnected or blinded wherever possible;
 - 3.2.4. Specific safe work procedures must be developed for work activities that are more hazardous when carried out in a confined space, including hot work (cutting, welding); chemical cleaning; steam cleaning; and abrasive blasting;
 - 3.2.5. Where the risk assessment has identified the need for ventilation or purging this must be covered by a documented procedure.
- 3.3. Entry into a confined space must only be allowed after a written permit has been issued by a competent and

authorized person. Where the work continues over a shift the permit must be renewed or reissued. The permitting process must include:

- 3.3.1. A risk assessment, including requirements for a competent person to reassess levels of oxygen, contaminants, flammable & toxic substances, temperature extremes etc. and actions to be taken if these exceed established upper or lower levels;
- 3.3.2. Ventilation requirements;
- 3.3.3. Isolation procedures for energy sources and contaminants;
- 3.3.4. Requirements for specific safety equipment such as breathing apparatus; respiratory protection, rescue belt, life lines and other personal protective equipment;
- 3.3.5. The sign-in and sign-out of all persons entering the confined space;
- 3.3.6. A standby person, who shall be positioned outside the confined space and must have no other duties other than monitoring people and conditions inside the confined space and coordinating with rescue personnel if required;
- 3.3.7. Display of the permit;
- 3.3.8. Communication process and/or equipment between the standby person and personnel within confined space;
- 3.3.9. Safety specification of equipment to be taken into the confined space, noting that low voltage lighting and equipment should be used in confined spaces where practicable;
- 3.3.10. Barricading;
- 3.3.11. Rescue plan and equipment. Ideally, confined spaces will have two means of access/egress;
- 3.3.12. A completion procedure.

4. Review

- 4.1. A system to review the identification of confined spaces and the application of the confined space entry standard must be implemented;
- 4.2. Businesses are required to comply with local laws and regulations covering work in confined spaces.



Andrew Lewin
Group Head HSE & Sustainability