

1. Scope

This standard applies to all operations managed by Vedanta businesses and specifies mandatory requirements for all existing operations, new acquisitions, including those developed for construction or operational purposes. This standard applies to all business partners.

The objective of the standard is to eliminate the risk of fatalities and serious incidents resulting from collapse or other excavation accidents. Excavations can include trenches, potholes, earthworks, tunnels, retaining walls, small excavation pits used in exploration, environmental restoration, formwork, and construction.

2. People

The SBU Head is responsible for ensuring that all statutory duties as outlined in the legislation are strictly observed. The SBU Head shall assign an Authorised Person to ensure that there are appropriate resources; equipment and a management system in place for training, monitoring and controlling the safety of all people working in excavations. The Authorised Person shall ensure that:

- 2.1. All personnel working in excavations are authorised.
- 2.2. All site PPE requirements are applied to work in excavations.
- 2.3. A Training Programme is in place for all employees and Business Partner personnel on the excavation safety requirements, which must include:
 - 2.3.1. Permits to Work and Risk Assessments
 - 2.3.2. Identification and management of buried services
 - 2.3.3. Confined Space training if required, e.g. if the risk of engulfment, entrapment or hazardous atmosphere exist
 - 2.3.4. Excavation safety training, including SOPs review
 - 2.3.5. Emergency rescue training
- 2.4. Annual retraining is in place for all personnel or more frequent as required by the scope of work.

3. Process

- 3.1. The Authorised Person shall ensure SOPs are implemented and revised at least every two years, or more frequently as required, covering:
 - 3.1.1. Assignment of responsibilities.
 - 3.1.2. Consultation with a competent person regarding the design of any temporary works.
 - 3.1.3. Identification of health and safety hazards and the conduct a risk assessment for each excavation.
 - 3.1.4. Description of how controls will be implemented, monitored and reviewed.
 - 3.1.5. The minimum training requirements.
 - 3.1.6. Documentation and practice of emergency procedures.
 - 3.2. Any excavation over 1.5 meters deep in type 1 or 2 soil per GN25 shall have appropriate shoring/support or shall be sloped back at a minimum of 45⁰.
- 3.3. Any excavations over 1.5 meters in type 3 or 4 soil shall have support and sloping designed by a competent person.
- 3.4. Shoring is required for loose soils (type 3 & 4); where sloping is not permitted; or where the excavation is near a structure. The shoring must be designed and installed using good engineering practices and it must be capable to withstand the maximum load that could be applied to it without buckling, shifting or failure. For soil types 1 & 2, shoring shall be installed as per the risk assessment and based on the site condition.
- 3.5. Each excavation shall have adequate working space, which should be a minimum of 300 mm from the edge of the foundation.
- 3.6. All excavations must have a minimum of two means of access. The project shall determine the number of additional access points as required by the risk assessment and based on the number of workers and size of the excavation.
- 3.7. For excavations deeper than 1.5 meters, a designated Safety Watch shall be positioned at top of the excavation with radio

- communication to emergency services. The Safety Watch will monitor conditions and assist in the case of any emergency.
- 3.8. Excavations must be kept dry and free of water and debris.
- 3.9. Buried services shall be identified prior to start of digging and where these are located within the excavation they must be exposed with care, normally by manual excavation.
- 3.10. Overhead services shall be identified, and the limits of approach shall be specified and strictly maintained, including visually by a Spotter. Signs must be installed that clearly identify overhead hazards.
- 3.11. All excavations shall be checked daily for any changes and prior to start of work. Checks should look for:
 - 3.11.1. Tension cracks in the soil
 - 3.11.2. Sliding / sloughing soils, rocks or materials
 - 3.11.3. Toppling, subsidence and bulging
 - 3.11.4. Stability of excavation walls
- 3.12. An inspection shall be conducted after heavy rain to check for wall and shoring stresses and water accumulation.
- 3.13. Mechanical plant, spoil pile or heavy loads shall be no closer than 1m from the zone of influence (as described in GN25).
- 3.14. Hard barricading should be installed around the excavation area to restrict access.
- 3.15. If excavation meets the definition of a confined space as defined in the Confined Space Safety Standard, then the requirements of that Standard shall be applied.
- 3.16. Every excavation shall have an Emergency Response and Rescue Plan.

4. Review

The requirements of this Standard shall be reviewed at least annually by businesses through their Civil Engineering and Safety departments.



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