**Summary**

To detail the requirements for persons carrying out excavation works including: the excavation of trenches.

**Definitions**

Trench – opening whose length is greater than its depth and the width is less than its length.

Deep Excavation – means a trench which is deeper than 1.4 metres and a shaft deeper than 2.0 metres.

Shallow Excavation – means a trench shallower than 1.4 metres and a shaft shallower than 2.0 metres.

Excavation Supervisor – means an INFRATEC employee who has been nominated by the Area Supervisor/Manager to supervise trenching and excavation works after:

* Completion of an accredited trenching and shoring course (or Mine Managers Certificate)
* Demonstration of suitable experience in excavation works

**Responsibilities and Authorities**

Area Supervisor/Manager

1. Monitor to ensure staff members are following appropriate excavation procedures.
2. Ensure new staff members are provided with information regarding INFRATEC’s procedures for trenching operations.

Area Coordinator/site manager

1. Ensure individual works are carried out in accordance with the excavation procedure and Risk assessment.
2. Ensure the risk assessment is reviewed, updated and signed prior to commencement.
3. Ensure that an approved Excavation Supervisor is available to supervise each work site that involves the excavation of trenches or shafts (excluding shallow excavations by hand).

All Employees

1. Follow safe work practices at all times and review and sign safe work method statement
2. Do not enter to a deep excavation until the Excavation Supervisor has assessed the excavation is safe to enter.
3. Do not start or continue to work where the worksite is unsafe. Never work alone in a deep excavation.
4. Alert the Excavation or Site Supervisor, and fellow operators to any hazard or potential danger which may exist from the excavation (e.g. trench movement)

Excavation Supervisor

1. Ensure safe work method statements (risk assessments) are performed for all deep excavations - excluding shallow trenches or shafts that are hand excavated.
2. Ensure deep excavation activities are adequately supervised.
3. Carry out periodic inspections of deep excavations and record the details of such inspections.
4. Respond immediately to excavation and trenching hazards raised by employees working in and around the excavation. Investigate these issues and where necessary implement control measures to address them.
5. Ensure employees do not enter a deep excavation before an assessment has been made that the excavation is safe to enter.

**Hazards and Controls**

The following table lists common hazards associated with excavation work and examples of control measures:

|  |  |
| --- | --- |
| **Potential hazards** | **Examples of control measures** |
| Ground collapse | The use of benching or the installation of ground support (e.g. shoring or shields) |
| Water inrush | Pumps or other dewatering systems to remove water and prevent build-up |
| Falls | Ramps, steps or other appropriate access into the excavation (eg. Ladders) |
| Hazardous manual tasks | Rotating tasks between workers |
| Airborne contaminants (welding gases, sealants, etc.) | Mechanical ventilation to remove airborne contaminants |
| Buried contaminants (e.g. asbestos) | Training to identify buried contaminants and what action to take |
| Underground services | Obtain information from the relevant authorities on the location of underground services |
| Plant and Equipment Hazards (Being struck by mobile plant or loads) | Exclusion zones, hi-vis clothing and hard hats |
| Electrocution - machine contacts live wires. | Visual inspection of site – detailed safe work method statement. Use spotter if working in the spotter zone |

**Training & Competency**

1. All deep excavations shall be supervised by an Excavation Supervisor who is required to be present at all times where persons are working in a deep excavation.
2. All shallow excavations shall be supervised by a fully trained operator who has completed an accredited trenching and shoring course.
3. All persons working in deep excavations must have read and understand this excavation procedure and safe work method statement.
4. Hold a valid CSCS card.

**Procedure**

General Requirements - All Excavations

1. All persons on site (including those who may be inspecting or visiting) shall wear the following personal protective clothing and equipment:

* Safety helmet (hard hat)
* Safety footwear
* High visibility vest for those working around mobile plant or near roadways.

1. Where an excavation is assessed as a confined space INFRATEC’s procedure, “Entry into Confined Spaces Procedure” shall be observed and applied.

Shallow Excavations

1. All shallow excavations must be supervised by a competent person (Site Supervisor) who has completed an accredited training course in trenching and shoring.
2. All shallow excavations must be assessed for risks:
3. Where mobile plant is used to excavate a documented site safety assessment using INFRATEC’s “Site Safety Risk Assessment and Record of Excavation Inspection” shall be carried out by the Site Supervisor.
4. Where hand excavation occurs an informal risk assessment must be carried out. INFRATEC’s “Site Safety Risk Assessment and Record of Excavation Inspection” may be used as a guide.

Deep Excavations

1. INFRATEC do not operate in or near deep excavations.