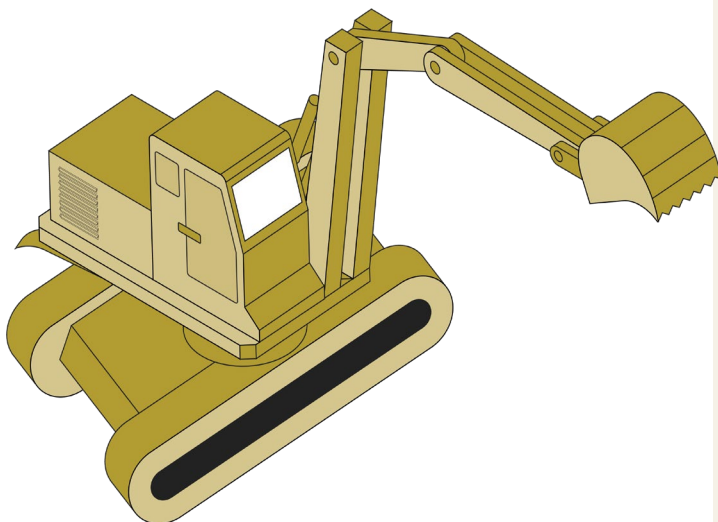


Excavation & Earthworks Safeguards

When this applies

Any work where removing soil or rock to form an open face, hole, cavity, trench or tunnel. This could include:

- Preparing drilling pads.
- Preparing staging areas to support oil and gas exploration and production.
- Construction of hydrocarbon processing facilities.
- Construction of logistics bases, lay down yards, roads, tracks and pathways.
- Construction of pipeline right of ways.
- Rehabilitating areas where excavation construction has occurred.
- High risk construction work under the WHS Regulation, where excavation work is carried out in or near:
 - a shaft or trench with an excavated depth greater than 1.5 metres.
 - a tunnel.



Did you know:

The collapse or failure of an excavation is dangerous. It can occur quickly, limiting the ability for people to escape.

Hazards

Common hazards include, but not limited to:

- Other construction activities, workers, vehicles and mobile plant.
- Underground essential services or pressurised pipelines.
- Overhead powerlines.
- Adjoining facilities or structures that could be impacted or become unstable.
- Falls from one level to another.
- Falling objects.
- Hazardous chemicals present in the soil, or where airborne contaminants could create a hazardous atmosphere (e.g. plant exhaust fumes).
- Sources of water or liquid that may engulf the excavation.

Key Safeguards

Wherever possible reduce your risk by adopting the following hierarchy:

- Undertake work above ground to eliminate or minimise the need to enter an excavation or trench.
- Obtain information and positively identify the location of underground services.
- Assess soil stability and make sure appropriate shoring, benching or battering is in place for all excavations where workers are required to enter and where the depth is 1.5m or more.
- Establish an exclusion zone and prevent falls with physical barriers, including fences, edge protection and covers.
- Establish a minimum buffer of 1 metre or greater beyond the zone of influence within the edges of an excavation for all vehicles, plant and storage of excavated material.
- Safe access and exits provided by ramps, steps or other means into the excavation.
- Implement traffic management control arrangements including restricting plant movement near workers and the edge of an excavation.
- Install pumps or other dewatering systems to remove water and prevent build up.
- Secure the area from inadvertent or unauthorised entry including livestock.

Excavation & Earthworks Safeguards

What you need to do

1. Ensure the **Significant Hazard Management Plan (SHMP)** is in place includes excavations for the scope and verify that the controls are implemented.
2. Obtain an **General Work Permit** and complete the **Excavation Checklist**.
3. Assess if the excavation also meets the definition of being a Confined Space. If so, review the **Confined Space Entry Safeguards** and implement controls.
4. **Safe Work Method Statement (SWMS)** completed. Note – this is a legislative requirement for any high risk construction work.
5. Confirm the location of the earthworks and **peg the boundaries and no-go zones** before moving machinery onto the site.
6. Implement **traffic management control** arrangements.
7. Only operate machinery if **competent**, and after **pre-start checks** completed.
8. Complete the Excavation & Earthworks **Safeguards Checklist** prior to commencing work.

Worker competencies required

Underground Services

- RIICCM202E – Identify, Locate and Protect Underground Services

Gas Detection

- MSMWHS217 – Gas Test Atmospheres

Additional resources

- Excavation work Code of Practice
- Excavation and Earthworks Procedure SENEX-CORP-HS-PRC-032
- Confined Space Entry Safeguards SENEX-CORP-HS-CTL-003
- Permit to Work Procedure SENEX-CORP-HS-PRC-005
- Excavation Work Checklist OPS-CORP-CI-CHK-001
- Traffic Management Procedure SENEX-CORP-HS-PRC-037



If you have any questions or need any support, speak to your Supervisor.

Excavation & Earthworks Safeguards

Complete this checklist before starting work.

START HERE
Has alternative methods to work above ground to eliminate or minimise the need to enter an excavation been considered?
 Yes

Has a Permit been authorised, and Excavation Checklist completed for the scope of work and location?
 Yes

Has underground services been positively identified and protected?
 Yes

Is traffic managed to maintain safe separation between vehicles, mobile plant and workers, whilst also protecting the edge of the excavation?
 Yes

Is the excavation site able to be secured to prevent inadvertent entry when unattended (inc. livestock)?
 Yes

Is there an exclusion zone established to prevent falls (e.g. fencing) with warning signs posted?
 Yes

Do all excavations have safe access and exits (e.g. ramps / steps)?
 Yes

Controls in place to manage airborne contaminants / hazardous atmosphere?
 Yes

Have all excavations greater than 1.5 metres been shored, benched or battered?
 Yes

Do machinery operators hold appropriate competencies and can demonstrate pre-start checks completed?
 Yes

Is a minimum zone of influence of 1 metre established and maintained for vehicles and plant?
 Yes



If you can't achieve all applicable controls in this safeguard, STOP work, review and update the SWMS (and Work Permit where required) with your Supervisor and ensure hazards are controlled.

Excavation & Earthworks Safeguards

Did the task have any challenges or complications?
If yes, how were they managed?

Yes No

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.....

Were there any controls on the safeguard which could not be achieved?
If so, why not and how was this managed?

Yes No

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.....
.....

Did you improve the safeguards during verification?
If yes, how did you improve it?

Yes No

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.....
.....

Do you have any feedback on this safeguard document or the controls?
If yes, please detail below.

Yes No

.....
.....
.....

Name: Role:

Site: