

Definitions

Blind Sweep - the use of electronic line finding equipment, and visual scan to locate unmarked underground facilities in the path of ground disturbance activities. The use of witching sticks is not approved for blind sweep activities.

Competent Person - for excavation safety, a person who is capable of identifying existing and predictable hazards in the surroundings, or working conditions, that are hazardous, unsanitary or dangerous to workers, soil types and protective systems required, and who is authorized to take prompt corrective measures to eliminate these hazards and conditions. See the training requirements in section 5.0 for additional requirements.

Excavation - any man-made cut, cavity, trench or depression formed by earth removal.

Ground Disturbance - any work, operation or activity that results in a disturbance of the earth, rock or other material in the ground.

Tolerance Zone - comprised of the width of the underground facility, plus a specified distance on both sides of that facility. Specific tolerance zones distances are listed on page two.

Underground Facility - any underground installation, pipe, utility line(s) which may be encountered during ground disturbance activities (e.g., underground storage tanks, pipelines, flowlines, electric / cable/ telephone lines, water / gas / sewer lines, etc.).

Purpose:

This Devon Energy EHS protocol establishes minimum requirements for performing ground disturbance activities, as well as, requirements to work safely in and around excavations and trenches.

One-Call

Make the One-Call notification when required by state and provincial regulations, and when driving ground rods. The Devon Mechanical Excavation Permit is not required for ground rods.

Note: Driving ground rods is in addition to any other state-specific requirement for making the One-Call notification.

Perform a blind sweep along the path of ground disturbance when a Mechanical Excavation Permit is required.

Note: See step 3.2.1 for Mechanical Excavation Permit requirements.

One-Call Notifications

Respond to locate request(s) and mark any known underground hazards, in the ground disturbance area with flagging or paint. Flagging will be done in accordance with provincial, state and local government requirements.

Excavation

1. Complete the Mechanical Excavation Permit (**Attachment B**) for mechanical excavation activities greater than 16 inches deep.
 - A permit can only cover ground disturbance activities identified in a single One-Call notification.
 - A new permit is required if the One-Call ticket has expired or has to be extended.
 - Each day of excavation the permit must be discussed as part of the pre-task tailgate.
 - Review and confirm the One-Call Responder Log (**Attachment C**) is complete. An equivalent document can be used to document the responses.
 - Drawings, maps, etc., need to be included and attached if hazards are present.
 - PIC and contract supervisor are required to sign permit, if either of these change, the replacement must also sign the permit.
2. Prohibit workers from being in the excavation during mechanical excavation or backfilling.

Note: See section 3.3.1 prior to entering an excavation greater than 4 feet deep.
3. Consult with environmental team when excavation activities include environmental remediation activities or contaminated soil. The environmental team will provide guidance to ensure that the contaminated soil is tested and remediated/disposed of according to federal, state and local regulations.

Inspections and Excavation Entry

1. Conduct inspections before personnel enter an excavation greater than 4 feet deep. Inspections will be conducted daily, when personnel will be entering the excavation. Document the inspection using the Excavation Inspection Report (**Attachment D**). List an explanation for all "No" responses on the inspection report, including corrective actions take
2. Identify the soil type and determine the appropriate protective system. Information on soil classification and requirements for protective systems can be found in the following appendices.
 - Soil Types and Soil Testing - **Appendix A**
 - Protective System Requirements - **Appendix B**
 - Sloping and Benching Requirements - **Appendix C**
 - Shoring and Shielding Requirements - **Appendix D**
3. Re-inspect the excavation when the following occur:
 - conditions change that might result in a new hazard,
 - damage resulting in possible failure of the protective system, after every rainstorm and other hazard-increasing occurrence.
4. Brief excavation and trenching personnel on the methods of eliminating or controlling hazards as part of a pre-task tailgate prior to entering an excavation or trench.
5. When entering an excavation of greater than 4 feet, test the atmosphere and document results on the Excavation Inspection Report (**Attachment D**) before entry and continuously monitor while occupied. Follow Confined Space and Hot Work protocols if air monitoring is outside any of the following ranges.
 - Oxygen levels 19.5-23.5%,
 - LEL 0%,
 - CO 0 PPM, and
 - H2S 0 PPM.

Note: Refer to the Confined Space Entry Protocol if the excavation exhibits hazardous atmosphere or other conditions which pose hazards.

Note: Hot Work Protocol is only required when hot work activities will be performed.
6. Verify that ladders, ramps or other means of egress are placed no more than 25 feet from personnel working inside the excavation.

Note: Ladders will extend a minimum of 3 feet above the top of the excavation.

Water Accumulation Requirements:

Do not allow entry into excavations 4 feet deep where water is accumulating. Use pumps, berms or other means to keep water out.

Damage Reporting

Shut down work and report any damage caused or discovered to underground facilities to the following:

- Devon Energy
- Underground facility owner/operator

Tolerance Zone

New Mexico: 18 inches

Texas: $\frac{1}{2}$ the diameter of pipe plus 18 inches; e.g., 20-inch pipe, tolerance zone is 18 inches plus 10 inches = 28-inch tolerance.

Oklahoma: 24 inches

Wyoming: 24 inches

Canada: 1 meter

The tolerance zone is the width of an underground utility plus a specified tolerance distance on both sides of that utility. Do not use mechanical-digging equipment within this zone. The zone provides a margin of error in case the locator marks are slightly off. It also provides a buffer zone to prevent damage resulting from nearby excavation.

Training Requirements

- Verify Devon employees involved in excavation and trenching operations have completed the Ground Disturbance Protocol training.
- Verify that employees and contractors designated to oversee excavation work have competent person training
- Verify people operating equipment involved with excavation and trenching have been trained on the use and operation of equipment.
- Verify Devon line locator operators are properly trained on the equipment they are using, including the equipment's limitations.