



Alberta Energy Regulator and Ground Disturbance

September 2024



Disclaimer

The simplified diagrams, explanations, and references to provisions of the *Pipeline Rules* in this presentation illustrate the recent changes to the *Pipeline Rules* impacting ground disturbance but do not supersede the requirements in the Rules and related instruments.

Although every effort has been made to ensure information accuracy, the user of this presentation is responsible for ensuring that any ground disturbance work complies with all requirements, regardless of what is depicted in the presentation provided.

Who We Are

- › Alberta's energy resources significantly contribute to both Alberta's and Canada's economies.
- › Canada has the third-largest oil reserves in the world, behind Saudi Arabia and Venezuela and is the fifth-largest producer of hydrocarbons. We are also well situated for geothermal and mineral exploration.
- › The AER's role is to create and enforce rules and regulations around energy and mineral development, taking direction from government policy.
- › Everything we regulate is outlined in directives and manuals that connect to an act or regulation.

Our Mission

To provide for the efficient, safe, orderly, and environmentally responsible development of energy and mineral resources in Alberta through our regulatory activities.

This regulation covers the entire life cycle of oil and gas activities, including allocating and conserving water resources, managing public lands, and protecting the environment while providing economic benefits for all Albertans.

What We Regulate



nearly

447 000

kilometres
of pipelines*



over

157 000

operating natural gas
and oil wells



over

26 000

oil facilities



over

460

operating
gas processing plants



over

18 000

gas facilities



157

operating oilfield waste
management facilities



over

160

primary/enhanced
recovery in situ projects



26

thermal recovery
in situ projects



8

operating
oil sands mines



5

operating
bitumen upgraders



5

operating
coal mines



5

decommissioned
coal mines



1

decommissioned coal
processing plant



1

geothermal
well



6

brine-hosted mineral
facilities and wells



35

rock-hosted mineral
surface mines

What We Don't



gasoline



pipelines that
cross borders



electricity



regulated
natural gas rate



renewables

*Operating, permitted, abandoned, and discontinued. We also provide inspection and incident response support for 12 000 kilometres of pipelines regulated by the Alberta Utilities Commission.

As of May 2024

Pipeline Act

- » The AER administers the *Pipeline Act*, which is the enabling legislation that allows for the licensing of oil and gas pipelines in Alberta.
- » The *Pipeline Act* also gives the AER the authority to set technical requirements in the *Pipeline Rules* for pipeline design, construction, operation, discontinuation, abandonment, and removal.

Pipeline Rules

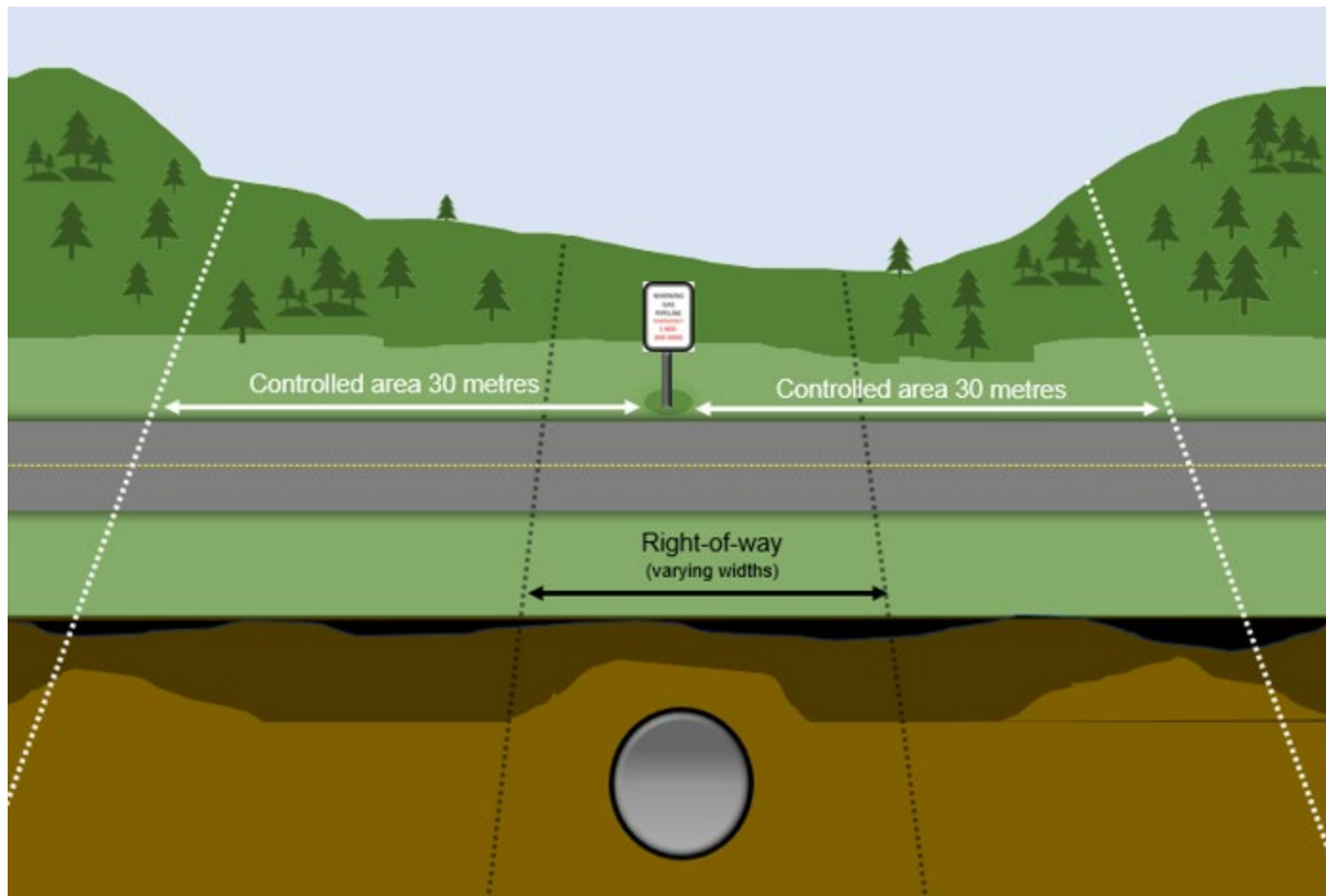
- » On November 15, 2023, the AER released Bulletin 2023-40 [Release of the new *Pipeline Rules* and Associated Instruments](#)
- » Relevant main changes
 - clarifying requirements for minimum cover for existing or abandoned pipelines (section 29)
 - reorganizing requirements for ground disturbance including trenchless excavation techniques (part 4)

What is the purpose of the controlled area?

The controlled area is a requirement in regulations prescribing an area in which excavation activities are controlled for the purposes of pipeline safety and security.

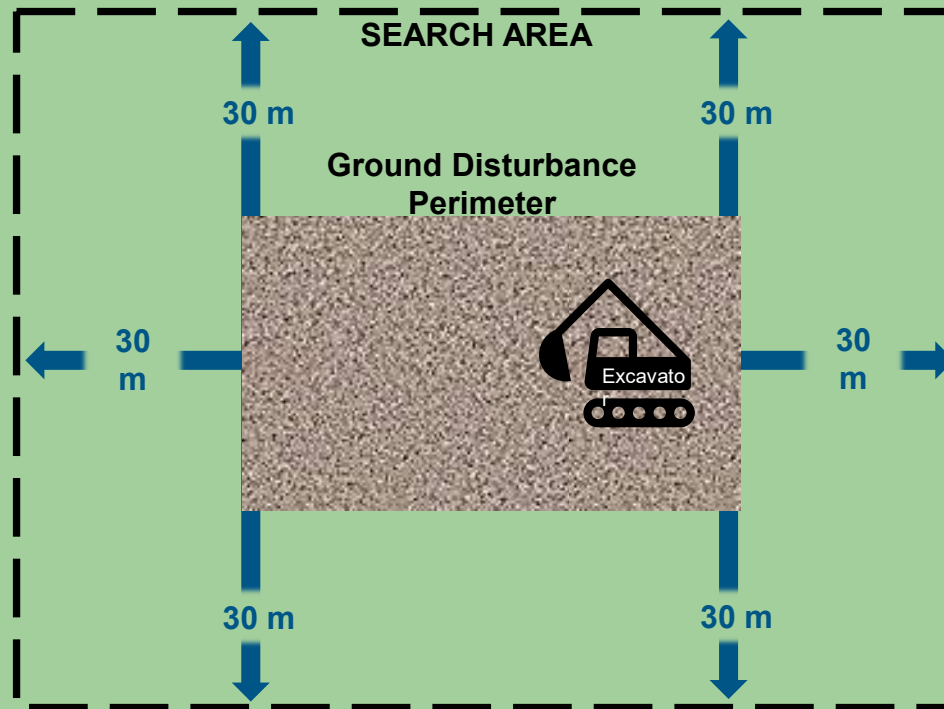
It is an area where extra precaution must be taken to determine the existence of any pipelines in the area, and locating and marking of all pipelines must be completed.

The controlled area is a strip of land extending 30 metres on each side from the centreline of a pipeline and includes the right of way.



Pipeline Rules 45(1)

45(1) For the purposes of section 32(1)(a)(i)(B) of the Act, the distance from the perimeter of the area in which a person proposes to undertake a ground disturbance within which the person must take all precautions reasonably necessary to ascertain whether a pipeline exists before commencing any work, operation or activity is 30 metres.

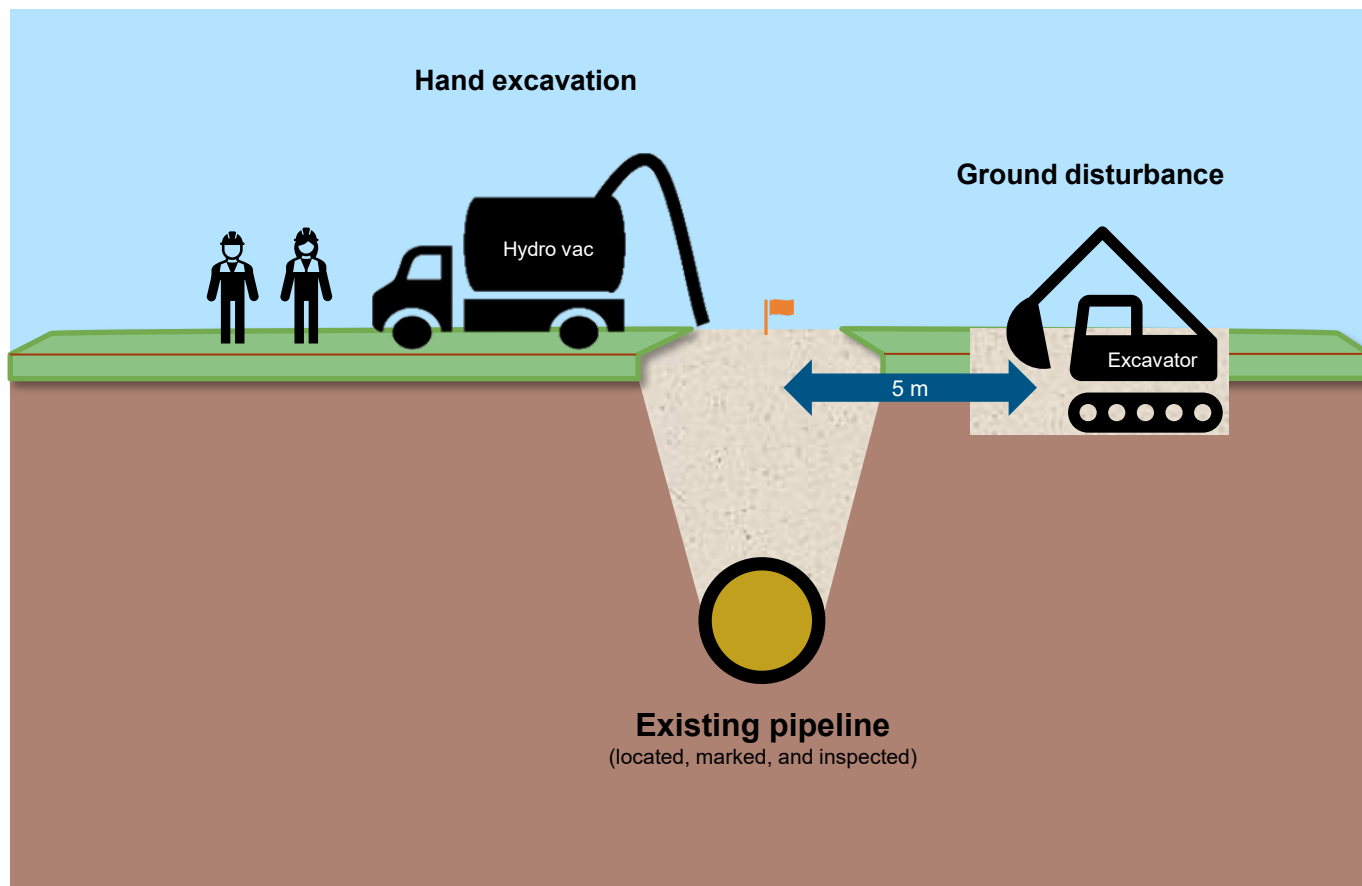


When does a pipeline need to be exposed?

Pipeline Rules

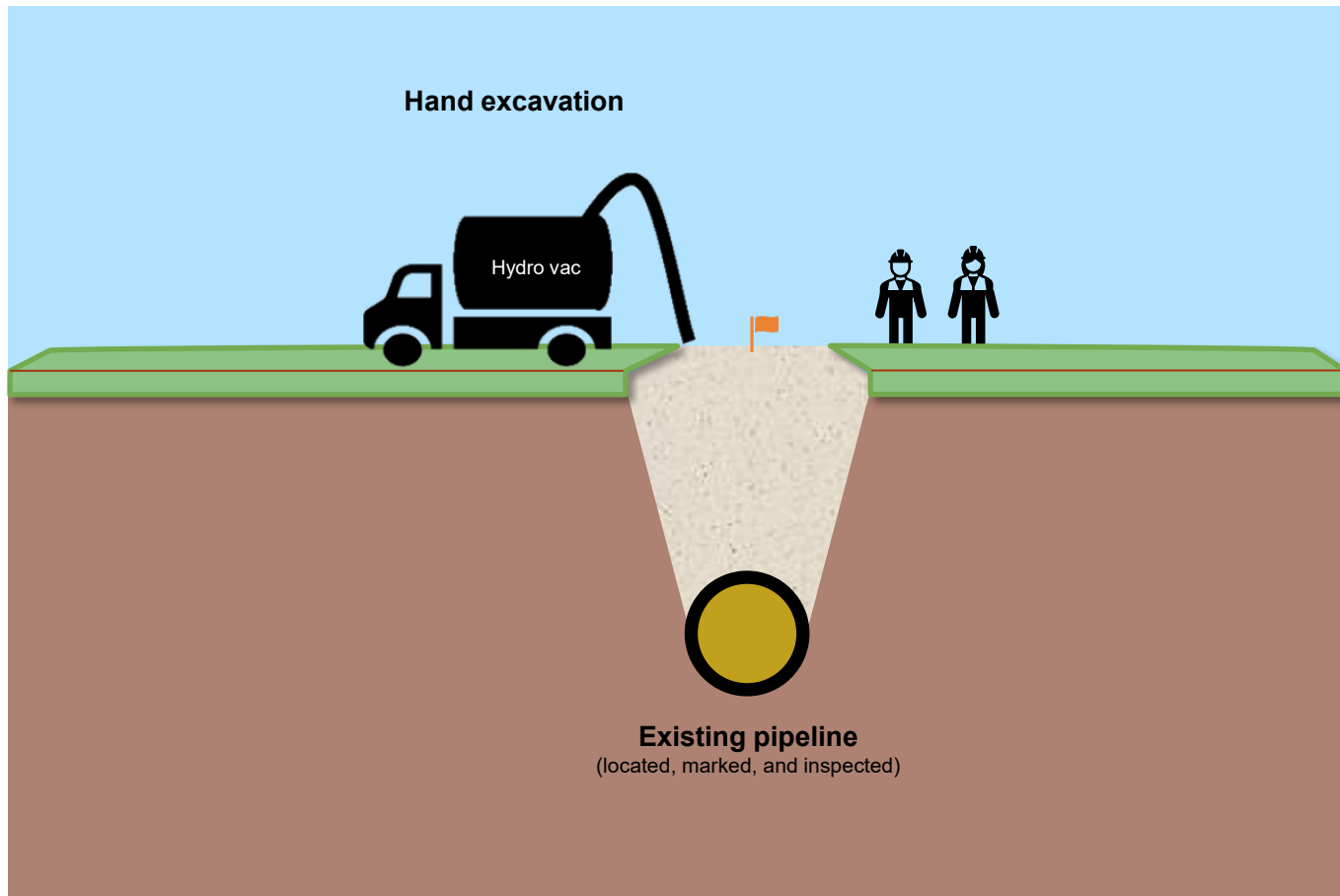
51(1) When a ground disturbance approaches within 5 metres of a pipeline, the person conducting the ground disturbance must expose the existing pipeline using hand excavation methods until positive identification and orientation of the pipeline is achieved, and before any further mechanical excavation may continue.

(2) If hand excavation of polymeric or composite pipelines is being conducted by high-pressure water or air excavation methods, those methods and procedures must be in accordance with the pipeline manufacturer's recommendations or industry best practices, as available, and must be acceptable to the licensee of the existing pipeline.



Who needs to be present when exposing the pipeline:

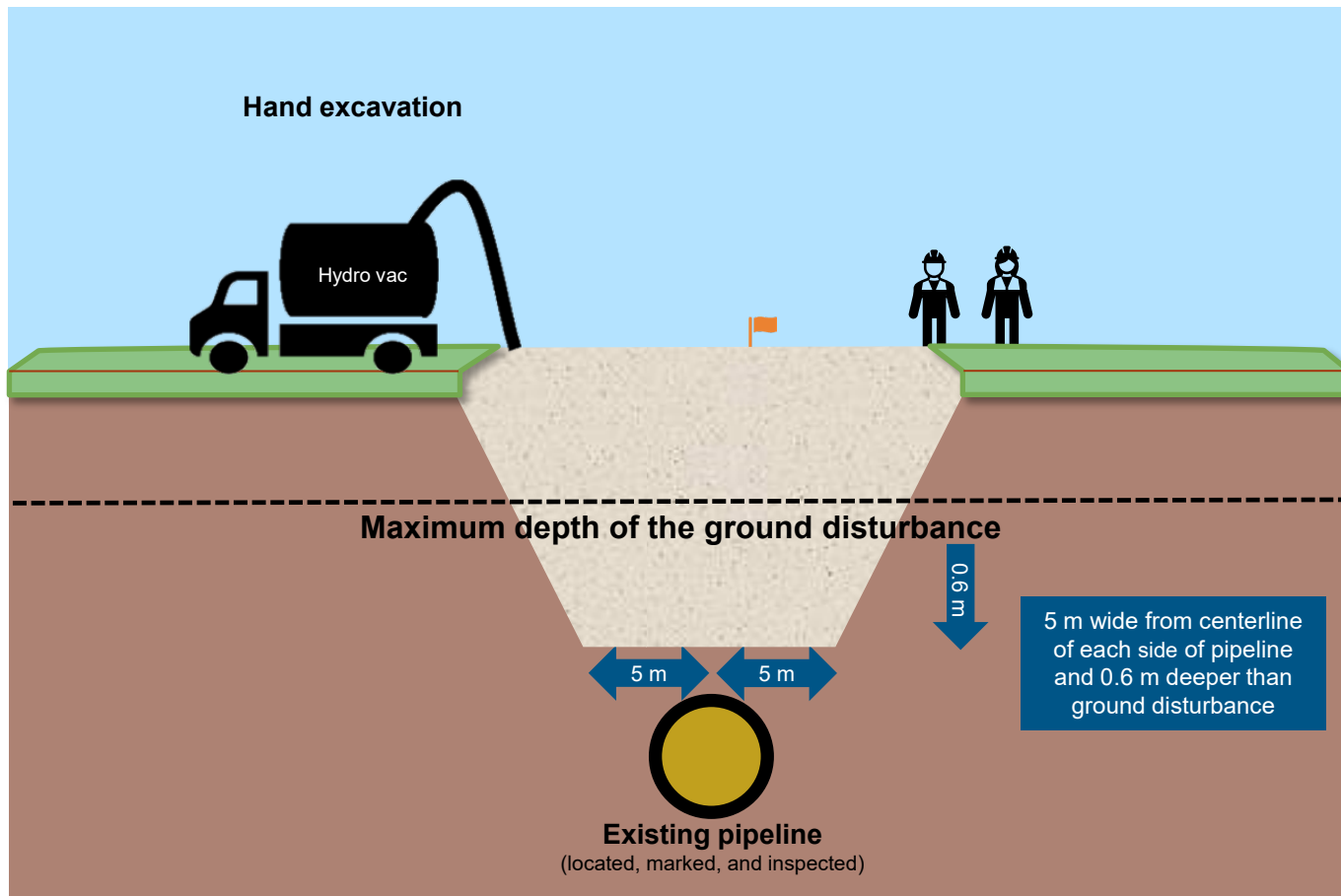
51(3) Under this section, at the time the pipeline is being exposed, either a representative of the licensee of the existing pipeline or a designated delegate the licensee agreed to accept, who meets the requirements of section 47(c), must be present.



When does a pipeline NOT need to be fully exposed?

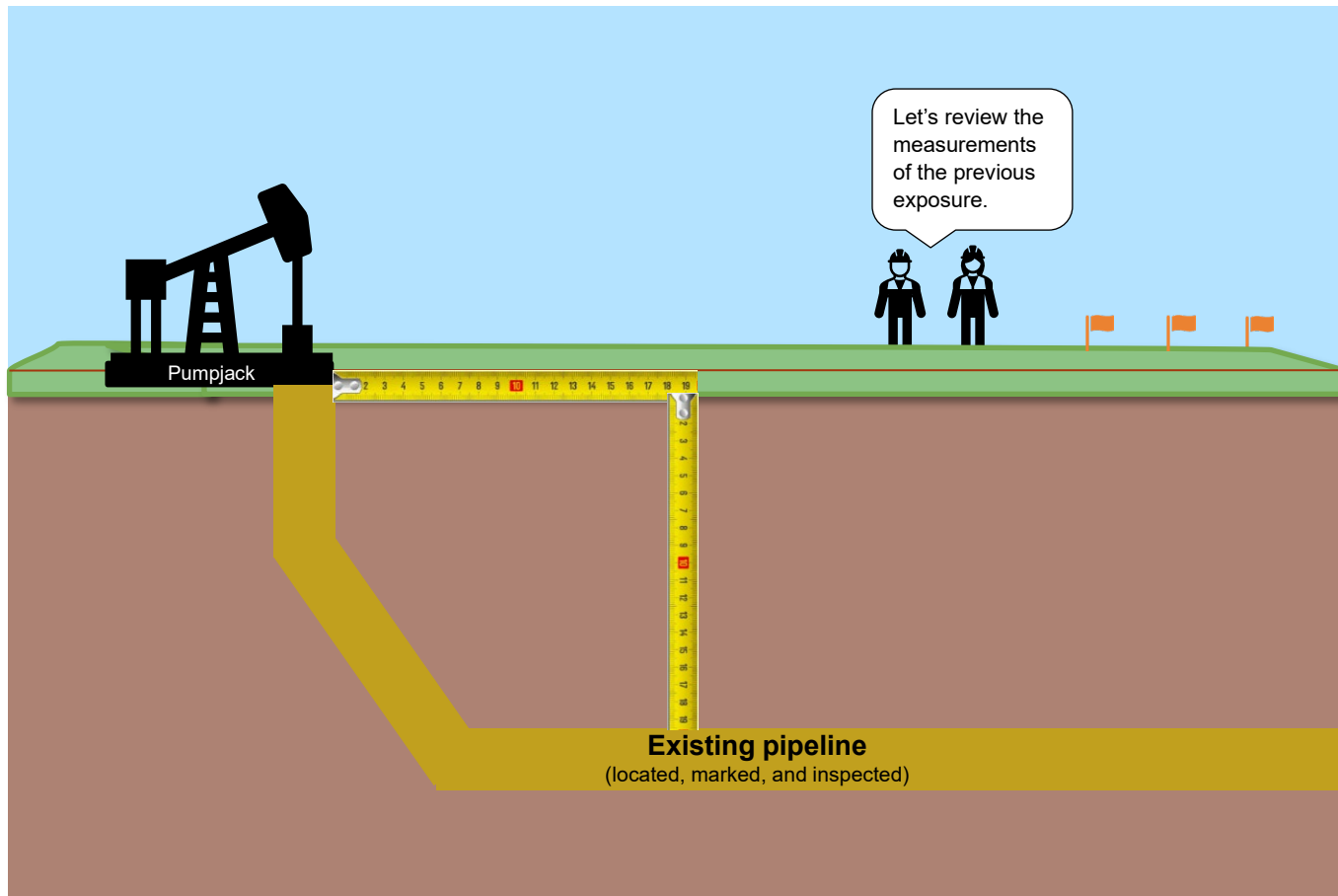
51(4) Despite subsection (1) and subject to subsection (5), an existing pipeline does not need to be fully exposed if

(a) the existing pipeline is located, marked and inspected in accordance with sections 46(1) and 47, and hand excavation to a distance of 5 metres on each side of the centreline of the marked position and to a depth at least 0.6 metres greater than that required for the ground disturbance has not exposed the pipeline,



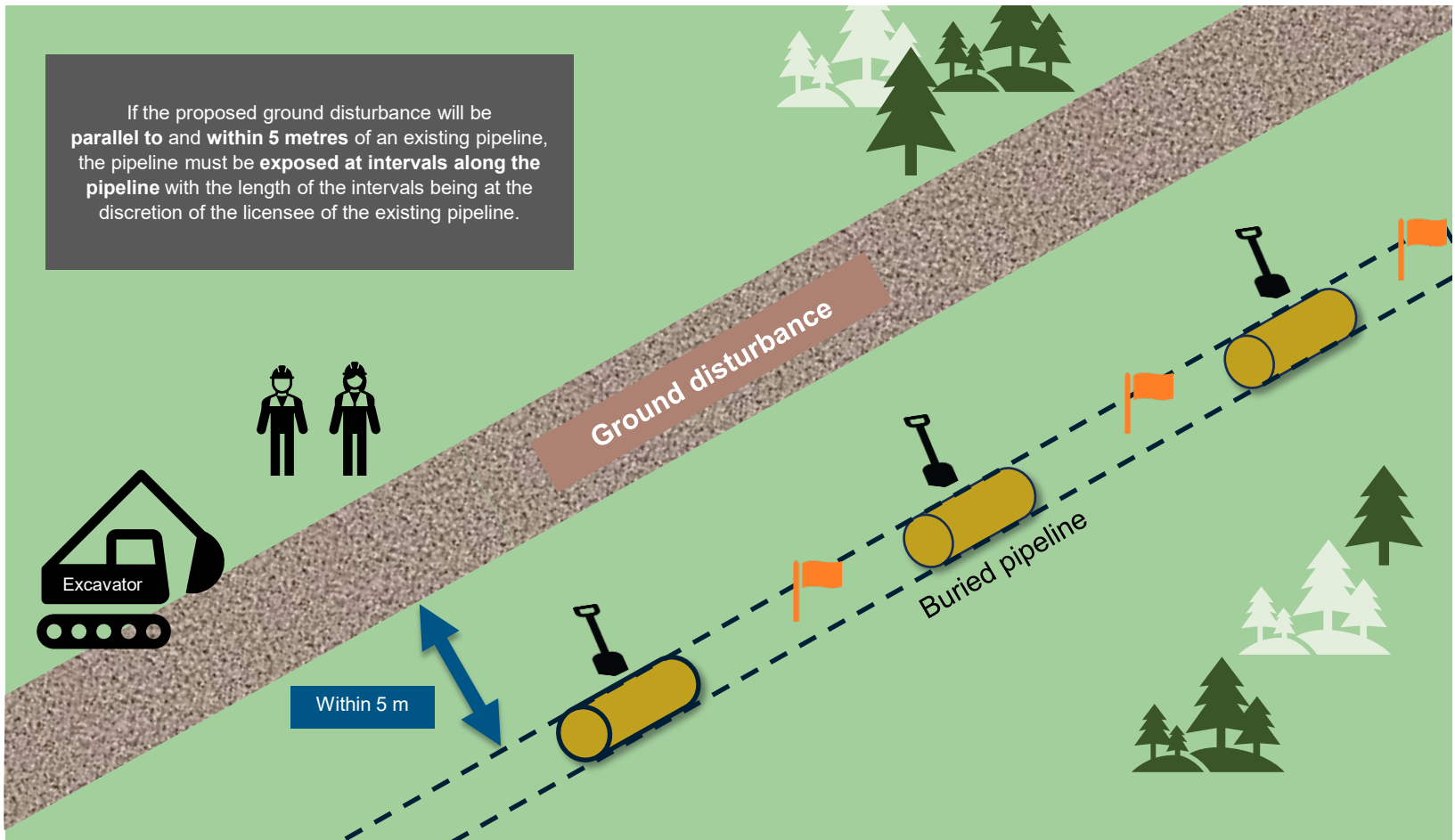
When does a pipeline NOT need to be fully exposed?

51(4)(b) The position of the existing pipeline has been verified to the satisfaction of the licensee of the existing pipeline by comparison with recorded measurements of the pipeline taken during a previous exposure.



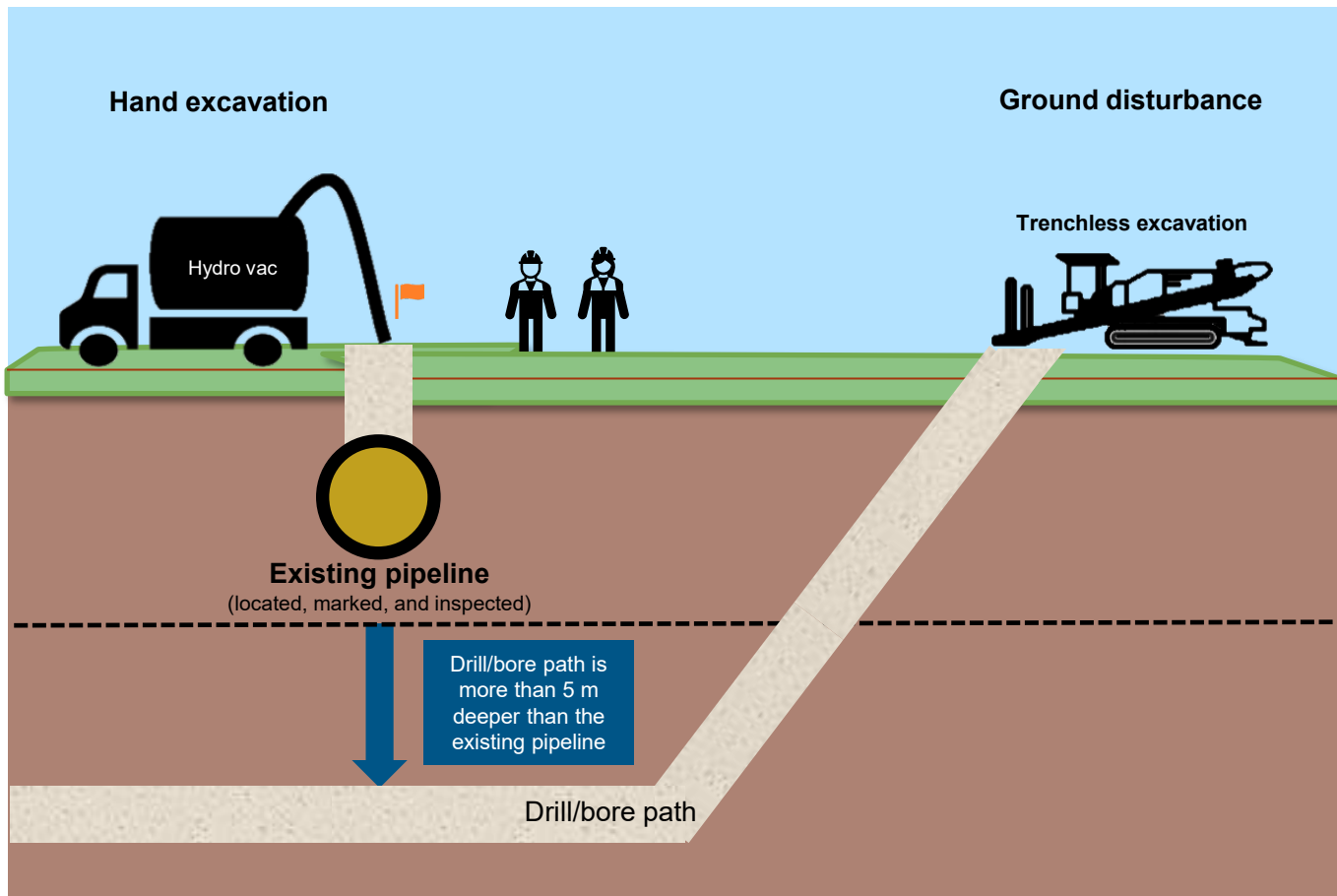
When does a pipeline NOT NEED to be fully exposed?

51(4)(c) the proposed ground disturbance will be parallel to and within 5 metres of an existing pipeline, in which case the pipeline must be **exposed at intervals along the pipeline** with the length of the intervals being at the discretion of the licensee of the existing pipeline



When does a pipeline NOT NEED to be fully exposed?

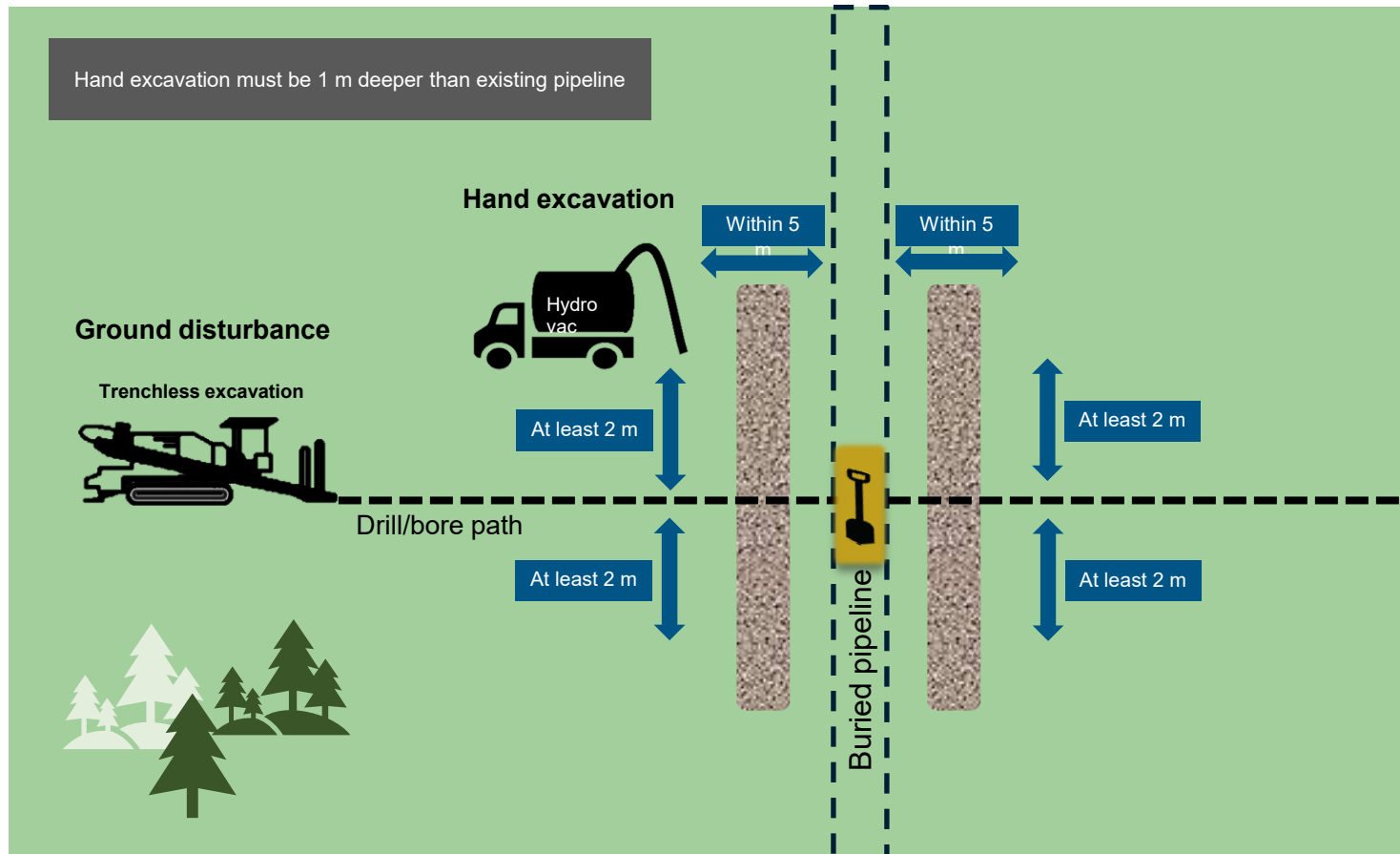
51(4)(d) in the case of a trenchless excavation technique, the drill or bore path is confirmed during the drilling process to be more than 5 metres deeper than the confirmed depth of the existing pipeline



Hand excavation for trenchless excavation crossing the path of an existing pipeline

51(7) For the purpose of subsection (6), for a trenchless excavation crossing the path of the existing pipeline, the hand excavation must

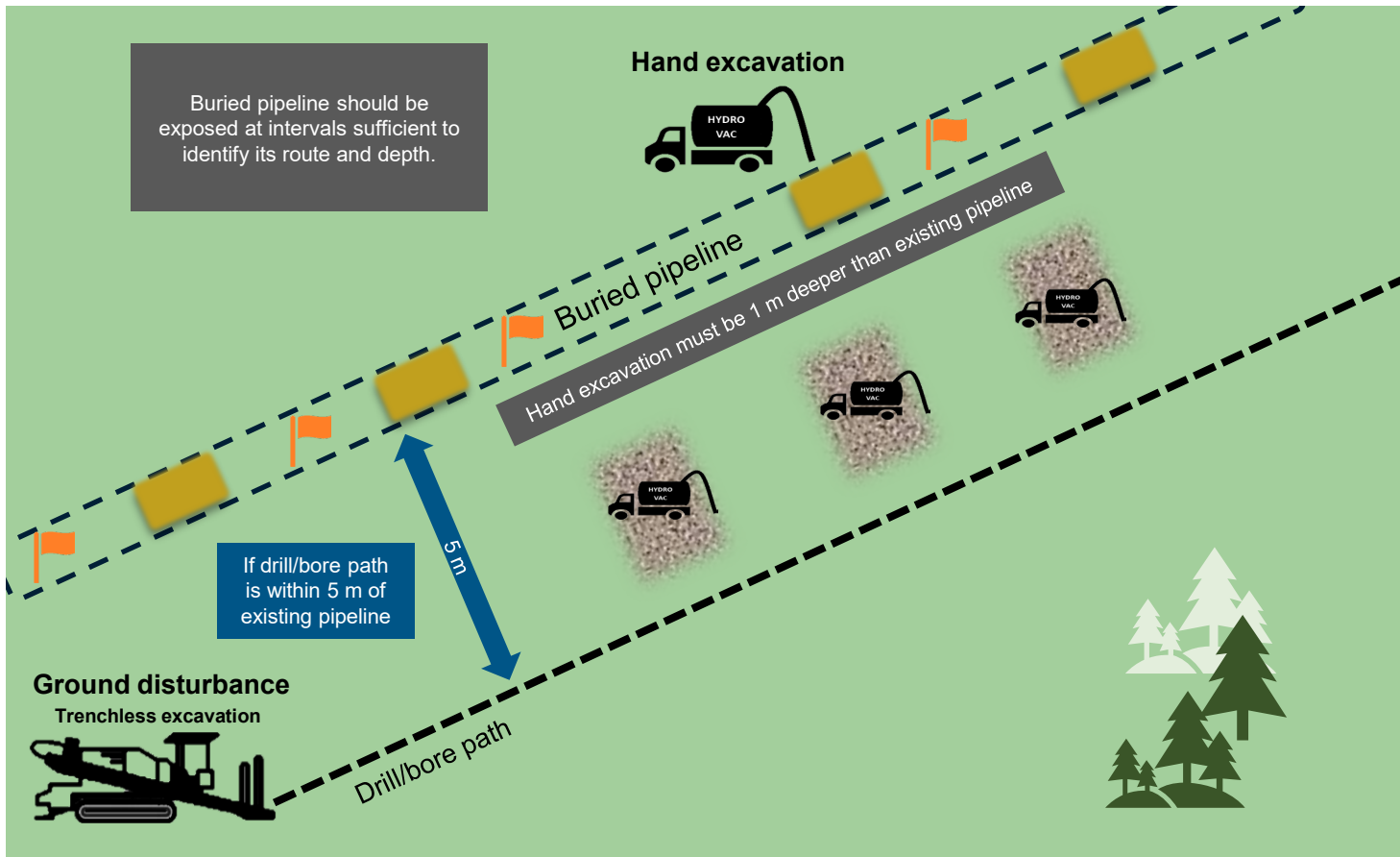
- (a) be located within 5 metres of the existing pipeline,
- (b) extend to a depth of at least one metre deeper than the existing pipeline,
- (c) run parallel to the existing pipeline for a distance of at least 2 metres on each side of the intended tool path, and
- (d) be of adequate width to allow for effective visual monitoring of the tool path.



Hand excavation for trenchless excavation running parallel to the path of an existing pipeline.

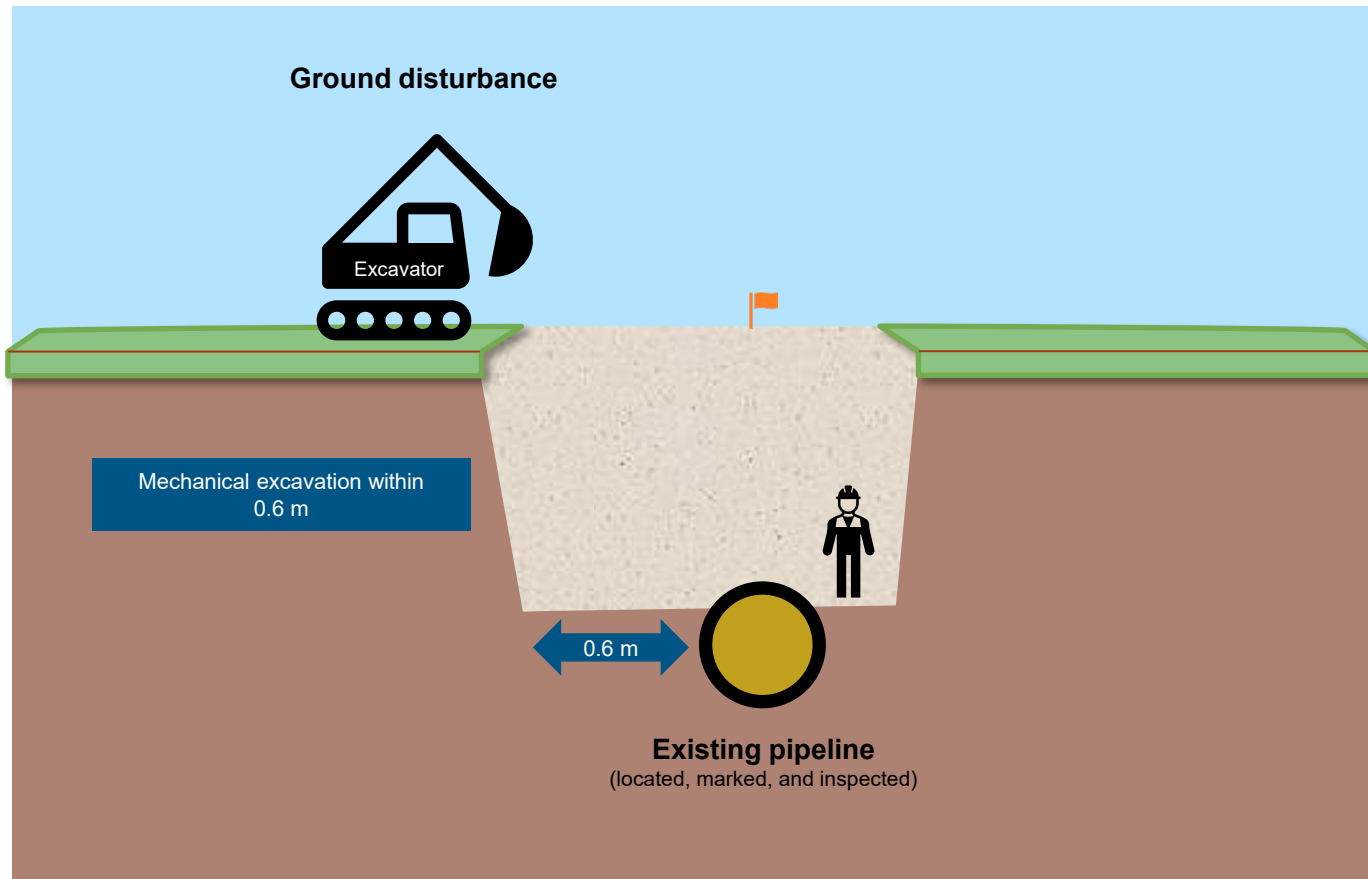
51 (8) For the purpose of subsection (6), for a trenchless excavation running parallel to, or otherwise not crossing the path of the existing pipeline, the hand excavation must

- (a) run parallel to and be offset from the existing pipeline
- (b) extend to a depth of at least one metre deeper than the existing pipeline,
- (c) be located between the intended tool path and the existing pipeline,
- (d) be installed at intervals adequate to identify any critical deviation of the tool from the intended tool path, and
- (e) be of adequate width and length to monitor for deviation of the tool path.



After the pipeline has been exposed:

51(5)After an existing pipeline has been exposed in accordance with this section, no mechanical excavation equipment shall be used within 0.6 metres of the pipeline or within any distance beneath a pipeline, except under the direct supervision of either a representative of the licensee of the existing pipeline or a designated delegate the licensee agreed to accept, who meets the requirements of section 47(c).





Thank you

