



COUNTY OF NORTHERN LIGHTS

POLICY

GROUND DISTURBANCE

CREATED: 2/9/2025

REVISED:

TOTAL PAGES: 6

PURPOSE

The purpose of this program is to provide employees general information for working on owner client or other non-owned pipelines. For excavation safety procedures the company Excavation safety procedure shall be followed.

SCOPE

When work is performed on a non-owned or operated site, the operator's program shall take precedence; however, this document covers all employees for awareness purposes and shall be used when an operator's program doesn't exist.

KEY RESPONSIBILITIES

Before any excavation work begins workers must be made aware of the potential hazards of the job functions they are to perform. A pre-job safety meeting must be completed before conducting ground disturbance. Prior to any ground disturbance management will conduct a pre-job safety meeting discussing the job, the hazard assessment, roles and responsibilities, buried facilities/pipelines, emergency procedures, etc. All employees involved will be in attendance for this meeting.

Where a worker is present in an excavation that is more than 1.2 meters deep and is present in a trench or required to be closer to the wall or bank than the distance equal to the depth of the excavation, management will ensure that the worker is protected from cave ins or sliding material by meeting local provincial or territorial requirements.

Additionally, excavation work must be in accordance with the written instructions of a qualified registered professional if the excavation is more than 6 m (20 ft.) deep, an improvement or structure is adjacent to the excavation, the excavation is subject to vibration or hydrostatic pressure likely to result in ground movement hazardous to workers, or the ground slopes away from the edge of the excavation at an angle steeper than a ratio of 3 horizontal to 1 vertical (3:1). Only trained personnel can be involved in working in trenches or excavations

PROCEDURE

Competent Person Duties

Only competent persons may conduct ground disturbance activities. Personnel involved in ground disturbance activities should be deemed as competent to complete those activities. Competence includes a combination of training, experience, and qualifications. Management will designate a competent person to supervise work at an excavation site.

Protective Systems or Equipment

- Monitoring water removal equipment and operations.
- Inspecting excavations subject to runoff from heavy rains to determine need for diversion ditches, dikes, or other suitable protection.
- Determining cave-in potential to assess need for shoring or other protective system.
- Examining damaged material or equipment used for protective systems to determine its suitability for continued use.
- Classifying soil and rock deposits, by both visual analysis and by testing, to determine appropriate protection; re-classifying, if necessary, based on changing conditions.
- Determining the appropriate slope of an excavation to prevent collapse due to surcharge loads from stored material or equipment, operating equipment, adjacent structures, or traffic, and assuring that such slope is achieved.

Inspecting Trench or Protective Systems



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- Authorizing immediate removal of employees from the hazardous area where evidence of possible cave-in, failure of protective systems, hazardous atmospheres, or other hazardous conditions exists.

Unsafe Access/Egress

- Designing structural ramps that are used solely by employees as a means of access or egress. Structural ramps used for access or egress of equipment must be designed by a competent person qualified in structural design.

Utilities and Pre-Work Site Inspection

- Approvals shall be received from buried facility owners prior to ground disturbance activity. Before the start of a ground disturbance activity approvals or crossing agreements must be obtained from the buried facility owner. The approval will outline the personnel responsibilities as well as any conditions or limitations for the ground disturbance activity.
- The Company, as Ground Disturber, shall confirm that notification of the buried facility owner is complete prior to a ground disturbance activity. Before starting a ground disturbance activity, notification should be made to the Provincial One-Call centre/buried facility owner for the applicable province. The One-Call Centre will notify the subscribed buried facility owners of the pending ground disturbance.
- Management must ensure that the initiator has accurately established the location of all underground pipelines, cables and conduits in an area where work is to be done and shall ensure that those locations are conspicuously marked before commencing work using power tools or powered mobile equipment on an excavation, trench, tunnel, excavated shaft or borehole or before breaking ground surface with any equipment to a depth that may contact underground utilities. Buried facilities must be exposed by hand digging or other non-destructive techniques within the hand expose zones.
- Emergency response procedures are to be implemented in the event buried facilities are damaged. When unwanted contact is made with a pipe or buried facility, work should be stopped immediately and the owner (licensee) will be notified. If the owner cannot be contacted, the applicable one-call centre will be contacted.
- Trees, utility poles, rocks and similar objects adjacent to an area to be excavated must be removed or secured if they could endanger workers. Utilities left in place shall be protected by barricades, shoring, suspension or other means as necessary to protect employees.

Permit

A safe work permit must be completed prior to ground disturbance activity. A work permit will be completed prior to commencing a ground disturbance to ensure that all pre-job activities are complete and the crossing agreements or approvals are complete. The permit will include the requirements listed in the crossing agreements/approvals, identification of hazards and controls, and evidence of communication to affected personnel. The permit will be supplied by the owner client.

Marking of Excavations

If there is a danger of a worker or equipment falling into an excavation Management will ensure that workers are made aware of the excavation through flagging, marking, safeguards, or other appropriate and effective means.



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Protection of the Public

Barricades, walkways, lighting and posting shall be provided as necessary for the protection of the public prior to the start of excavation operations.

Walkways or bridges protected by standard guardrails shall be provided where employees and the general public are permitted to cross over excavations. Where workers in the excavation may pass under these walkways or bridges, a standard guardrail and toe board shall be used.

Protection of Workers in Excavations

Safe Access and Means of Egress

If a worker is required or permitted to enter an excavation, tunnel or underground shaft Management must provide the worker with a safe means of entering and leaving the area prior to work beginning. This will include the requirement to install ladders, stairways or ramps to provide a safe means of entrance to and exit from the trench and to ensure that the ladder, stairway or ramp is located not more than eight meters from a worker working in the trench.

Ladders

When workers are required to enter excavations over 1.2 metres in depth a ladder shall be provided in the immediate area where workers are employed and the ladder shall extend from the bottom of the excavation to at least 0.91 metres above the top of the excavation.

- Ladders shall be used only on stable and level surfaces unless secured. Ladders placed in any location where they can be displaced by workplace activities or traffic shall be secured, or barricades shall be used to keep these activities away from the ladder.
- Non-self-supporting ladders shall be positioned so that the foot of the ladder is one-quarter of the working length away from the support.
- Employees shall not be allowed to carry any object or load while on the ladder that could cause them to lose their balance and fall.

Exposure to Vehicular Traffic

Employees exposed to vehicular traffic shall be provided with and shall wear warning vests or other suitable garments marked with or made of reflectorized or high-visibility material. Warning vests worn by flagmen shall be red or orange and shall be of reflectorized material if worn during night work.

Employee Exposure to Falling Loads

No employee shall be permitted underneath loads handled by lifting or digging equipment. Employees shall be required to stand away from any vehicle being loaded or unloaded to avoid being struck by any spillage or falling materials. Operators may remain in the cabs of vehicles being loaded or unloaded when the vehicles provide adequate protection for the operator during loading and unloading operations.

Hazardous Atmospheres

The atmosphere in excavations shall be tested if a hazardous atmosphere exists or could reasonably be expected to exist. A hazardous atmosphere could be expected, for example, in excavations in landfill areas, in excavations in areas where hazardous substances are stored nearby, or in excavations near or containing gas pipelines.

Personal Protective Equipment

- All employees working in trenches or excavations shall wear approved hard-hats and steel toed shoes or boots.
- Employees exposed to flying fragments, dust, or other materials produced by drilling, sawing, sanding, grinding, and similar operations shall wear approved safety glasses with side shields.
- Employees exposed to hazards produced by, or performing, welding, cutting, or brazing operations shall wear approved spectacles or a welding face shield or helmet.



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- Employees entering bell-bottom pier holes or other similar deep and confined footing excavations shall wear a harness with a lifeline securely attached to it. The lifeline shall be separate from any line used to handle materials and shall be individually attended at all times while the employee wearing the lifeline is in the excavation.
- Employees shall wear approved gloves or other suitable hand protection.
- Employees using, or working in the immediate vicinity of, hammer drills, masonry saws, jackhammers or similar high noise producing equipment shall wear suitable hearing protection.
- Each employee at the edge of an excavation 6 feet or more deep shall be protected from falling. Fall protection shall be provided by guardrail systems, fences, or barricades.

Emergency rescue equipment, such as breathing apparatus, a safety harness and line, and a basket stretcher shall be readily available where hazardous atmospheric conditions exist or may develop during work in an excavation. This equipment shall be attended when in use. Only personnel that have received approved training and have appropriate equipment shall attempt retrieval that would require entry into a hazardous atmosphere.

Protection from Hazards Associated with Water Accumulation

Water must not be allowed to accumulate in an excavation if it might affect the stability of the excavation or might endanger workers. Erosion of slopes by surface water must be prevented if workers may be endangered.

Stability of Adjacent Structures

The competent person will determine if the excavation work could affect the stability of adjoining buildings, walls, sidewalks or other structures. Before excavating or trenching begins, where the stability of a structure may be affected by an excavation trench, the structure will be supported by a temporary protective structure designed by a professional engineer and constructed, installed, used, maintained and dismantled in accordance with that design.

Excavation below the level of the base or footing of any foundation or retaining wall that could be reasonably expected to pose a hazard to employees shall not be permitted.

Stability of Soil

Where work is being carried on in excavations, the slopes shall be scaled and trimmed, or otherwise stabilized to prevent slides of material or falls of rock, overhanging banks and dangerous trees or stumps which could endanger workers shall be removed and means shall be provided to prevent the dangerous erosion of slopes by surface water.

NOTE:

Management will utilize a higher level of compliance of 1.2 meter excavation depth for the following requirements:

- A worker shall not be permitted or required to enter an excavation over 1.2 metres in depth unless the sides of the excavation are sloped to safe angle, the sides have been secured by the use of sheet piling, shoring and bracing, or the workers are protected by other effective means.
- Before a worker begins working in an excavation that is more than 1.2 metres deep and closer to the wall or bank than the depth of the excavation Management will ensure that the worker is protected from cave-ins or sliding or rolling materials by cutting back the walls of the excavation to reduce the height of the remaining vertical walls, if any, to no more than 1.5 metres for "hard and compact soil" and "likely to crack or crumble soil" installing temporary protective structures, or using a combination of the methods.

If the walls of an excavation are cut back Management will ensure that if the soil is classified as "hard and compact soil", the walls are sloped to within 1.5 metres of the bottom of the excavation at an angle of not less than 30 degrees measured from the vertical or if the soil is classified as "likely to crack or crumble soil" the walls are sloped to within 1.5 metres of the bottom of the excavation at an angle of not less than 45° measured from the vertical, and if the soil is classified as "soft, sandy or loose soil" the walls are sloped from the bottom of the excavation at an angle of not less than 45° measured from the vertical.

Where a wall of an excavation or trench is cut back Management shall ensure that in the case of type 1 or 2 soil, the walls are sloped to within 1.2 meters of the bottom of the excavation or trench, with a slope at an angle not steeper



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than one horizontal to one vertical, or 45° measured from the horizontal. In the case of type 3 soil, the walls are sloped from the bottom of the excavation, or trench, with a slope at an angle not steeper than one horizontal to one vertical, or 45° measured from the horizontal. In the case of type 4 soils, the walls are sloped from the bottom of the excavation or trench, with a slope at an angle not steeper than three horizontal to one vertical or 19° measured from the horizontal.

Workers shall not allow excavated material, equipment, rocks and construction materials to remain within 1.22 metres of the edge of a trench-type excavation nor within 1.50 metres from the edge of a pit-type excavation from any other excavation. Under no circumstances may excavated material be piled so that it endangers workers. Excavated material shall be piled so that it cannot fall into the excavation.

Materials piled, grouped or stacked near the edge of an excavation must be stable and self-supporting. Spoil piles will be piled so that the leading edge of the pile is at least 1 metre away from the edge of the excavation, the slope of a spoil pile adjacent to the excavation is at an angle of not more than 45° from the horizontal and loose materials are scaled and trimmed from the spoil pile.

Daily Inspection

The competent person shall conduct daily inspections of excavations, adjacent areas, and protective systems for evidence of a situation that could result in possible cave-ins, failure of protective systems, hazardous atmospheres, or other hazardous conditions. An inspection shall be conducted by the competent person prior to the start of work and as needed throughout the shift. Inspections shall also be made after every rainstorm or other hazard increasing occurrence. These inspections are only required when the trench will be or is occupied by employees.

Where the competent person finds evidence of a situation that could result in a possible cave-in, failure of protective systems, hazardous atmosphere, or other hazardous conditions, exposed employees shall be removed from the hazardous area until precautions have been taken to assure their safety.

There shall be a written log of all inspections conducted. This log shall include the date, work site location, results of the inspection, and a summary of any action taken to correct existing hazards.

The pipe/buried facility owner is to be notified prior to backfilling operations. When a pipe/buried facility is exposed, the owner must be notified at least 24 hours prior to backfilling. The owner must inspect the buried facility to ensure its condition is satisfactory. If the owner cannot be contacted or fails to inspect, the ground disturber must demonstrate that they made an effort. All records of inspections shall be kept for the life of the buried facility.

TRAINING

All personnel involved in trenching or excavation work shall be trained in safe work practices, the requirements of this program, the Excavation program and applicable regulatory requirements. Workers shall ensure workers are made aware of the potential hazards of the job functions they are to perform.



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PROGRAM REVIEW

The Ground Disturbance program shall be reviewed as necessary. The ground disturbance written program must be reviewed on a regular basis and updated as necessary. The program will be reviewed when there are changes to regulations, client or company policy

COMMUNICATION

As per the company's Safety Management System Manual, and corporate communication policy, all applicable policies and procedures are reviewed with all new employees prior to engaging in any work activities (during orientation) and annually with seasonal/returning employees (refresher training).

Chief Elected Official

Chief Administrative Officer