Compliance Review eSafetyFirst Canada

Online Ground Disturbance Course

The purpose of this document is to outline the compliance review for the eSafetyFirst Canada (eSafetyFirst) online **Ground Disturbance** course. The course was viewed in its entirety and then reviewed chapter by chapter to determine both compliance and alignment with federal and provincial jurisdictions in Canada.

Each section in this report contains the points required for compliance with the legislation. **It is important to note, there are no required revisions for compliance reasons**. There are few technical and cosmetic points that will be noted in the appropriate sections that should be corrected to improve the course content and learner experience.

To evaluate a **Ground Disturbance Level 1 (101)** equivalent online course, the learning outcomes must reflect worker-level awareness, basic regulatory compliance, and individual worker safety responsibilities.

Unlike supervisory Level 201 courses (which focus on obtaining permits, executing crossing agreements, and managing job sites), **Level 1 courses focus on ensuring workers can identify hazards, recognize mark-outs, understand their role in the damage prevention process, and work safely within defined limits**.

The learning outcomes below are anchored in Canadian provincial Occupational Health and Safety (OH&S) legislation (e.g., Alberta OH&S Code Part 32, BC OHS Regulation Part 20, SK OHS Regulations Part 17) and regional Common Ground Alliance / Utility Safety Partners (USP) Level 101 standards.

Competency and understanding is assessed by the learner completing 3 quizzes that require an 80% passing grade.

1. Introduction to Ground Disturbance

This section establishes foundational concepts and hazards so workers recognize when their work falls under regulatory requirements.

Expected Learning Outcomes

To meet legislated requirements a course would have to cover:

- **Define Ground Disturbance:** Define a ground disturbance according to provincial OH&S legislation (e.g., mechanical excavation at any depth, or hand-digging deeper than 300 mm / 1 ft that alters cover over a buried facility).
- **Identify Buried Facility Infrastructure:** Categorize common underground infrastructure (e.g., high-pressure gas mains, electrical lines, telecommunications, water/sewer, and petroleum pipelines).

- **Identify Primary Ground Disturbance Hazards:** Describe immediate health and physical hazards, including utility contacts (electrocution, gas leaks, explosion), trench cave-ins, hazardous atmospheres, and soil instability.
- **Understand Consequences of Contacts:** Explain the potential impacts of line strikes on worker safety, public safety, community infrastructure, environmental damage, and financial/legal liabilities.

Module 1 provides all of this information in detail and expands to include scope and risk and covers the required definitions. This module meets compliance requirements.

2. Ground Disturbance Process & Worker Safety

This section covers practical safety measures on site, line identification, and safe digging techniques around known utilities.

Expected Learning Outcomes

To meet OHS legislative requirements this module would need to deliver:

- **Interpret Locate Markings & Color Codes:** Read and identify standardized APWA utility color codes (e.g., Red = Electric, Yellow = Gas/Oil, Orange = Telecom, Blue = Potable Water) and physical marks (flags, paint lines, stakes).
- **Understand One-Call Notification Basics:** Explain the requirement to submit locate requests via provincial One-Call systems (e.g., Utility Safety Partners, BC One Call, Click Before You Dig) before starting work.
- **Recognize Surface Indicators:** Identify physical on-site indicators of underground utilities, such as marker posts, warning signs, valve boxes, and visible line scars.
- **Participate in Pre-Job / Tailgate Meetings:** Explain the purpose of site-specific hazard assessments, pre-job meetings, and tailgates in communicating job-site hazards, buffer zones, and locate boundaries to workers.
- **Apply Safe Hand Exposure Techniques:** Describe safe hand-exposure procedures within the hand-expose/tolerance zone (e.g., using non-destructive methods like soft digging or hand digging with round-nosed shovels—never picks or axes) before using heavy machinery.
- **Recognize Excavation Protective Systems:** Identify basic worker protection methods required by provincial OH&S for deep excavations (typically >1.2m to 1.5m), such as sloping, shoring, and trench boxes.
- **Respond to Emergency Situations:** Outline immediate worker steps if a line strike occurs or a gas/power line is damaged (e.g., stopping work, turning off equipment if safe, evacuating upwind, notifying supervisors, and emergency contacts).

Module 2 covers all of these points and meets all legislated requirements. It also goes further to reinforce the requirements for safe work procedures and rescue plans.

3. Ground Disturbance Damage Prevention

This module outlines legal responsibilities, stakeholder roles, and compliance requirements from a worker perspective.

Expected Learning Outcomes

To achieve compliance this module would need to cover the following:

- **Differentiate Stakeholder Responsibilities:** Outline the core damage prevention responsibilities of primary and secondary parties:
    - **Project Owner / Employer:** Ensuring line locates are requested, permissions are secured, and workers are trained.
    - **Ground Disturbance Supervisor:** Verifying locate marks on-site, managing permits, and overseeing safe site execution.
    - **Ground Disturber / Worker:** Following pre-job instructions, staying within marked search areas, maintaining visual line-of-sight, and respecting hand-exposure zones.
    - **Locator:** Accurately marking underground facilities and providing detailed locate documentation.
- **Identify Mandatory Site Documentation:** Recognize key documentation required on site prior to breaking ground, such as locate slips, hazard assessments, work permits, and emergency response plans.
- **Understand Tolerance / Hand-Expose Zones:** Define jurisdiction-specific hand-exposure or tolerance zones (e.g., 45 cm to 1 meter depending on provincial regulation and utility type) where mechanical equipment is restricted. The module does not discuss depth measurements (which is not needed) but reinforces the need for daylighting and ensuring the ground disturber complies with local legislation.
- **Execute Incident & Near-Miss Reporting:** Explain provincial legal requirements for reporting any underground line contact, scrap, gouge, or near-miss to the supervisor and facility owner—even if no visible leak or outage occurs.

Module 3 covers all of this material very well and meets legislated requirements.

~~**One point to note, Slide 7 uses the OHS Canada Magazine logo. The image should be swapped out to avoid any potential copyright issues. -**~~ **Corrected**

Respectfully submitted



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