



Alberta Hot Line Inc

National Energy Board
444 – 7th Avenue SW
Calgary, Alberta
T2P 0X8

Attention: Claudine Dutil-Berry

Via E-mail

April 8, 2009

Re: Proposed Damage Prevention Regulations and Draft Guidance Notes, February 2009

To Claudine Dutil-Berry,

Alberta Hot Line Inc. (AHL) recognizes the opportunity and importance to provide comment on the *Proposed Damage Prevention Regulation Draft Guidance Notes – February 2009*.

Before providing comments, I would like to introduce Alberta Hot Line to you. Alberta Hot Line Inc. provides locating services primarily to the Oil and Gas industry within Alberta and Saskatchewan. AHL is very dedicated to the buried facility locating industry and our President & CEO, Paul Richard, not only serves as a Director for the Canadian Association of Pipeline and Utility Locating Contractors (CAPULC) but also teaches the Buried Facilities Locator curriculum at Enform. In addition to this, AHL has provided feedback and recommendations for Enform *IRP-17: Ground Disturbance and Damage Prevention*.

Our comments coincide with existing legislation and industry recommendations on best practices which include the *Alberta Pipeline Act*, the *Damage Prevention Process in Alberta* as published by Alberta One-Call in conjunction with the Alberta Damage Prevention Council, *IRP 17 – Ground Disturbance and Damage Prevention*, Common Ground Alliance – *Best Practices 6.0*, and CAPULC (Canadian Association of Pipeline and Utility Locating Contractors) *Canadian Locator Technician Standards* and *Locating Industry Recognized Practices*.

Comments as follow:

Proposed Regulatory Text² – Guidance Notes

Safety Zone

The safety zone extends (30) metres in both directions from the centreline of a pipe.

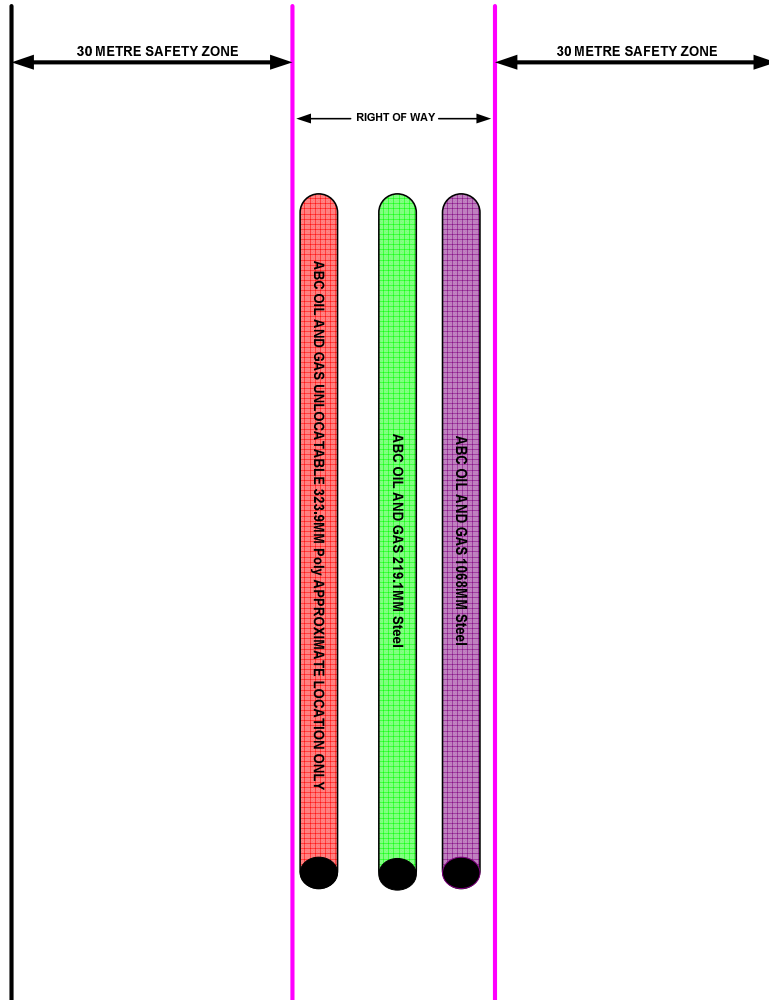


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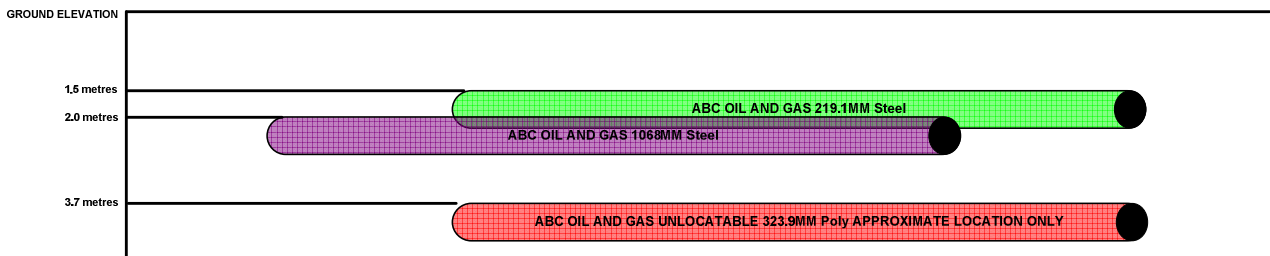
Pipelines and utilities are not always located in the middle of the Right-Of-Way. A locator may encounter difficulties, such as lost signal, field distortion, ghosts, depth wandering, differing soil types, and proximity to other conductors. Deeper pipelines and utilities have been installed using tunnel construction (i.e. boring or directional drilling). Tunnel construction is becoming more common place in the underground infrastructure making it more difficult or impossible to locate using electronic equipment. Some pipelines may run through a sleeve or casing that may cause a loss of signal response along its length. In addition, different compositions of target facilities and poor construction methods can lead to distorted readings which can lead to inaccurate locates. An un-locatable pipe or facility is impossible to measure from and cannot be assumed to be constructed in the centre of a right-of-way. Whenever the aforementioned difficulties arise, AHL strongly recommends the safety zone should be measured from the edges of the right of way and not from (30) metres from the centreline of a pipe.

See drawing below for visual reference.

THE SAFETY ZONE MUST BE MEASURED FROM THE EDGES OF THE RIGHT OF WAY
WHENEVER DIFFICULTIES ARISE IN LOCATING, OR RECORDS ARE INCOMPLETE OR INACCURATE.



THIS DRAWING IS AN EXAMPLE OF THE DEPTH OF COVER VARIANCES.



Some buried facilities depths are greater than 15 metres.
Most standard pipe and cable locators cannot locate signals beyond 3 metres.



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Proposed Regulatory Text⁴

Section 3 - Members of one-call centre

If a pipeline company has a pipeline within a geographical area where a one-call centre exists, the pipeline company shall be a member of that centre.

Alberta Hot Line agrees with this statement, however, we feel that there should be a requirement or need for utility companies to be included in these centres.

One important item that is not addressed pertains to ancillary facilities. Many oil and gas facilities may have buried electrical, communication, water, sewer and/or low pressure gas facilities, owned by the oil and gas facility owner, associated with them. There may or may not be records of them. They may or may not be included in the facility owner's data at the one-call centre. They may or may not be located in response to a locate request placed through the one-call centre. They may or may not be considered when a notification from the one-call centre is screened by the facility owner or its contract locator.

Some oil and gas companies have addressed this issue by requiring an inductive sweep be done of the entire site before they undertake a ground disturbance. Other ground disturbers are unlikely to incur that extra expense. Ancillary facilities MUST be addressed within the Damage Prevention Regulations for safety and damage prevention of these.

Omissions and errors may occur due to inaccurate records, changes during construction, repair or abandonment of facilities, and delays in posting new records. Facility operators should be required to update maps when discrepancies are found.

Proposed Regulatory Text⁶

Qualification and Competency Requirements

Locators must be adequately trained in order to carry out their work. Pipeline companies should develop and maintain training programs and minimum qualification and competency requirements for locators. Additional guidance on training programs for pipeline company employees can be found under section 46 of the OPR. Pipelines companies may also reference the Canadian Association of Pipeline and Utility Locating Contractors at www.capulc.ca for locator technician standards.

At a minimum, locators should:



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- understand plans showing buried facilities;
- possess a basic understanding of construction standards and practices;
- be competent in the use of equipment they are likely to use;
- understand the principles of how locators work (this may include an understanding of the electromagnetic theory behind the operation of electromagnetic locating equipment);
- understand the varied relationships among all stakeholders in the damage prevention process including the owners and operators of buried facilities, the digging community, the regulatory agencies and the one-call centres;
- take ground disturbance training and;
- complete periodic testing to verify their knowledge and abilities.

AHL offers the following text modifications and/or additions:

Pipeline and utility companies should assist CAPULC with developing and maintaining locator technician standards, and ensuring that training providers buried facilities locating training is CAPULC approved.

At a minimum, CAPULC approved locators should:

- take CAPULC approved buried facilities locating course(s);
- successfully complete testing associated with the CAPULC approved buried facilities locating course(s);
- take CAPULC approved recertification courses every 3 years to maintain certification;
- successfully complete CAPULC approved recertification testing to verify their abilities;
- if a seasonal worker, successfully complete CAPULC approved testing annually

Surface Markings

Companies should identify and mark continuously or at regular intervals the horizontal alignment of their buried facilities using combinations of colour coded surface marks, temporary stakes or flagging. Where possible, markings should indicate the name, initials or logo of the pipeline company that owns or operates the line.

All surface markings shall extend a reasonable distance beyond the bounds of the work area. Due to the fact that approximately 10% of the male population and 0.5% of the female population in Canada are coloured blind, AHL suggests the following text modification:



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Locate marks must be written on both sides of marking materials, such as, lath, hubs, pin flags, etc. Special considerations should be made for painted ground markings.

We reference the following report on an accident related to colour blindness from the Winnipeg Free Press which can be viewed at:

<http://www.canada.com/Health/Colour+blind+engineer+mistake+forced+plane+down+near+Winnipeg+report/1379238/story.html>

Colour-blind engineer's mistake forced plane down near Winnipeg: report

A mistake made by a colour-blind engineer was one of the reasons a passenger plane was forced to land on a highway north of Winnipeg last summer, forcing a motorist to drive into a ditch just to avoid the aircraft, according to a report.

The Transportation Safety Board pointed a finger of blame at a colour-blind engineer in a seven-page report into the crash.

Depth of Cover

Pipeline companies should develop, implement and maintain procedures when establishing the depth of cover over the pipe. The depth of cover over the pipe may be established by either probing or daylighting, depending on the proposed activity and the location of the pipe.

AHL agrees with the above text, however, we propose the following text addition:

Some pipelines may run through a sleeve or casing that may cause a loss of signal response along its length. Depth measurement will probably be inaccurate over a sleeve/casing. Deeper utilities have been installed using tunnel construction, i.e. boring or directional drilling. Pipeline and utility companies should develop specific procedures and verification addressing deeper installed pipeline and utility locating and crossing agreements whenever probing and daylighting is not viable, to avoid the potential of cross bore facility damage, injury, or death. A permanent record of the bore path and depth should be compiled for future reference.

Identification for Locators

Pipeline companies shall ensure that locators carry identification indicating they have been trained and are qualified to locate specific types of facilities on the company's behalf.



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Due to complexities involved in buried facilities locating, we believe that pipeline companies have the right to ensure that locators are competent. Vendor pre-qualification nor ISN, nor CanadaHSE assures locator competency. Therefore, we agree that pipeline companies shall ensure that locators are CAPULC trained and qualified. To assist the pipeline and utility companies in determining competency, CAPULC and Enform have developed a locator log book detailing training and experience.

Proposed Regulatory Text⁹

Locates

(2) Within three working days after the day on which the locate request is received, the pipeline company shall, at no cost to the person requesting the locate,

(a) determine if the ground disturbance has the potential to damage the pipe or associated facilities;

(b) locate the pipe and associated facilities and place surface markings to identify the horizontal alignment of that pipe and those facilities to within plus or minus 0.6 m; and

Many factors may have an effect on the accuracy of locates including, but not limited to, depth of facility, non-grounded facilities, short facilities, common bonded facilities, relative conductivity, electromagnetic interference, composition and size of facilities, congested underground infrastructure, parallel buried facilities, abandoned facilities, and surface and overhead facilities. In cases where non-conductive facilities are located using tracer wire, the tracer wire and not the facility is actually located. It is important to note that these can often be buried away from each other well beyond 0.6 m. For these reasons, AHL suggests that any surface markings used to identify the horizontal alignment of a pipe and those facilities within 0.6 m cannot be reached with any degree of certainty in every given situation. Instead the surface markings identify the approximate location of pipes, utilities, facilities and the location of these must be determined by exposing it in the presence of the pipeline and/or utility company representative if ground disturbance is to take place.

With respect to (b) above, a congested underground infrastructure of multiple buried facilities of various material types and depths will challenge even the most experienced locator. To avoid causing damage to a pipes, utilities, and associated facilities, no ground disturbance can take place within 3.0 m of the locates unless the location of the buried facilities has been determined by exposing them in the presence of a pipeline and/or utility company representative.



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Markings

Accuracy of markings shall be within plus or minus 0.6 m measured horizontally from the centre-line of the actual pipe or facility.

As stated earlier, many factors may have an effect on the accuracy of locates. The surface markings identify the approximate location of a pipe and the location of that pipe must be determined by exposing it in the presence of the pipeline and/or utility company representative.

In closing, Alberta Hot Line believes that regulations of “One-Call” type services alone have not eliminated the problems of damage to underground facilities nor eliminated the risk of injury or loss of life. However, we acknowledge that it is an important step and recognize that additional efforts are needed to improve the currently accepted standard practices. Alberta Hot Line is optimistic that the NEB Proposed DPR is being seriously scrutinized by other interested parties and from other viewpoints, all in the interests of damage prevention and safety.

Please contact us directly should you require further information or wish to discuss any of the recommendations contained herein.

Best Regards,

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