

The Canada Energy Regulator (**CER**) responded to an incident that occurred when a person unintentionally struck a pipeline while conducting an agricultural activity. The incident resulted in a release of natural gas.

This incident serves as a reminder to all CER-regulated companies that they are required by the Canadian Energy Regulator Onshore Pipeline Regulations (**OPR**) to establish and implement effective processes to identify and evaluate depth of cover related hazards, including those related to agricultural activities. In accordance with the Canadian Energy Regulator Pipeline Damage Prevention Regulations – Obligations of Pipeline Companies (DPR–O), companies are required to monitor changes in land use and identify locations where operating vehicles or mobile equipment for the purposes of performing agricultural activities could impair the pipeline’s safety or security.

The incident also highlights the importance of communication with landowners and land-users to discuss activities and conditions that have the potential of reducing depth of cover over time.

This Safety Advisory is being issued to reinforce regulatory requirements relating to depth of cover, with a focus on agricultural areas, to prevent future pipeline strikes and rupture incidents on CER-regulated pipelines.

Background

On October 5, 2021, a person near McAuley, Manitoba was operating a tractor with a pull-dozer to remove weeds in a drainage feature when the blade contacted the Minell natural gas pipeline (**Pipeline**) operated by Manitoba Hydro. The 6” gas line ruptured and released approximately 84,000 cubic metres of natural gas to atmosphere. Fortunately, there were no resulting injuries.

Neither the landowner nor operator of the tractor had previously been advised by Manitoba Hydro or Minell Pipelines Ltd. that agricultural activities could impair the Pipeline’s safety or security at that location. The earth cover where the blade contacted the Pipeline was estimated to be less than 12 cm (4.7”) at the time of the incident. There is an ongoing investigation of this incident by the Transportation Safety Board.

As a result of the line strike and rupture, the CER issued Inspection Officer Order [MEL-001-2021](#), requiring Manitoba Hydro conduct a depth of cover survey of the approximately 70 km pipeline.

CER Requirements related to Depth of Cover in Agricultural Areas

Regulated pipeline companies are required by section 94 of the Canadian Energy Regulator Act (**CER Act**) to take all reasonable care to ensure the safety and security of persons, regulated facilities, abandoned facilities and the protection of property and the environment.

As part of this obligation, companies are required by section 6.5 of the OPR to establish and implement effective management system processes relating to hazards and risks. With respect to depth of cover, these processes include:

- identifying and analyzing hazards and potential hazards, such as those associated with agricultural activities;
- evaluating risks, including risks related to normal and abnormal operating conditions;
- developing and implementing controls to prevent, manage and mitigate hazards and for communicating those controls to anyone who is exposed to the risks; and
- the internal and external communication of information relating to safety matters.

Companies are also required to develop, implement and maintain Damage Prevention Programs under section 47.2 of the OPR. These programs must include public awareness measures that address work safety near pipelines, ground disturbances and the operation of vehicles or mobile equipment across pipelines.

In accordance with section 7 of the DPR–O, companies must identify specific locations where the operation of vehicles or mobile equipment across pipelines for agricultural purposes could impair the pipeline’s safety or security. Companies must also notify:

1. (a) Landowners of the identified locations; and
2. (b) Persons that are engaged in agricultural activities, rent or lease the land or work as service providers or employees at the identified locations.

Please note that landowners and land users are authorized to operate vehicles and mobile equipment across pipelines to perform low-risk agricultural activities, including shallow cultivation,^{Footnote 1} without prior notice or approval pursuant to section 13 of the Canadian Energy Regulator Pipeline Damage Prevention Regulations – Authorizations (DPR–A) if the following conditions are met:

- the loaded axle weight and tire pressure of the vehicle or equipment are within the manufacturer’s approved limits and operating guidelines; and
- there has been no notification from a pipeline company that performing an agricultural activity could impair the pipeline’s safety or security.

Given this authorization for agricultural activities, it is critical that companies establish and implement effective management system processes to address hazards relating to depth of cover at locations where agricultural activities take place or can reasonably be expected to take place. It is also imperative that companies proactively identify high risk crossing locations and notify the appropriate landowners and third parties.

Preventive Actions

Regulated companies must comply with all regulatory requirements contained within the CER Act, OPR, DPR–O and DPR–A relating to depth of cover.

As part of its mandate to promote safety and security of pipelines, the CER has developed the following list of actions for companies to incorporate, as appropriate, into their OPR processes and Damage Prevention Programs. In general, companies are expected to:

1. Periodically engage landowners and land users to obtain updates on the following:
 - the activities being conducted on or near pipelines;
 - the vehicles and/or equipment being used for crossings, if any; and
 - depth of cover issues and changes in the land that may have been observed on pipeline right-of-ways (**ROWS**);
2. Monitor depth of cover on ROWs and be knowledgeable of the activities and conditions that may reduce depth of cover over time, including natural disasters such as floods, fires and mudslides;
3. Conduct and document periodic pipeline patrols. Patrol observations should include conditions impacting depth of cover on ROWs. Reporting on an ad hoc basis or only by exception does not demonstrate monitoring conditions over time;
4. Consider taking depth measurements at the lowest point of cover (bottom) and on both shoulders of drainage features when conducting depth of cover surveys;

5. Where inadequate depth of cover is identified, immediately prevent physical damage to the pipeline and notify landowners and appropriate third parties;
6. Periodically evaluate effectiveness of depth of cover procedures, particularly with respect to confirming locations where agricultural activities take place; selecting methods for confirming depth of cover in such areas; identifying high-risk crossing locations; and notifying landowners and third parties of these locations; and
7. Ensure adequate staffing, resources, and support for damage prevention programs.

Further information

If you have any questions regarding this Safety Advisory, please visit the CER [Damage Prevention](#) webpage. For more information on the pipeline company obligations described in this Safety Advisory and requirements relating to agricultural activities, please contact the CER through our toll-free number at 1-800-899-1265 or via email at DPinfo@cer-rec.gc.ca.

References

- [Canadian Energy Regulator Act](#)
- [CER Pipeline Damage Prevention Regulations – Obligations of Pipeline Companies](#)
- [CER Pipeline Damage Prevention Regulations – Authorizations](#)
- [CER Onshore Pipeline Regulations](#)
- [Guidance Notes – CER Pipeline Damage Prevention Regulation](#)
- [CER Damage Prevention Pipeline Company stakeholder page](#)
- [CER Damage Prevention Agricultural Activities stakeholder page](#)
- CSA Z662-19 Oil and Gas Pipeline Systems

Footnotes

Footnote 1

Agricultural activity is broadly defined in section 13(2) of the DPR–A to mean “the production of crops and the raising of animals and includes tillage, plowing, disking, harrowing and pasturing, but does not include the construction of new buildings or impervious areas or the placement of footings, foundations, pilings or posts, including fence posts.” Please also note that cultivation of less than 45 cm is not considered a ground disturbance under section 2 of the CER Act.

[Safety Advisory SA 2022-01 – Depth of Cover in Agricultural Areas](#)
[\[PDF 246 KB\]](#)