

FREQUENTLY ASKED QUESTIONS ABOUT ENBRIDGE PIPELINE SAFETY



Pipeline accidents are not common, and Enbridge's goal is to have zero accidents that result in worker injuries or pipeline leaks. Since landowners are typically interested in pipeline leaks that could affect the public or environment, Enbridge has prepared some information that answers the questions we most often receive on this subject.



Who regulates pipeline safety?

Enbridge, federal pipeline safety regulators and communities along pipeline routes all share a common goal – preventing pipeline accidents. A comprehensive set of national standards, federal laws and regulations have developed over many decades that prescribe design, construction, operations and maintenance of liquid petroleum pipelines. The Pipeline Safety Act designated the U.S. Department of Transportation (DOT) Pipeline and Hazardous Materials Safety Administration as the agency responsible for regulating pipeline safety. The federal regulations included in 49 Code of Federal Regulations (CFR) Parts 190-199 set standards for practices ranging from record keeping to design standards to required inspections. Some states have also established additional standards for intrastate pipelines (such as local gas distribution pipelines); but, interstate pipeline safety standards are exclusively regulated by the DOT.

Are there quality control inspections by government agencies to ensure these regulations are followed?

Yes. The regulations require a host of pipeline system inspections at prescribed intervals. For example, the petroleum pipeline routes must be patrolled 26 times per year, valves must be checked for functionality,

corrosion prevention systems must be checked and maintained, and integrity tests must be performed in areas of high population or unusual environmental sensitivity (referred to as high-consequence areas). Enbridge conducts integrity inspection tests on our liquid pipeline systems using sophisticated internal inspection devices.

The DOT maintains regional offices with government pipeline safety inspectors. These inspectors frequently audit each pipeline operator's written procedures and inspection records. They also inspect pipeline construction and facilities. The DOT regional office for Enbridge's Lakehead System (including our expansions along this system) is located in Kansas City and also has staff based in the Chicago area. Minnesota officials have been designated as federal DOT inspection agents for liquids pipelines and are based in several locations throughout the state. Interested parties can contact DOT offices or learn more about this agency by going to their website at: <http://ops.dot.gov/>.

What is Enbridge's accident history?

Our accident statistics and those of pipelines in general are much better than those reported for other modes of transportation (e.g., truck, rail and water transport). When considering the hundreds of facilities, and thousands

of miles of liquid petroleum pipelines we have operated for decades in the United States, pipeline leaks are relatively rare. And although our record ranks among the best in the industry, it is not perfect. Enbridge has invested millions of dollars in advanced monitoring and inspection practices and continues to make progress toward achieving our ultimate goal of no major pipeline leaks. Pipeline accidents resulting in a spill of 5 gallons or more (prior to 2002 the reporting threshold was 50 barrels) must now be reported to the DOT. Additionally, various state and federal rules require telephone notifications so that emergency responders and environmental agencies can be mobilized as necessary to swiftly respond to incidents to assure the spill is cleaned up in compliance with all applicable regulations and standards. DOT posts a listing of all reported leaks on its website at: <http://ops.dot.gov/>.

Did Enbridge clean up these accidents?

Yes. While our goal is zero pipeline leaks, we still prepare to immediately respond to emergencies to ensure swift containment and cleanup of a pipeline spill. State environmental agencies oversee environmental cleanup at most sites, and the federal DOT inspects the causes of the pipeline failure.

Does Enbridge have an emergency plan?

Enbridge has prepared a comprehensive written emergency response plan that has been reviewed and approved by the DOT. The plan includes guidelines, reference information, requirements for periodic emergency training exercises, emergency contacts and lists of pre-identified emergency contractors. We contact local emergency responders with general information on an annual basis and periodically meet with them face-to-face to review our respective emergency planning for the area. Local emergency responders have access to maps of the Enbridge system (and other pipelines in their area) through a National Pipeline Mapping System maintained by the DOT.

Are there long-term effects from crude oil leaks?

Swift response, containment and cleanup are aimed at removing crude oil from the area and preventing long-term impacts. Oil very rarely reaches ground water. Longer term treatment and monitoring is required so that we – and the state environmental agencies – are assured that no drinking water is at risk. The cleanup and monitoring of petroleum leaks is well studied by federal and state environmental agencies. For example, many members of the public may be familiar with monitoring or cleanup at their local gas station in the last decade as aggressive efforts were made to detect and replace leaking underground tanks with modern equipment. The Enbridge Lakehead System is monitored and controlled using leak detection equipment that can trigger automatic pump station and pipeline shutdown and prompts response by trained Enbridge pipeline control operators. So, while no leak is acceptable, Enbridge has shown that quick response and cleanup avoids long-term landowner and environmental impacts.

Who is responsible or liable for damages?

Enbridge assumes responsibility for the costs of response and cleanup. If there is intentional or negligent damage caused by a third-party, Enbridge pursues reimbursement for its costs but, in the meantime, Enbridge bears all costs of containment, cleanup, repairs and remediation. If there are damages incurred by the landowner (such as temporary lodging, damage to crops or other facilities) Enbridge will pay for the damages caused directly by the incident or cleanup activities.

What happens when there is a leak?

Every accident must be evaluated and responded to depending on the situation, but here is what typically happens:

- 1** Significant leaks result in noticeable loss of pressure in the pipeline observed remotely 24 hours a day by our computerized Pipeline Control System. The system or the trained operator immediately shuts down the pipeline. The pipeline is then isolated by closing valves both up- and down-stream of a suspected leak. Small leaks are usually discovered during maintenance or inspection of our pipeline, including our regular aerial patrols of the route; or, they may be called in by landowners or the public who have been previously informed on detecting and reporting suspected pipeline problems.
- 2** While the pipeline is being shut down, a pre-planned notification and call-out system is implemented to mobilize our trained employees and crews as well as local emergency responders. If necessary, we fly or walk the pipeline route to pinpoint the exact leak location.
- 3** Upon arrival at the site, the area is contained with emergency equipment Enbridge maintains at key locations. More equipment and contractors are brought in to supplement Enbridge resources as necessary. Our plans, procedures and equipment are prepared to handle a spill on land, in wetlands, on water and in all weather conditions.
- 4** Enbridge works with local emergency responders and agencies to establish a “unified incident command” structure and response plan.
- 5** The oil is contained and vacuum trucks and other recovery equipment begin immediately removing the free oil from the site. If needed, tanker trucks then transport the oil to an Enbridge facility, where the oil is re-injected into the pipeline system.
- 6** Soil and vegetation that is oily is then moved to an approved disposal site. Occasionally other cleanup techniques, such as controlled burning under the oversight of emergency and environmental agencies, is done to facilitate cleanup.
- 7** Meanwhile, engineering and operations personnel access the pipe, inspect the source of the failure and begin an accident investigation. Usually, the pipe is repaired by placement of a pre-tested metal “sleeve” that is bolted and then welded on. Sometimes the failed section is cut out for metallurgical (lab) examination and a new section of pipe welded in. The accident investigation and repairs are in compliance with written repair procedures and subject to DOT inspection and oversight.
- 8** The pipeline is returned to service after repairs are completed.
- 9** Work continues to clean and restore the area affected, and Enbridge coordinates with the affected landowner(s) and state environmental agency(s) to complete final testing of soils and water as necessary and complete remediation of the site.