Inspecting our pipelines

At TransCanada, ensuring our pipelines and other facilities operate safely is the most important aspect of our business.

In-line inspection is an activity TransCanada regularly undertakes to inspect the condition of our pipelines. It is a key part of our pipeline integrity and maintenance program.

In-line inspection

TransCanada has over 70,000 kilometres (43,500 miles) of pipelines in North America. Part of ensuring our pipelines are in safe operating condition involves regularly inspecting the condition of our pipelines after they are installed underground. This is done through a process called in-line inspection.

TransCanada uses in-line inspection tools known as smart pigs. Originally designed to clean the inside of pipelines, these specialized tools contain an onboard computer system, and travel through the pipeline collecting data which is then analyzed to determine the condition of the pipe. These tools are equipped with hundreds of electronic sensors that inspect the quality of the pipeline inside and out to identify even the tiniest crack, flaw or sign of corrosion.

The pigs travel through the pipeline without interrupting the flow of product through the pipe. If an area of concern is identified, TransCanada investigates further to determine how to proceed with repairs or replacement to the section of pipe identified.
TransCanada uses different types of smart pigs to detect for various deficiencies in the pipe. An electro-magnetic acoustic transducer (EMAT) pig inspects for small cracks, and a magnetic flux leakage (MFL) pig inspects for internal corrosion. Both are extremely accurate and provide a highly detailed analysis of the interior of the pipeline.

When in-line inspection is taking place, temporary above-ground markers are installed every two to five kilometres (one to three miles). The markers track the progress of the pig as it travels through the pipe. After the pig passes through the section with the markers, the markers are removed and moved to the next section of pipe to be inspected. During TransCanada’s in-line inspection activities, please do not remove or disturb the above-ground markers.

For over 65 years, we have demonstrated world-class safety performance and have one of the best safety records across our industry. Inspecting our pipelines is part of our larger pipeline integrity and maintenance program we use to deliver energy safely and reliably every day.