

## "DilBit"

The following is an updated commentary from 2011.

The Enbridge Alberta Clipper pipeline and the TransCanada Keystone pipeline both transport diluted Bitumen, the thick tarry substance produced at the oil sands, through to the United States. This is the same product that TransCanada wants to ship in the XL pipeline and Enbridge wants to ship west in one of the two Northern Gateway pipelines. The diluents, to be off loaded from ships at Kitimat then piped east in the second pipeline is another story. As if landowners have not been imposed upon enough, now it seems landowners will get two pipelines from now on, rather than one for refined products, and will also need to be much more vigilant in monitoring their land than ever before.

In a recent report from the U.S., which was co-sponsored by the Pipeline Safety Trust, it appears that diluted bitumen, usually called "DilBit," is highly corrosive causing increased internal damage to pipelines. Dilbit is a blend of 70% bitumen and 30% diluents (thinners). It contains high levels of acidity, sulphur, and abrasives that can quickly wear the inside of a pipe. Additionally, because DilBit is so thick, it has to be pumped at a much higher pressure at a much higher temperature. The higher pressure and higher temperature has the effect of increasing the corrosive properties of the substance, and makes leak detection difficult.

The report states that conventional crude flows at less than 100 degrees Fahrenheit (37.7 C) while bitumen is pumped at temperatures of about 158 degrees Fahrenheit (70 C). The report says that an accepted industry rule of thumb is that the rate of corrosion doubles, with every 20 degrees Fahrenheit increase in temperature.

In the Executive Summary of the report, a number of recommendations are made for increasing pipeline safety when DilBit is being transported. They include:

- Evaluate the need for new pipeline safety regulations;
- The oil pipeline industry should take special precautions for pipelines that transport DilBit;
- Improve spill response planning for pipelines that move DilBit;
- No new DilBit pipeline construction or development should be considered until adequate safety regulations for DilBit pipelines are established and in place.

It is obvious that regulators in Canada—maintained by the National Energy Board—are delinquent in that they neglect to ensure that landowners are aware of these issues, before DilBit pipelines are approved and constructed. If landowners had known that these higher pressures, higher temperatures, and the high corrosiveness of DilBit more quickly diminish the effectiveness of the actual pipe, no doubt they would have called for thicker and higher tensile pipe to be used and made mandatory in such situations.

The document can be found at the [Pipeline Safety Trust](#) website.

[The US Pipeline Safety Trust is the only national (U.S.) non-profit that focuses exclusively on pipeline safety.]