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Kalamazoo River Pipeline Spill: A Primer

On the evening of July 25th of 2010 in Marshall, Michigan, Enbridge's Line 6b oil pipeline ruptured, causing the most expensive pipeline oil spill in recorded U.S. history[1]. Despite numerous warnings and alarms and contrary to their own rules, Enbridge restarted the pipeline twice, failing to discover the leak until the next day. By the time Enbridge finally did staunch the flow, they had spilled more than 3 million litres of diluted tar sands bitumen (known as dilbit) into the Kalamazoo River, sickening hundreds of nearby residents and fouling 55km of the river downstream[2].

Built in 1969, the 30 inch steel pipeline had a long history of corrosion problems. It had numerous documented cracks and dents which went unrepaired. The "defect" that eventually ruptured had been noted in three separate safety surveys, but Enbridge had failed to fix it[3].

For local residents, many of whom had no idea they lived near an oil pipeline, the spill has was devastating. A survey of four nearby communities showed that nearly 60 per cent of those interviewed suffered headaches, breathing difficulties, coughing, vomiting, anxiety or other health problems[4]. 150 families have been permanently relocated, their properties purchased by Enbridge. The long-term recovery of the river ecosystem remains uncertain.

Enbridge didn't acknowledge that the pipeline wasn't shipping normal crude oil until days after the spill. Dilbit is heavy crude with a peanut butter-like consistency, so thick that it needs to be diluted with a toxic 'condensate' just to make it flow in the pipeline. Condensate contains toxic chemicals such as benzene, a known carcinogen. When it spilled into the Kalamazoo river, the condensate evaporated and may have contributed to residents' health problems. At the same time, the leftover heavy bitumen didn't float on the water like regular oil, but sunk, coating the river bottom and greatly complicating clean-up efforts.

The cleanup of the Kalamazoo River was unlike any other oil spill cleanup the Environmental Protection Agency had undertaken. Instead of just skimming oil from the river's surface, they had to scrape, dredge and decontaminate roughly 55km of riverbed and shoreline. The clean-up has taken two years and has so far cost more than $800 million, and still it's not yet complete [5]

On July 2nd 2012, Enbridge was charged an unprecedented $3.7 million fine by U.S. regulators. The company was cited for 24 separate violations of hazardous liquid pipeline regulations, including failure to fix corrosion problems in the damaged pipe joint discovered as far back as 2004.

The National Transportation Safety Board released its findings on the suspected causes of the spill on July 10th, 2012. The Board slammed Enbridge for countless failures, including, ignoring the well documented cracks in the pipeline where the rupture eventually occurred, ignoring their own safety procedures for shutting down the pipeline, perpetuating a "culture of deviance" in their own control room, not informing emergency authorities of the existence of the pipeline, and lacking adequate emergency cleanup equipment in the area. The U.S. National Transportation Board said in presenting its report that the accident could have been avoided.

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[1] http://www.ntsb.gov/news/speeches/hersman/daph120710o.html
[2] http://www.epa.gov/enbridgespill/
[3] http://www.guardian.co.uk/environment/2012/jul/10/oil-kalamazoo-spill-keystone-cops?newsfeed=true
[4] http://www.ilr.cornell.edu/globallaborinstitute/research/upload/GLI_Impact-of-Tar-Sands-Pipeline-Spills.pdf
[5] http://insideclimatenews.org/news/20120621/enbridge-oil-spill-tar-sands-dilbit-michigan-kalamazoo-river-pipeline-safety-epa-keystone-xl