Marshall, Michigan Tar Sands Spill into Kalamazoo River - 2010

On July 26, 2010, a pipeline operated by Enbridge Inc. ruptured releasing 843,000 gallons of tar sands diluted bitumen into Talmadge Creek which flows into the Kalamazoo River near Marshall, Michigan. The tar sands spill eventually contaminated 35 miles of the Kalamazoo River.[1] The rupture of this pipeline (called line Line 6B) is the costliest inland oil spill cleanup in U.S. history. Significantly, this spill drew national attention to the fact tar sands oil sinks in water (unlike conventional oil) and that despite five years of cleanup efforts overseen by the U.S. Environmental Protection Agency, the Kalamazoo River is still contaminated with tars sands.[2]

1. **Most expensive inland oil spill in U.S. history:** To date, the cleanup cost has exceeded $1 billion. Cleanup requires river-bottom dredging to remove the submerged tar sands that have remained since 2010. Even as this expensive and time-consuming process has taken place, there is evidence that dredging and other river-bottom removal techniques may also be leading to a wider spread of the spilled tar sands oil.[3] Traditional oil spill clean tools used for conventional oil—like surface skimmers, vacuum trucks, an absorbent booms—are largely ineffective for tar sands because large quantities sink and become submerged oil.[4]

2. **Tar sands oil sinks:** The response and cleanup of the Kalamazoo river spill has confirmed longstanding concerns among scientists and environmental monitors that tar sands do not float like conventional oil if spilled in water.[5] On the Kalamazoo, this has proved to be the case as the lighter, highly volatile diluting agents quickly evaporated, leaving behind the highly viscous, heavy bitumen, which sunk to the river bottom and has not significantly biodegraded over time. Even the State Department has acknowledged that a spill of tar sands presents different challenges than a conventional oil spill but failed to consider this in its environmental review.[6]

3. **Leak detection technology was ineffective:** The pipeline company operating Line 6B was not the first one to notice the rupture. Despite modern spill detection technology (similar to that proposed for Keystone XL), the rupture was reported by a member of the public 17 hours after the pipeline had ruptured.[7]

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[1] EPA Response to Enbridge Spill in Michigan, updated October 16, 2014, http://www.epa.gov/enbridgespill/.
[2] EPA website, http://www.epa.gov/enbridgespill/
[3] Lisa Song, Inside Climate News, March 27, 2013, http://insideclimatenews.org/news/20130327/cleanup-2010-mich-dilbit-spill-aims-stop-spread-submerged-oil.
[4] Kari Lydersen, On Earth, July 25, 2011, http://archive.onearth.org/article/tar-sands-oil-plagues-a-michigan-community.
[5] Lisa Song, Inside Climate News, March 14, 2013, http://insideclimatenews.org/news/20130314/tar-sands-dilbit-sinks-enbridge-oil-spill-floats-its-lab-study.
[6] Final Supplemental Environmental Impact Statement for the Keystone XL Pipeline Project, Chapter 4, Potential Releases, http://keystonepipeline-xl.state.gov/documents/organization/221189.pdf.
[7] Pipeline Accident Report, Enbridge Incorporated Hazardous Liquid Pipeline Rupture and Release, National Transportation Safety Board, July 10, 2012, https://www.ntsb.gov/investigations/summary/PAR1201.html. Though the pipeline's leak detection system issued alarms consistent with a rupture, operators misinterpreted the alarms and continued to keep the pipeline open as it poured oil into the environment.