VII. TAR SANDS OIL SPILLS

Oil pipeline operators acknowledge that leaks and spills are an inherent risk when it comes to pipelines. Enbridge, for example, notes a wide range of potential leak causes including equipment failure, operator error, and catastrophic events like natural disasters, fires, and explosions.[1] The cleanup process for a tar sands oil spill is far more complex than the cleanup for a conventional oil spill, and the impact is often more damaging to environmental and public health for the following reasons:

- The natural gas condensate used to dilute tar sands oil increases the risk that spilled material will explode if it comes in contact with high heat, sparks, static electricity, or lightning.[2]
- Exposure to diluent toxins like benzene, n-hexane, and polycyclic aromatic hydrocarbons can affect the human central nervous system.[3]
- If spilled, diluted bitumen contaminates a body of water, and the diluents can quickly evaporate, leaving the heavy bitumen to sink to the bottom.[4]

Enbridge has experience with tar sands oil pipeline spills. On July 25, 2010, an Enbridge pipeline near Marshall, Michigan burst open, spewing more than 1 million gallons of diluted bitumen from a large gash in a black pipe.[5] The spill originated in an open field, but the oil eventually flowed into Talmadge Creek, where it traveled several miles before spreading down a 30-mile stretch of the Kalamazoo River and contaminating a lake.[6] Despite multiple alarms and warning signals, operators did not shut down the pipeline for more than 17 hours after the spill began.[7] The Michigan governor at the time called Enbridge's initial spill response "anemic."[8]

Enbridge's line spilled for more than 17 hours, devastating the Kalamazoo watershed and much of its wildlife.

"This was the first time the Environmental Protection Agency or anyone has done a submerged cleanup of this magnitude. I would never have expected ... that we would have spent two or three times longer working on the submerged oil than surface oil."

– Ralph Dollhopf, EPA Incident Commander for the Kalamazoo spill[9]

Shortly after the spill, people in the vicinity began reporting "strong, noxious odors and associated health symptoms."[10] According to a 2010 report by the Michigan Department of Community Health, in the weeks after the spill, health officials identified 145 patients who reported illness or symptoms associated with the leak.[11] A door-to-door survey of 550 people showed that 58 percent of those contacted suffered from adverse health effects, most commonly headaches, respiratory problems, and nausea.[12] In addition to health problems, the real estate market near the spill site has been transformed. After the spill, Enbridge instituted a home buyout program for residents living directly along Talmadge Creek and the Kalamazoo River. Enbridge has purchased at least 130 homes in two counties, leading some residents to express concerns over how the spill itself and the resulting buyback program will affect real estate prices.[13] As of spring 2012, the cleanup is continuing with nearly 400 acres identified as having a significant amount of submerged tar sands oil. Its cost is estimated at $725 million.[14]

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Wildlife such as this Great Blue Heron was soaked in oil after the Enbridge spill.

A History of Spills

Enbridge strives for zero spills, but when it comes to pipeline safety, the company has an oil-splattered record. According to Enbridge's own data, between 1999 and 2010, the company had 804 spills, releasing 6.8 million gallons of hydrocarbons.[a]

a Richard Girard and Tanya Roberts Davis, "Out on the Tar Sands Mainline," Polaris Institute, May 2010, p. 49. http://www.tarsandswatch.org/files/Updated%20Enbridge%20Profile.pdf (accessed April 12, 2012).

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Enbridge's tar sands pipeline spilled more than 1 million gallons of diluted bitumen, which is tar sands oil mixed with natural gas liquids and other volatile petroleum products.