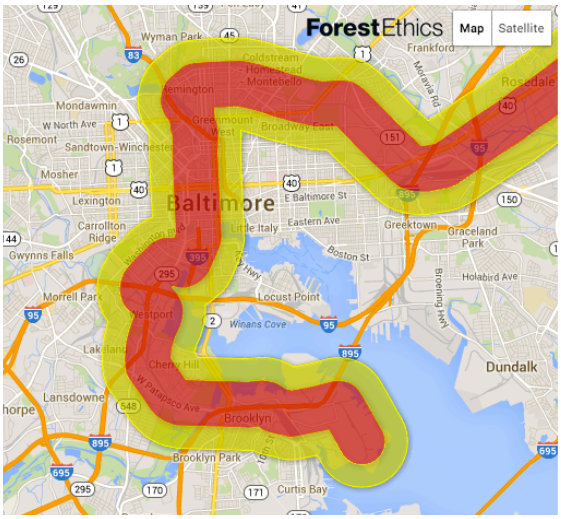
# Crude Oil-by-Rail in Baltimore

## Putting thousands of residents at risk

Crude oil production, transport, and export out of America's port cities is on the rise. Over 800,000 barrels per day (bpd) of crude oil were shipped on U.S. railroads in 2013, a 70-fold increase from 2005.[1] This is largely due to the advent of a controversial oil and gas drilling process commonly known as "fracking." The Bakken Shale region of North Dakota now produces nearly one million barrels of oil per day, making North Dakota the second largest oil producing state in the country.[2] To get this oil to refineries, the industry is transporting record volumes of volatile Bakken crude oil by rail – and the safety of Baltimore residents is at risk.

The oil industry is targeting Baltimore as an easy through-way to export crude oil to refineries along the East Coast, and potentially throughout the world. In the community of Curtis Bay, Targa Terminals is seeking approval to construct a crude oil export facility that would cause more air pollution and bring significant safety risks to South Baltimore and the city as a whole. A crude oil train or port explosion could threaten thousands of Baltimore residents, local property and the environment




**The city of Baltimore at risk.** This map, produced by Forest Ethics, shows the evacuation zone (red) for oil train derailments and the potential impact zone (yellow) in case of an oil train fire. <www.explosive-crude-by-rail.org>

## Bakken Oil: Highly Volatile and Explosive

The oil found in Bakken Shale has a relatively large concentration of flammable methane and toxic fracking chemicals compared to more conventional forms of oil. A recent report by the Wall Street Journal demonstrates that Bakken crude is much more volatile and explosive than other crude oil travelling around the country.[3]

A study by the National Transportation Safety Board found that crude oil trains have a **high incidence of failure**. These trains, labeled "DOT-111" have derailed dozens of times in the past year.[4]

**Explosive Trains**. This photo shows the aftermath of a DOT-111 train derailment and subsequent explosion that brought crude oil into Lac-Mégantic, Québec. The explosion killed 47.

## Crude-by-Rail: A Track Record of Danger

When accidents happen, the human and environmental impacts are costly and dangerous. The deadliest oil train explosion occurred in July 2013 in Lac-Mégantic, Québec. Twenty crude oil trains derailed and exploded, killing 47 people and flattening 30 buildings.[5]

Even with updated railcars, oil trains are dangerous. Last April, 10 newer crude oil cars derailed and exploded in Lynchburg, VA, spilling at least 50,000 gallons of Bakken crude oil and setting the James River on fire for two hours.[6]

## Targa Shipping Terminal: Air Pollution Impacts to South Baltimore

Targa Terminals, located in South Baltimore, recently applied for a construction permit to expand and retrofit its existing export pier to store, handle, process and ship more than nine million barrels of crude oil per year to East Coast refineries.[7]

South Baltimore, and especially the Curtis Bay neighborhood, already suffers disproportionately than the rest of the state from industrial air pollution. A recent study reported that Curtis Bay is the most polluted neighborhood in the state of Maryland, hosting 37% of all toxic stationary source air pollution in Maryland, and more than 87% of all toxic stationary source air pollution in Baltimore City.[8]

## Climate Change: Deepening Dependence on Harmful Fossil Fuels

The tremendous growth of Bakken shale oil production in North Dakota has also led to a rapid rise in the production of associated natural gas, which is often "flared off" on-site – so much so that it can be seen from space.[9]

Flaring at the Bakken shale emits roughly 6.7 million metric tons of carbon dioxide emissions per year[10], which is the greenhouse gas pollution equivalent of adding about 1.4 million cars onto the road each year.[11]

Fracking wells leak gases into groundwater and into the air. One of the gases, methane, is approximately 86-times as potent a greenhouse gas pollutant as carbon dioxide over a 20-year timeframe.[12] The combination of flaring and methane leakage during Bakken oil extraction contributes to cumulative heat-trapping emissions that are potentially much higher than other sources of oil.

## Community Organizing: Localities Fight for Safety

Across the country, communities are coming together to stop crude oil trains and export facilities in their towns, cities and neighborhoods. A recent city ordinance to ban exports of crude oil and tar sands oil through Portland, ME won overwhelming support.[14]

Mayors, first responders, neighborhood associations, and citizens are coming together all over the country to take a stand against crude oil export terminals and crude-by-rail. We can join the fight right here in Baltimore.

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[1] American Association of Railroads, Moving Crude Oil by Rail, July 2014, Pg. 1.
[2] **American Association of Railroads, Moving Crude Oil by Rail, July 2014, Pg. 2.**
[3] Cook, Lynn. "Bakken Crude Is Highly Volatile, Oil Study Shows." *Wall Street Journal*. 14 May 2014 <http://online.wsj.com/news/articles/SB10001424052702304908304579562471022167310>
[4] Stancil, Paul L. (2012-02-17). "DOT-111 Tank Car Design". National Transportation Safety Board, Office of Railroad, Pipeline and Hazardous Materials Safety. Retrieved 9 September 2014.
[5] Valdmanis, Richard, and Julie Gordon. "Five Die, 40 Missing after Canadian Freight Train Disaster." *Reuters*. 8 July 2013 <http://www.reuters.com/article/2013/07/08/us-canada-train-idUSBRE96712W20130708>
[6] Martz, Michael, and Rex Springston. "NTSB Investigating Derailment, Oil Spill in Lynchburg." *Richmond Times-Dispatch* 30 Apr. 2014.
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[8] Orvis, Robbie, Abel Russ and Leah Kelly. "Air Quality Profile of Curtis Bay, Brooklyn and Hawkins Point, Maryland." Environmental Integrity Project. March 2012
[9] Krulwich, Robert. "A Mysterious Patch Of Light Shows Up In The North Dakota Dark." National Public Radio, 16 Jan. 2013 <http://www.npr.org/blogs/krulwich/2013/01/16/169511949/a-mysterious-patch-of-light-shows-up-in-the-north-dakota-dark>
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[11] U.S. Environmental Protection Agency. "Greenhouse Gas Equivalencies Calculator." Clean Energy. 16 Apr. 2014. <http://www.epa.gov/cleanenergy/energy-resources/calculator.html#results
[12] IPCC, Climate Change 2013: Physical Science Basis, Anthropogenic and Natural Radiative Forcing, 714 (2013) <http://www.climatechange2013.org/images/report/WG1AR5_Chapter08_FINAL.pdfhttp://www.climatechange2013.org/images/report/WG1AR5_Chapter08_FINAL.pdf>
[14] Environment Maine. *Maine Port City's Historic Vote on Tar Sands Ordinance Has Significant National, Regional Implications*. News Release.

CHESAPEAKE CLIMATE ACTION NETWORK

For more information, contact: Jon Kenney, Maryland Community Organizer, at jon@chesapeakeclimate.org or 240.396.1985. Learn more at chesapeakeclimate.org