



WHY CALIFORNIA SHOULD SAY "NO" TO PETROLEUM COKE

Big oil companies and billionaire industrialists want you to believe that the environmental and health impact of petroleum coke (also known as “petcoke”) is negligible. Yet the appearance of black mounds of petroleum coke in U.S. cities like Detroit¹ and Chicago² is causing a national outcry. Some are calling it “one of the dirtiest, most carbon intensive fuels on the planet”.³

WHAT EXACTLY IS PETCOKE?

- Petcoke is a byproduct of an oil refining process called coking. Petcoke visually resembles coal. It is over 90% carbon, and each ton of petcoke emits 30-80% more CO₂ than coal.⁴

WHAT ARE THE HUMAN AND ENVIRONMENTAL HEALTH EFFECTS?

- Petcoke contains heavy metals such as arsenic, mercury, lead, and vanadium, as well as PAHs that are carcinogenic.⁵ Health experts say that petcoke is equivalent to coal for lung disease potential.⁶
- Inhaling petcoke can cause serious respiratory problems, particularly for individuals suffering from heart and lung disease and asthma.⁷
- Aquatic areas adjacent to petcoke piles show reduced species diversity and abundance, and fish in the area have an increased number of tumors.⁸
- Samples collected near the Levin-Richmond petcoke pile in Richmond, CA showed concentrations of heavy metals and other pollutants.⁹
- Chicago’s Attorney General and City Mayor filed a lawsuit last November against KCBX Terminals Company for air and water pollution violations caused by growing piles of petroleum coke and coal along the Calumet River in Chicago.¹⁰

WHERE IS THE PETCOKE COMING FROM?

- Petcoke is a byproduct of refining any kind of oil. More petcoke is produced from refining tar sands and heavy crude than from refining conventional oil.¹¹

- A large volume of petcoke currently originates from Canadian tarsands oil, some of which is refined in the U.S. There are over 79.8 million tons of petcoke stockpiled in Canada,¹² and such waste piles are accumulating in the U.S. as well.

IF IT IS SO DIRTY, WHO IN THE WORLD WOULD WANT IT?

- It is clear that Americans do not want petcoke in their cities. Following the city’s lawsuit against petcoke pollution, Chicago Mayor Rahm Emanuel instituted a city ordinance banning new petcoke export facilities and stopping the growth of existing facilities.¹³ In addition, Mayor Emanuel instituted regulations that require facilities storing coal, petcoke, and other forms of coke to fully enclose their storage piles and provide



PETCOKE PILES IN RICHMOND, COURTESY OF BAYKEEPER

monthly monitoring reports to ensure public health and safety.¹⁴

- As a waste byproduct, petcoke costs nothing to produce. However, it is very costly and inefficient to store. With a mind for profit over environment, wealthy industrialists are selling the dirty waste material on the global market.¹⁵
- The US Environmental Protection Agency (EPA) is no longer issuing new licenses banning burn petcoke in the U.S., but in some countries petcoke is considered a cheap alternative to coal.¹⁶
- Over 60% of petcoke produced in the U.S. was exported in 2011.¹⁷
- China is currently the primary export market of U.S. petcoke. As an alternative to low-grade coal, cheap petcoke is primarily used to generate electricity, at the cost of horrible air-quality conditions and a weakened ozone layer. Other export markets include Japan, India, Brazil, Turkey, and Mexico.¹⁸

WesPac Pittsburg Energy Project and the Golden Eagle Refinery.¹⁹

- Tarsands are transported by train or by ship from Washington in order to be refined in California.
- Despite strict emissions laws within the state, California exports 128,000 barrels of petcoke a day, primarily to China.²⁰
- We need to urge Governor Brown to stop exporting waste materials like petcoke that endanger local health and safety and our climate.

PROPOSALS TO BRING MORE DIRTY CRUDE AND PETROLEUM COKE TO THE BAY AREA BY TRAIN SHOULD BE REJECTED BECAUSE:

- These proposals put the health and safety of California residents at risk because they have to breathe in the dust from the petcoke mounds.
- Its high-carbon composition makes petcoke one of the dirtiest fossil fuels in the world, so exporting the waste to another country still has significant effects on the global climate.
- We should protect our communities and follow Chicago's lead²¹ by imposing heavy regulations on existing petcoke facilities and banning additional petcoke from poisoning our cities.

WHY IS CALIFORNIA INVOLVED IN THIS MESS?

- The low cost of Canadian tar sands are attractive to California refineries. Refineries in the Bay that currently produce petcoke include the Port of Benicia, the Martinez refinery, the Chevron Richmond refinery, and the Rodeo facility. In addition there are also several proposed refineries in the Bay including the

ENDNOTES

- 1 Ayres-Deets, Andrea. "Koch Brothers: Billionaires Place 3-Story Pile of Petroleum Coke in Detroit." PolicyMic: May 19, 2013. <http://www.policymic.com/articles/422449/koch-brothers-billionaires-place-3-story-pile-of-petroleum-coke-in-detroit/>.
- 2 Bradley, Ben. "Mayor Rahm Emanuel announced ordinance banning new petcoke, coke, coal facilities." ABC Local Chicago News: February 12, 2014. http://abclocal.go.com/wls/story?section=news/local/chicago_news&id=9428814.
- 3 Biello, David. "How Much Will Tar Sands Add to Global Warming?" Scientific American: January 23, 2013. <http://www.scientificamerican.com/article/tar-sands-and-keystone-xl-will-raise-impact-on-global-warming/>.
- 4 Stockman, Lorne. "Petroleum Coke: The Coal Hiding in the Tar Sands." Oil Change International: January 2013. http://priceofoil.org/content/uploads/2013/01/OIL_Petcoke_FINAL_SCREEN.pdf.
- 5 "Petroleum Coke Dust Emissions From Open Rail Cars in Northwest Washington and Southwest British Columbia", Tony Basabe, Swinomish Air Quality Program Office of Planning and Community Development, slide 10. http://www.sqa.gov/asp/tribes/NatForum06/3_2.pdf.
- 6 Paulman, Ken. "Documentary: 'Petcoke: Toxic waste in the Windy City.'" February 28, 2014. <http://www.midwestenergynews.com/2014/02/28/video-toxic-waste-in-the-windy-city/>.
- 7 Madigan, Lisa, Illinois Attorney General. "Madigan files suit against petroleum coke site for air pollution." November 4, 2013. http://www.illinoisattorneygeneral.gov/pressroom/2013_11/20131104.html.
- 8 Baumann, P.C. 2000. Health of Bullhead in an Urban Fishery after Remedial Dredging Final Report - January 31, 2000. Prepared for U.S. Environmental Protection Agency, Great Lakes National Program Office, Chicago IL, by U.S. Geological Survey Field Research Station, Ohio State University, Columbus, OH [online]. <http://www.sqa.gov/greatlakes/sediment/Bullhead/report.html>.
- 9 Expert report of William J. Rogers regarding San Francisco Baykeeper v. Levin Enterprises, Inc., in the U.S. District Court, Northern District of California, Oakland Division, Case number 3:12-cv-04388-EDL, September, 2013.
- 10 Madigan, Lisa, Illinois Attorney General. "Attorney General Madigan, Mayor Emanuel File Suit Against Second Pet Coke Site." November 22, 2013. http://illinoisattorneygeneral.gov/pressroom/2013_11/Beemanterberp_112213.pdf.
- 11 http://priceofoil.org/content/uploads/2013/01/OIL_Petcoke_FINAL_SCREEN.pdf.
- 12 Austen, Ian. "A Black Mound of Canadian Oil Waste Is Rising Over Detroit." The New York Times: May 17, 2013. http://www.nytimes.com/2013/05/18/business/energy-environment/mountain-of-petroleum-coke-from-oil-sands-rises-in-detroit.html?_r=1&.
- 13 Emanuel, Rahm, Office of the Mayor. "Mayor Emanuel Announces Next Steps in Crack Down on Harmful Pet Coke Dust." February 12, 2014. http://www.cityofchicago.org/city/en/depts/mayor/press_room/press_releases/2014/feb/mayor-emanuel-announces-next-steps-in-crack-down-on-harmful-pet.html.
- 14 E-news, Park Forest, Illinois. "Mayor Emanuel Announces Crack Down on Pet Coke Dust by Requiring Facilities to Fully Enclose Harmful Materials" March 13, 2014. <http://www.enevnews.com/latest-news/science-a-environmental/50980-mayor-emanuel-announces-crack-down-on-pet-coke-dust-by-requiring-facilities-to-fully-enclose-harmful-materials.html>.
- 15 U.S. Energy Information Administration. "Asian demand spurs U.S. net exports of petroleum coke to high levels in early 2012." May 25, 2012. <http://www.eia.gov/topstories/energyupdate.cfm?id=6432>.
- 16 http://www.nytimes.com/2013/05/18/business/energy-environment/mountain-of-petroleum-coke-from-oil-sands-rises-in-detroit.html?_r=0.
- 17 See footnote 16.
- 18 See footnote 6.
- 19 Based on data related to proposed oil refineries in Bay Area.
- 20 Ayers, Christin. "Dirty Substance From California's Oil Refineries Burned Overseas." CBS SF Bay Area: October 1, 2013. <http://sanfrancisco.cbslocal.com/2013/10/01/dirty-substance-from-californias-oil-refineries-burned-overseas/>.
- 21 Madigan, Lisa, Illinois Attorney General. "Madigan proposes statewide petcoke, coal dust regulations." February 19, 2014. http://illinoisattorneygeneral.gov/pressroom/2014_02/20140219.html.

Sierra Club San Francisco Bay Chapter
2530 San Pablo Ave
Berkeley, CA 94702
(510) 848-0800

sierraclub.org
facebook.com/SierraClub
twitter.com/SierraClub

