

2014

## Chicago's Pet Coke Problem: A Dusty Conundrum

Conor Desmond

Follow this and additional works at: <http://lawcommons.luc.edu/pilr>



Part of the [Environmental Law Commons](#)

---

### Recommended Citation

Conor Desmond, *Chicago's Pet Coke Problem: A Dusty Conundrum*, 19 Pub. Interest L. Rptr. 129 (2014).  
Available at: <http://lawcommons.luc.edu/pilr/vol19/iss2/9>

This Article is brought to you for free and open access by LAW eCommons. It has been accepted for inclusion in Public Interest Law Reporter by an authorized administrator of LAW eCommons. For more information, please contact [law-library@luc.edu](mailto:law-library@luc.edu).

# CHICAGO'S PET COKE PROBLEM: A DUSTY CONUNDRUM

*by* CONOR DESMOND

A mere twenty miles southwest from Chicago's Gold Coast, lies one of the biggest oil refineries in the United States, capable of processing over 400,000 barrels of oil daily.<sup>1</sup> This process of refining oil, or "cracking," produces the fuel that we need to power our cars, heat our homes, and run our power plants.<sup>2</sup> When the oil is "cracked", a dusty coal-like product is generated along with the various fuels. This product is called Petroleum Coke.<sup>3</sup> The refining process has generated Petroleum Coke, or "Pet Coke," for almost 100 years, and refiners have found marketable uses for the solid, grainy, coal-like material.<sup>4</sup> It can be burned as a fuel, assist in making dry cells for batteries, and make products necessary to smelt aluminum, steel, and titanium.<sup>5</sup> However, this by-product has a far nastier side to it.

Loyola Public Interest Law Reporter

Today, piles of Pet Coke are sitting on the Southside of Chicago and have grown so large that natural forces like wind and weather are working to spread dust to localities, causing both health and environmental problems.<sup>6</sup> The City of Chicago and the State of Illinois are facing this growing issue head on, as there is evidence that Pet Coke is exacerbating asthma conditions for those with the disorder, as well as polluting the Calumet River.<sup>7</sup>

#### WHAT IS PET COKE AND WHY IS IT A PROBLEM NOW?

Normally, Pet Coke is stockpiled until enough has accumulated to make it feasible to sell on the market.<sup>8</sup> For years, the piles were relatively small, as refineries were not producing large amounts of the substance.<sup>9</sup> Companies found numerous buyers and the Pet Coke did not sit on the ground, uncovered, for an extended amount of time. With the changing U.S. economy, demand for Pet Coke has decreased recently and fluctuating market forces along with increased environmental regulations have resulted in Pet Coke accumulating in uncovered piles on Chicago's Southside.<sup>10</sup> However, the real problems with the growing piles did not become as apparent until about 20 years ago.

Since 2000, the U.S. has greatly increased its production of domestic, high quality, sweet (light) crude oil.<sup>11</sup> In fact, current production is at its peak for the last two decades.<sup>12</sup> A significant source of this production comes from processing the oil sands found in Canada through refineries located in the mid-western states, such as the Whiting, Indiana Plant.<sup>13</sup> This increase in production combined with a large drop in demand has led to a massive increase in the production of Pet Coke, and unfortunately, its accumulation as well.<sup>14</sup> Because the companies are producing so much more Pet Coke than normal, they are unable to find enough buyers or even move the product into the market at a pace that would prevent its collection.<sup>15</sup>

In actuality, pet coke is in high demand.<sup>16</sup> Many companies want the product for use in various industrial projects but as these companies are often located outside the U.S., the shipment of Pet Coke is often slow.<sup>17</sup> Another issue with Pet Coke is that it is a very dirty substance. Burning Pet Coke as a fuel source is very effective on a weight basis relative to coal.<sup>18</sup> Some studies suggest that it can emit 30-80 percent more energy per unit than coal!<sup>19</sup> However, the process is incredibly unclean. By burning the material, an energy consumer would release up to 10 percent more carbon dioxide than if they were using coal.<sup>20</sup>

Given environmental regulations in the U.S., that is not an economically feasible option.

#### EFFECTS OF THE PILES OF PET COKE: DUST DEVILS ABOUND

The rising concern is that the piles of Pet Coke are being scattered throughout the Southside due to wind and changing weather conditions.<sup>21</sup> The dust is causing numerous problems by damaging homes, destroying personal property, and polluting the air.<sup>22</sup> The residents of the nearby Pet Coke factories claim that on windy days, they cannot open their windows for fear of having Pet Coke dust blow all around the interior of their homes.

On the environmental front, the weathering of the piles has caused Pet Coke dust to blow into the Calumet River, a significant waterway on the Southside of Chicago.<sup>23</sup> The river itself serves as a conduit between Lake Michigan and the Mississippi River. It is also rich in animal and plant life.<sup>24</sup> The effect of the Pet Coke dust on plants and animals is not specifically known, but Pet Coke can carry heavy metals and other toxic materials, both of which have severe health effects.<sup>25</sup> Beyond animals and plants, drinking water contaminated with Pet Coke dust could have cancerous or other significant health concerns for humans.<sup>26</sup> Because it is a drinking water source, contamination of the Calumet River is a significant concern. The far more concerning effect of the blowing dust is the effect that it has on individuals who breathe it.<sup>27</sup> Children with asthma or other breathing disorders could have their conditions exacerbated by the presence of this dust.<sup>28</sup> Moreover, the particles would act as an irritant to eyes and could cause other health problems.<sup>29</sup>

#### ENCLOSE, CONTAIN, CLEAN

The City of Chicago and State of Illinois have reacted quickly to this issue. Bill McCaffery, a spokesman for the Mayor of Chicago, declared that a proposed ordinance to limit Pet Coke dust in Chicago addresses the problem. "Under this ordinance, Chicago will not become a dumping ground for petcoke and we are preventing this material from negatively impacting our communities."<sup>30</sup> This ordinance bans the creation of new Pet Coke storage areas but allows existing operations to continue. Along with these rules, Attorney General Lisa Madigan and the EPA have brought significant lawsuits against the pile own-

Loyola Public Interest Law Reporter

ers. In response, one of the pile owners KCBX, a division of Koch industries, threatened litigation and the fight continues to this day.

CONCLUSION: WHAT IS THE BEST APPROACH?

The existence of Pet Coke is a reality. Our economy relies on developing affordable forms of energy and Pet Coke is an unfortunate byproduct of processing oil to make the fuel that powers our lives and economy. However, reasonable and affordable regulations can be put in place to manage the health and environmental risks of the dust. To develop a regulatory system to enclose, contain, and keep our streets clean of Pet Coke dust is a reasonable and just objective for society to pursue.

NOTES

- 1 Whiting Facility Fact Sheet, BP, Nov. 2012, available at [http://www.bp.com/content/dam/bp/pdf/Whiting\\_Facility\\_Fact\\_Sheet\\_November\\_2012.pdf](http://www.bp.com/content/dam/bp/pdf/Whiting_Facility_Fact_Sheet_November_2012.pdf).
- 2 James H. Gary and Glenn E. Handwerk, *Petroleum Refining: Technology and Economics* (4th ed.) CRC Press. (2001).
- 3 *Id.*
- 4 Petroleum Coke Overview, American Fuel & Petrochemical Manufacturers, available at <https://www.afpm.org/policy-position-petroleum-coke/> (accessed on Mar. 14, 2014).
- 5 How the Petcoke Market Functions – Petroleum Coke Used as a Combustible in Cement Kilns, The European Cement Association, available at <http://www.cembureau.eu/newsroom/article/how-petcoke-market-functions-petroleum-coke-used-combustible-cement-kilns>; Petroleum Coke Glossary, Pet Coke Consulting LLC, available at <http://www.petcokeconsulting.com/glossary/>.
- 6 Pet coke only the latest pollution threat on the Southeast side, WBEZ91.5, Mar. 5, 2014, available at <http://www.wbez.org/news/pet-coke-only-latest-pollution-threat-southeast-side-109811>.
- 7 Henry Henderson, *Petcoke Blight Tells Bigger Story About Chicago's Waterways*, Huffington Post, Jan. 10, 2014, available at [http://www.huffingtonpost.com/henry-henderson/petcoke-blight-tells-bigg\\_b\\_4572741.html](http://www.huffingtonpost.com/henry-henderson/petcoke-blight-tells-bigg_b_4572741.html).
- 8 Michael Hawthorne, *Chicago Moves to Enclose Piles of Petroleum Coke*, Chicago Tribune, Dec. 19, 2013, available at [http://articles.chicagotribune.com/2013-12-19/news/ct-petcoke-regulations-met-20131219\\_1\\_kcbx-uncovered-piles-petroleum-coke](http://articles.chicagotribune.com/2013-12-19/news/ct-petcoke-regulations-met-20131219_1_kcbx-uncovered-piles-petroleum-coke).
- 9 *Id.*
- 10 *Id.*
- 11 David Bird, *EIA: U.S. February Crude Output Tops Net Crude Imports for First Time Since 1996*, Wall Street Journal, Apr. 29, 2013, available at <http://online.wsj.com/article/BT-CO-20130429-708699.html>.
- 12 *Id.*

- 13 Canadian Oil Sands, <http://www.cdnoilsands.com>, accessed on Mar. 21, 2014.
- 14 *Hawthorne*, supra note 8.
- 15 *Id.*
- 16 Asian demand spurs U.S. Net Exports of Petroleum Coke to Higher Levels in Early 2012, U.S. Energy Information Administration, May 25, 2012, available at <http://www.eia.gov/todayinenergy/detail.cfm?id=6430>.
- 17 *Id.*
- 18 *Id.*
- 19 *Id.*
- 20 Petroleum Coke: The Coal Hiding in the Tar Sands, Oil Change International, Jan. 2013, available at <http://priceofoil.org/content/uploads/2013/01/OIL.Petcoke.FINALSCREEN.pdf>.
- 21 What is Petroleum Coke, City of Chicago Department of Public Health, available at [http://www.cityofchicago.org/city/en/depts/cdph/supp\\_info/environmental\\_permitsandregulation/what-is-petroleum-coke-.html](http://www.cityofchicago.org/city/en/depts/cdph/supp_info/environmental_permitsandregulation/what-is-petroleum-coke-.html).
- 22 Illinois AG and Neighbors Sue over Humongous Heaps of 'Petcoke', NBC News, Nov. 8, 2013, available at <http://www.nbcnews.com/news/investigations/illinois-ag-neighbors-sue-over-humongous-heaps-petcoke-v21370499>.
- 23 *Id.*
- 24 *Id.*
- 25 Petroleum Coke Dust Emissions From Open Rail Cars in Northwest Washington And Southwest British Columbia, Environmental Protection Agency Office of Planning and Community Development, Mar. 2014, available at [http://www.epa.gov/osp/tribes/NatForum06/3\\_2.pdf](http://www.epa.gov/osp/tribes/NatForum06/3_2.pdf).
- 26 *Id.*
- 27 What is Petroleum Coke?, City of Chicago Department of Public Health, available at [http://www.cityofchicago.org/city/en/depts/cdph/supp\\_info/environmental\\_permitsandregulation/what-is-petroleum-coke-.html](http://www.cityofchicago.org/city/en/depts/cdph/supp_info/environmental_permitsandregulation/what-is-petroleum-coke-.html).
- 28 *Id.*
- 29 *Id.*
- 30 Bill McCaffery Written Statement, May 1, 2014.