

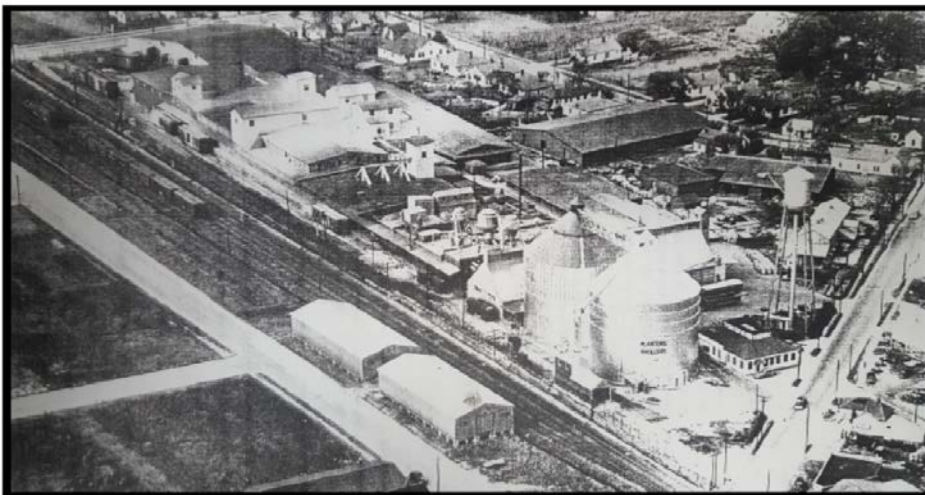
Contaminants in the Neighborhood: What's a PAH?

What are PAHs? PAH stands for Polycyclic Aromatic Hydrocarbons, and they get their name from the fact that they are made of 6-sided carbon-hydrogen rings, from their chemical properties, and that they're often found together in groups.



How are PAHs made? PAHs are created from natural sources such as forest fires and volcanoes, and from the incomplete burning of coal, gas, oil, wood, food and other substances.

The PAHs in the soil at Planter's Oil Mill were likely a result of burning fuels in the fire and leaks from six underground storage tanks (USTs), as well as vehicle maintenance that took place on the site. Five of the six USTs on the site held petroleum compounds and one held a solvent called hexane. Two large (10,000 gallon) USTs were removed in 2011, while the small (1,000 gallon) tanks remain.



References:

1. U.S. EPA. Guidance for Reporting Toxic Chemicals: Polycyclic Aromatic Compounds Category, EPA 260-B-01-03, Washington, DC, August 2001.
2. Agency for Toxic Substances and Disease Registry (ATSDR). 1995. Toxicological profile for polycyclic aromatic hydrocarbons (PAHs). Atlanta, GA: U.S. Department of Health and Human Services, Public Health Service.



How can I be exposed? PAHs exist naturally, so exposure can happen in many ways: the average person can be exposed through fumes from vehicle exhaust or asphalt, tobacco smoke, or grilled or smoked food.

Image credit: National Pesticide Information Center

How can exposure affect my health?

There is no information from studies of PAHs in people to identify a safe level of exposure. However, studies in mice show that higher exposure over long periods of time causes liver and blood problems.



<http://www.drawinghowtodraw.com/stepbystepdrawinglessons/wp-content/uploads/2013/05/a-mouse-finished.png>

What happens with PAHs in my body? PAHs stuck to soil, like those at the Planter's Oil Mill site, have very low bioavailability. This means they are not easily taken up by people and other living things and mostly pass through the body unchanged. They have low volatility, meaning they do not easily evaporate or change state.



How do common PAH exposures work?



PAHs stick to particles in the air or in the soil



People inhale dust particles with attached PAHs



Some PAHs leave the body unchanged, some may stay in the fat

What is the status of the site? The Planter's Oil Mill site was partially remediated (4.5/7 acres) in 2012. Depending on development options and funding, the remaining space may also be remediated. Until then, it is recommended that the public avoids using the site, so the non-remediated soil is not disturbed.

Agency for Toxic Substances and Disease Registry (ATSDR). 1995. Toxicological profile for polycyclic aromatic hydrocarbons (PAHs). Atlanta, GA: U.S. Department of Health and Human Services, Public Health Service.

United States Environmental Protection Agency, Office of Environmental Information, Emergency Planning and Community Right-to-Know Act – Section 313: Guidance for Reporting Toxic Chemicals: Polycyclic Aromatic Compounds Category, EPA 260-B-01-03, Washington, DC, August 2001.