

Please read this

ASPHALT PLANT POLLUTION

All asphalt plants emit toxic air pollution. A typical plant producing 300 thousand tons of asphalt per year and granted a permit to operate by the NC Division of Air Quality would be allowed to emit the following air pollution annually: (all numbers in pounds per year)

Chronic toxicants

carbon disulfide	585
hexane	3,450
methyl ethyl ketone	11,700
toluene	14,700
xylene	8,550

Acute system toxicants

styrene	3,240
CFC-11	168,000

Carcinogens

benzene	118
methylene chloride	1,600
perchloroethylene	13,000

Chronic toxicants include neurotoxins and developmental toxins, substances which have a negative impact on the human nervous system and/or human growth and development.

Acute system toxicants are pollutants which cause the death of laboratory animals within 14 days of exposure or is toxic based on human experience.

Carcinogens are substances which are known to cause cancer or which are suspected to cause cancer in humans.

Definitions from the US Code of Federal Regulations (16CFR1500) for the Federal Hazardous Substances Control Act.

Some pollution sources at an asphalt plant are exempted from its state permit: 1) an Asphalt Tank Heater burning No. 2 fuel oil, 2) a liquid asphalt storage tank, and 3) fuel oil storage tanks. These units are known sources of toxic air pollution but are exempted by state statute; that is, they are not included in the air pollution permit.

Road asphalt contains gravel and sand mixed with asphalt cement obtained from crude oil. Asphalt cement is a mixture of hydrocarbons including naphtha which contribute to the vaporization of organic compounds at operating temperatures of 300-350 degrees F. Hydrocarbons released into the air by the hot mix asphalt as it is loaded into trucks and hauled from the plant site include volatile organic compounds, polycyclic aromatic hydrocarbons, and condensed particulates. Also, arsenic, benzene, formaldehyde, and cadmium are toxic air pollutants emitted from asphalt plants. Condensation of particulates occurs at ambient temperatures of 70 degrees F. These very fine particles carry polycyclic aromatic hydrocarbons which are a danger to public health. Animal studies show that PAHs affect reproduction, cause birth defects, and cause harmful effects on skin, body fluids, and the immune system. The US Department of Health and Human Services has determined that PAHs may be carcinogenic to humans. [Source: 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]

The effect of fugitive emissions on local pollution levels may exceed the effects of pollutants emitted from the smokestack.

In addition to smokestack emissions asphalt plants emit large quantities of harmful fugitive emissions at ground level. A small asphalt plant producing 100 thousand tons of asphalt a year may generate 50 tons of toxic fugitive emissions. The bulk of fugitive emissions are condensed particulates. Volatile organic compounds (VOC's) emissions are about 29% of the this total. To this must be added the total emitted from the smokestack itself. Stagnant air conditions and inversions increase the level of exposure to the local community.

The Blue Ridge Environmental Defense League has released two studies showing the adverse impacts on property values and public health for residents living near operating asphalt plants. A property value study documented losses of up to 56% as a direct result of an asphalt plant. In another study nearly half of the residents report negative impacts on their health after only two years of asphalt plant operations. The door-to-door survey shows that 45% of the residents living within a half mile of a two year old asphalt plant report a deterioration of their health which began after the plant opened. The most frequent problems include high blood pressure (18% of people surveyed), sinus problems (18%), headaches (14%), and shortness of breath (9%).

Action recommendations

Federal regulation of asphalt plant emissions is inadequate to protect public health. EPA's emission estimates are inadequate to protect worker health and public health. Therefore, citizens must join together to protect their communities. Any county or town faced with an asphalt plant proposal should push for setbacks from residences and community buildings, site specific health-based air pollution modeling and monitoring, enclosures for load-out zones, and preferably a zero emissions asphalt plant, with total containment of air pollutants.