

## Coke Oven Emission Exposure Information

**Coke Oven Emissions:** contain literally several thousand compounds, several of which are known carcinogens (chemicals causing cancer). The following information is provided to see how coke oven emissions affect the human body and your organs.

**Coke Oven Emissions are:**

### **CARCINOGENS**

Evidence of coke oven workers has shown an increase in **cancer of the lung, trachea, bronchus, kidney, urinary tract, prostate**, and other sites (Sittig, 1991; U.S. EPA, 1994a). Cancer caused by coke oven emissions can develop many years after exposure. A latency period of as much as thirty years has been observed in many cancers.

### **Gastrointestinal / Liver Toxicants**

Exposure to coke oven emissions can cause adverse effects on the gastrointestinal tract, liver, or gall bladder (gastrointestinal and liver toxicity), which can cause anorexia, nausea, vomiting, abdominal cramps, and diarrhea.

### **Kidney Toxicants**

Exposure to coke oven emissions can cause adverse effects on the kidney, ureter, or bladder (Kidney Toxicity). The kidney is unusually susceptible because of its role in filtering harmful substances from the blood. Toxic injury to the kidney, including cancer, is known to occur as a result of exposures to coke oven emissions.

### **Respiratory Toxicants**

Exposure to coke oven emissions can cause adverse effects on the respiratory system, which consists of the nasal passages, pharynx, trachea, bronchi, and lungs.

### **Skin or Sense Organ Toxicants**

Exposure to coke oven emissions can cause adverse effects on skin or the sense organs.

**In addition to the health hazards associated with Coke Oven Emissions, here are some other chemicals emitted by the coking process that are detrimental to your health:**

### **Benzene**

The Environmental Protection Agency (EPA) has classified benzene as a Group A, known human carcinogen. Increased incidence of **leukemia** (cancer of the tissues that form white blood cells) has been observed in humans occupationally exposed to benzene. Benzene specifically affects bone marrow (the tissues that produce blood cells) and **disorders of the blood. Aplastic anemia, excessive bleeding, and damage to the immune system may develop. Reproductive effects have been reported in women** exposed to high levels of benzene, and **adverse effects on the developing fetus** have been observed in animal tests. Benzene has also been linked to **fibromyalgia**.

### **Ammonia:**

Ammonia is **highly irritating to the eyes, skin and respiratory tract**. Swelling and narrowing of the throat and bronchi, coughing, and an accumulation of fluid in the lungs can occur. Ammonia causes rapid onset of a burning sensation in the eyes, nose, and throat, and can be accompanied by lacrimation, rhinorrhea, and coughing. Upper airway swelling and pulmonary edema may lead to airway obstruction.

### **Heavy Metals** (arsenic and others such as: beryllium, cadmium, chromium, lead, nickel, mercury):

Specifically, inorganic arsenic exposure in humans by the inhalation route has been shown to be strongly associated with **lung cancer**. EPA has classified inorganic arsenic as a group A, known human carcinogen. Chronic (long-term) inhalation exposure to inorganic arsenic in humans is associated with irritation of the skin and mucous membranes. Other heavy metals, as specified above, can cause neurological injury.

**Certain neighborhoods in the Tonawanda, NY area are at greater risk.** To find out how you are affected or if you have any other questions, please call 873-5608.