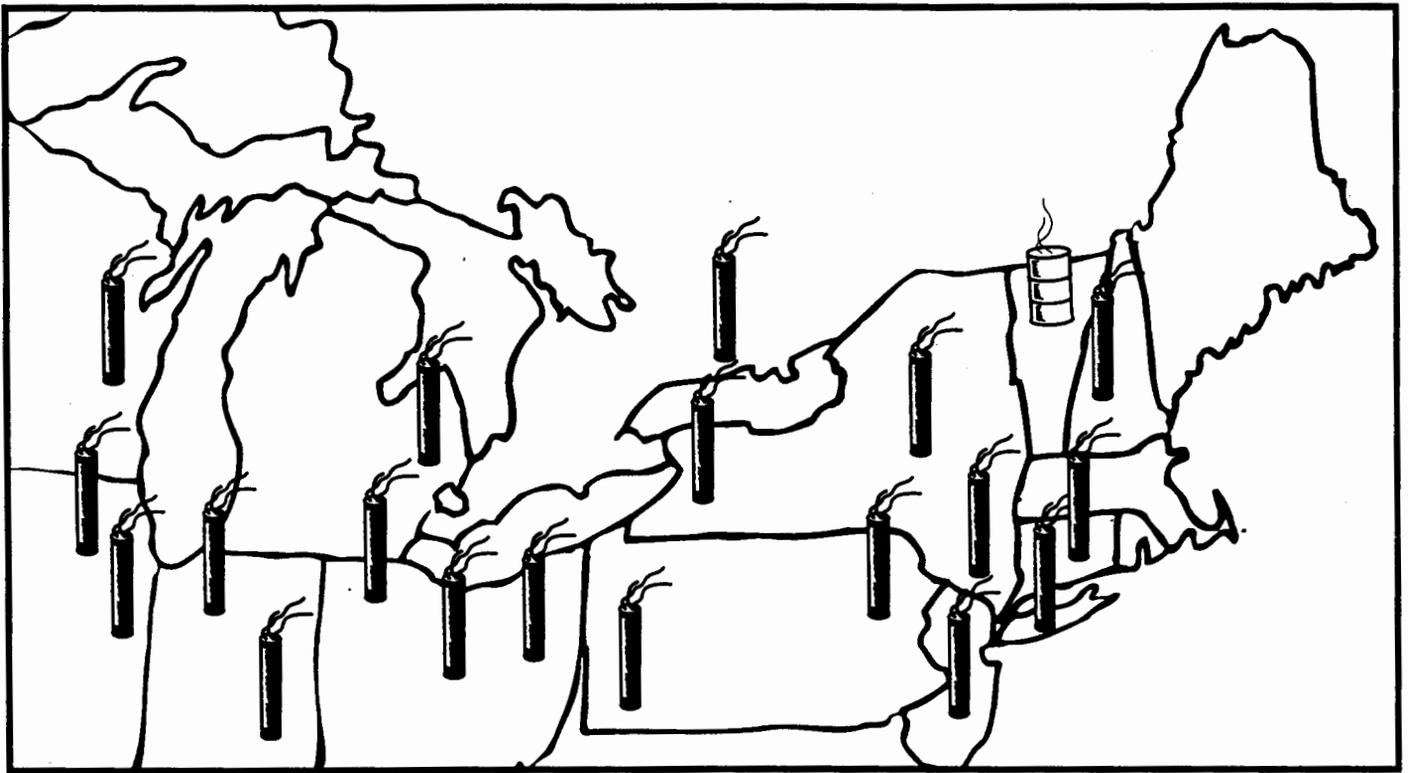


# WE CAN'T BLAME AIR POLLUTION ON OTHERS ANY MORE



**Lets take responsibility for our own air quality.**

**A**ccording to E.P.A. studies (October 1993) urban air in America is cleaner than it was ten years ago.

**M**eanwhile, the burning of household trash in rural Vermont has increased to 14,000 tons a year.

**O**nly untreated wood and yard debris may be burned legally in Vermont. Some municipalities ban all burning.

**Be a good neighbor**



**Protect our health**



Produced by concerned citizens with endorsements from Blue Cross Blue Shield; Earth Citizens News; Vermont Chapter of the American Lung Association; Vermont Chapter of the Sierra Club; Vermont Rural Fire Protection Task Force; Vermont State Labor Council, AFL-CIO.

# HEALTH EFFECTS OF BURNING SPECIFIC MATERIALS

**Polyvinylchlorides:** PVC plastic is used in making bottles and jugs, used for a variety of food, household, pharmaceutical and cosmetic products, children's toys, blister and shrink paks, vinyl tubing, flooring and siding materials, drainpipe vinyl fabrics and many other products. Similar plastics are used for clear food wrap. When burned, PVC and related plastics produce carbon monoxide, dioxins and chlorinated furans. Dioxins and furans are two of the most toxic products known because the dose that can cause disease is lower than that for any other man-made chemical. They are linked to cancer and birth defects. (U.S. Office of Technology Assessment, Facing America's Trash. 1989, p. 229-30) Combustion also produces hydrogen chloride gas. When inhaled, this gas forms hydrochloric acid in the lungs and causes fluid buildup and possible ulceration of the respiratory tract. (The Merck Index, 11th edition, 1989)

**Polystyrene and Styrenes:** These products include foam cups, bait containers, meat trays, egg cartons, packaging "peanuts," yogurt and deli containers, clear plastic cookie trays, plastic forks and spoons, photographic film, etc. Styrene is found in a number of other products including adhesives, synthetic rubber and inks and carpet backing. Styrene gas can be readily absorbed through the skin, respiratory system, and gastrointestinal tract. High doses can cause narcosis and death. The vapor can damage the eyes and mucous membranes. It may be a carcinogen when inhaled, but not when ingested. It is listed as a hazardous air pollutant in the 1990 Clean Air Act. (Harte, Holdren, Schneider & Shirley, Toxics A to Z, 1991 pp.403 -04)

**Polyurethanes:** Products include drapes, furniture foams, wood finishes, sealants, adhesives and many other products. When burned - especially when damp - these materials will produce clouds of yellow smoke containing varying amounts of hydrogen cyanide and phosgene. Exposure to 150 parts per million (ppm) of hydrogen cyanide gas for 30-60 minutes can cause death. Fifty ppm of phosgene is lethal to rats. (The Merck Index, 11th edition, 1989)

**Bleached Paper Products:** These include white packaging materials and paperboards (such as frozen food, bakery and pizza boxes —any light weight cardboard that is white on the inside or shows white when torn). Burning these materials releases halogenated hydrocarbons (carbon compounds with chlorine and fluorine). These compounds have been associated with blood abnormalities, low white cells and leukemia. (Waldrott, G., Health Effects of Environmental Pollutants. 1973, p. 235) Any organic wastes which contain chlorine can release dioxins and furans when burned.

**Papers and cardboards with slick color reproductions:** Synthetic inks contain heavy metals. Even though the printing industry has made great strides toward use of natural soy based ink, it is not a good idea to burn items with the slick coloring. The bright colors in the flame indicate the chemical content. Even plain cardboard burning emits a distinctive odor from the sulfites. When heavy metals are released into the air, they attach to soot particles which can be breathed into your lungs. The absorption of heavy metals by humans has been linked to birth defects, interference with red blood cell production, liver and kidney deterioration, and loss of coordination. Absorbing them through the lungs has a more pronounced effect on the body than when absorbed through the stomach. (Brunner, C.R., Hazardous Air Emissions. 1985, p.45) Heavy metals are particularly harmful to children because their immune systems are not fully developed.

**Pressure Treated Wood:** Burning treated wood produces arsenic and chromium compounds. These have the same detrimental effects as the burning of heavy metals.

**Be a good neighbor**



**Protect our health**