



Clean Air: An Act That Works

Prepared by the Office of Representative Henry A. Waxman

Issue 2

May 16, 1995

REDUCING LEAD EMISSIONS

One of the greatest achievements in modern environmental law is the reduction in lead emissions achieved under the Clean Air Act. This reduction has saved tens of millions of children from childhood lead poisoning -- a condition that can cause brain damage.

The Health Risk. Lead exposure -- from air pollution, drinking water, lead paint, and other sources -- is one of the most serious environmental threats facing children. Exposure to lead can adversely affect virtually every system in a child's body. The most significant impact is the effect on the development of the central nervous system. Low levels of lead exposure in childhood can reduce intelligence; impair perception, hearing, and speech; and cause behavior disorders. The damage to the brain appears to be irreversible.

25 Years Ago. In 1970, the year the Clean Air Act was first enacted, cars and trucks using leaded gasoline emitted 172,000 tons of lead. Industrial sources like lead smelters and incinerators emitted another 26,000 tons of lead to the atmosphere. These emissions caused an enormous pollution problem. Every major city monitored in the 1970 National Air Surveillance Network had ambient lead levels above the current federal health standard. The average blood lead level in children was more than 15 ug/dl -- a level of lead that is now considered to cause loss of IQ.

Today. Lead emissions have dropped by 98% from 1970 levels. The number of areas not meeting the lead standard has dropped to just 13 areas, all of which are located in the vicinity of a major stationary source of lead. Due primarily to the reduction in lead emissions, childhood blood lead levels have fallen dramatically. The average blood lead level in children is just 3.6 ug/dl, well below the current 10 ug/dl threshold for lead poisoning.

Why the Clean Air Act Is Working. The most significant cause of the reduction in lead emissions has been the 20-year phase-out of lead in gasoline. The phase-out began in 1973, when EPA promulgated an initial five-step phase-down of the lead content in leaded gasoline. This step was controversial. In explaining its decision, EPA acknowledged uncertainty about the health effects of lead, but concluded that "it would be prudent to reduce preventable lead exposure."

In 1981, the lead phase-down was challenged by Vice President Bush's task force on regulatory relief, which proposed "relaxing or rescinding the entire lead phasedown rule" because of potential "onerous capital requirements on small refiners." This initiative was withdrawn in 1982 after a public outcry, and small refiners adapted successfully to the phase-down requirements.

The 1990 Clean Air Amendments will finally complete the lead phase-out, banning the sale of leaded gasoline for motor vehicles after December 31, 1995.

Substantial progress has also been made under the Clean Air Act in reducing emissions from stationary sources. The national ambient air quality standard for lead was set at 1.5 ug/m³ in 1978. To meet this standard, lead emissions have been reduced from smelters by 91% and from incinerators by 76% from 1970 levels. Currently, EPA is conducting a site-by-site review of stationary sources in the remaining nonattainment areas and working with the sources and state officials to design additional controls.