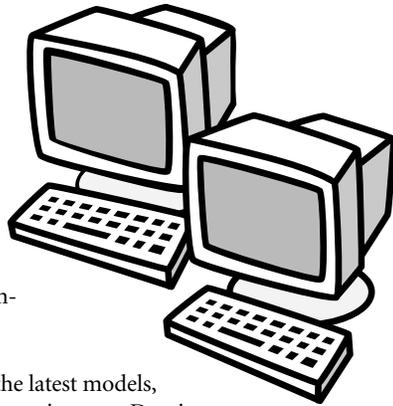


When Your Computer Becomes Toxic Trash

With more and more people getting “wired” everyday, electronics has become the world’s fastest-growing manufacturing industry. While computers enable us to access and retain more information than ever before, we may not realize that each of these machines is also a toxics trap. Tiny semiconductors require more material inputs than most traditional goods. Workers in the “clean rooms” where the chips are made are exposed to a host of chemicals that have been linked to cancers, miscarriages, and birth defects. And these facilities generate huge volumes of chemical waste, contaminating groundwater at many high-tech sites.

Moreover, as we replace our old computers with the latest models, we’re contributing to a mounting global problem: electronic waste. Despite an international ban on trade in hazardous waste, many old computers from the United States and other industrial countries make their way to “recycling” facilities in Asia and elsewhere. Investigations reveal that these facilities expose workers and the environment to a slew of deadly toxins that can cause damage to the central nervous system, endocrine disruption, interference with brain development, and organ damage.



DID YOU KNOW...?

- * In just over a decade, the number of personal computers worldwide increased five-fold—from 105 million machines in 1988 to more than half a billion in 2002.
- * Prices of personal computers and peripheral equipment in the U.S. have fallen by 81 percent since 1997 as a result of more powerful chips, low wages, and the offloading of environmental costs.
- * The total mass of secondary materials used to produce a 2-gram microchip is 630 times that of the final product. (For comparison, the resources needed to build a car weigh about twice as much as the final product.)
- * Santa Clara County in California, the birthplace of the semiconductor industry, contains more toxic waste sites than any other county in the United States.
- * A typical computer monitor with a cathode ray tube display contains 2-4 kilograms of lead, as well as phosphor, barium, and hexavalent chromium. Other toxic ingredients include cadmium in chip resistors and semiconductors, beryllium on motherboards and connectors, and brominated flame retardants in circuit boards and plastic casings.
- * Government researchers estimate that three quarters of all computers ever sold in the U.S. are lying in basements and office closets, awaiting disposal. An estimated 63 million personal computers are expected to be retired in the U.S. in 2005 alone—that’s one computer becoming obsolete for every new one put on the U.S. market!
- * As much as 50–80 percent of U.S. electronic waste collected for recycling is sent to Asia (mainly China, India, and Pakistan) where workers are exposed to toxic fumes, lung and respiratory irritants, and other dangerous health threats.

SUCCESS STORIES

❖ In 1993, U.S. President Bill Clinton issued an executive order requiring federal agencies to buy only computer equipment that meets the efficiency requirements described under the government’s Energy Star program. Today, largely as a result of this increased demand, 95 percent of all monitors, 80 percent of computers, and 99 percent of printers sold in North America meet Energy Star standards.

❖ In 2002, the European Union adopted two “extended producer responsibility” directives requiring electronics manufacturers to phase out the use of hazardous materials and to assume responsibility for the “take back” and recycling of e-waste.

❖ Computer manufacturer IBM began offering product take-back programs as early as 1989 in Europe, and then initiated a more-restricted program in the United States in 1997.



SIMPLE THINGS YOU CAN DO:

- ✓ When buying a computer, look for labels indicating that the machine is energy-efficient.
- ✓ Buy computers that can be easily upgraded to avoid having to purchase entire new systems as the technologies advance.
- ✓ Recycle old computers by donating them to charities or to other organizations that can refurbish or reuse the parts.
- ✓ Send a letter to electronics companies urging them to take full responsibility for the life cycle of their products. Learn more at www.computertakeback.com.

CHALLENGE YOURSELF AND OTHERS:

Don’t just throw your old electronics in the trash! Several manufacturers now take back old electronics for a small fee. Find out where you can send your old computers, cell phones, batteries, and other parts. At the same time, urge manufacturers to dispose of these products responsibly and not ship them to countries where they harm workers and the environment.

FOR MORE INFORMATION

- ☛ **Silicon Valley Toxics Coalition (www.svtc.org)** engages in research, advocacy, and organizing around the environmental and health problems caused by rapid growth of the high-tech industry.
- ☛ **Grassroots Recycling Network (www.grrn.org)** advocates corporate, government, and individual responsibility for waste.
- ☛ **Computer TakeBack Campaign (www.computertakeback.com)** is working to make computer producers responsible for the safe design, manufacturing, and recycling of their equipment.
- ☛ **European Environment Bureau’s** “Waste from Electrical and Electronic Equipment” website (www.eeb.org/activities/waste/weee.htm) provides background on regional efforts to address the environmental impacts of computers and other electronics.
- ☛ **Basel Action Network (www.ban.org)** is an international network of activists that works to oppose the trade in toxic wastes and technologies from rich to poor countries.