



### ••• Update on Electronics Management Programs •••

Provided as a service to Partners of the Federal Electronics Challenge

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*The following program updates are intended to provide background and update information on on-going electronics management programs relevant to Partners of the Federal Electronics Challenge. Some of this material has been extracted from program websites. URL's have been provided when possible, though not all will remain current indefinitely. For past updates, please visit the FEC website at <http://www.federalelectronicschallenge.net>.*

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#### **Federal Electronics Challenge (FEC)**

What's new with the FEC: There is a new presentation available on the website covering the topic of How to Choose a Recycler. You can access PDF and Powerpoint versions at: <http://www.federalelectronicschallenge.net/presenta.htm>, under End-of-Life Management.

#### Upcoming FEC Meetings:

- Auditing Your Recycler; July 15<sup>th</sup>
- Energy Star and other Labels; September 9th

If you represent a federal facility and would like more information on becoming an FEC federal facility partner, signing the pledge, upcoming FEC conference calls, and other activities, please visit the website at <http://www.federalelectronicchallenge.net> or contact Chris Kent at [Kent.Christopher@epamail.epa.gov](mailto:Kent.Christopher@epamail.epa.gov).

### **Electronics Toxics Challenge**

On April 20th, a meeting was held between the North American Pollution Prevention Partnership (NAP3), representatives of the electronics industry, NGOs and federal officials from the three NAP3 countries. The meeting took place at the Baltimore Wyndham Inner Harbor Hotel and was hosted by the US National Environmental Assistance Summit. The purpose of the meeting was to discuss the Electronics Toxics Reduction Challenge document and to explore opportunities for partnership, further development of the challenge, and to discuss next steps. This draft initiative is being "teed" up for the Commission on Environmental Cooperation (CEC), a body headed by the heads of the Environmental agencies of Canada, US and Mexico. The initiative aims to challenge electronics manufacturers to voluntarily meet the European toxics bans for electronics here in the North American market on the same schedule and with the same exemptions as apply in Europe. For more information, please visit: <http://www.p2.org/summit2004/>.

### **U.N. Study Highlights Computers' Environmental Hazards**

A recent U.N. study highlights the environmental hazards posed by the worldwide popularity of personal computers. Manufacturing the average PC requires 10 times the product's weight in fossil fuels, says the study -- compared to twice the product's weight for cars and refrigerators. Computer manufacturing also entails heavy use of toxic chemicals. To make matters worse, the lifespan of a PC is short and getting shorter, while sales continue to boom, making for a massive disposal problem. Discarded computers are often shipped to poorly managed facilities in developing countries to be recycled, leading to toxic waste and health risks for workers. The study calls on computer manufacturers to make their products easier to upgrade and U.N. member states to encourage citizens to purchase used PCs and use them longer.

Thirteen countries, mostly in Europe, have passed legislation on computer recycling. For more information, please visit: <http://www.it-environment.org/compenv.html>.

### **INTEL working to get the lead out**

Company Will Reduce Overall Use of Lead in its Logic Chips by 95 Percent April 7, 2004 -- Intel Corporation today announced it will begin eliminating approximately 95 percent of the lead used in its processors and chipsets starting later this year. The company is taking these significant steps to remove lead from its product packaging in order to make it more environmentally friendly. Intel will begin shipping the lead-free technology with select microprocessors and chipsets in Q3, 2004, and embedded IA processors in Q2, 2004. The company shipped its first lead-free memory chips last year. (Waste News)

### **Wooden computers offer 'greener' desktops**

Biodegradable monitor cases may reduce trash. A Swedish company is offering what they say is an ecofriendly alternative: a range of wooden computer monitors and keyboards that aim to brighten office life, while cutting the environmental impact of computer junk. Sollentuna-based company, Swedx is making computer screens, keyboards and mice encased in timber. Swedx's wooden cases are custom built using wood logged from managed forests in China, which decompose faster than plastic. Swedx has sold several thousand computer pieces since it launched them last year. A 15-inch flat screen monitor, available in beech, ash or sapele wood, costs about EU400, a keyboard EU50 and a mouse EU40. That is roughly 30% more than plastic versions, says company vice-president Jan Salloum. For more information, please visit: <http://www.nature.com/nsu/040412/040412-10.html>.

### **CIWMB's Life Cycle Management of Electronics Guidelines for State Agencies**

The CIWMB, in partnership with the California Department of General Services, has developed "Guidelines for Procurement, Use and End-of-Life Management of Electronic Equipment". The guidelines are designed for State agency procurement officers, information technology staff, surplus property staff managers, and any other staff or managers involved in purchasing, using or managing electronic equipment. Other organizations are welcome to use these resources to improve their procurement, use and end-of-life management of electronic equipment. For more information, please visit: <http://www.ciwmb.ca.gov/electronics/Procurement/PUEOL/>

### **New Guidance issued for Managing Used Consumer Electronic Equipment**

EPA released new, voluntary guidance to its Plug-In To eCycling partners, who will test its provisions to determine the most effective and practical methods for safely managing used electronic equipment. The Plug-In To eCycling partnership, formed in 2002, aims to increase the safe recycling of used electronic products by providing recognition and other incentives to partners. The new guidance, "Plug-In To eCycling Guidelines for Materials Management," spells out preferred waste management practices for used electronic products, and defines partner eligibility. Plug-In partners are manufacturers, retailers, government agencies, or nonprofit businesses that help in the collection, reuse, recycling, or refurbishing of old electronic equipment. These guidelines further encourage anyone who handles used electronic equipment to: (1) maximize reuse, refurbishment, and recycling rather than the option for disposal and incineration; (2) ensure that exported electronic products will be legitimately reused, recycled, or refurbished by receiving countries, and provide for special handling of export components which may contain potentially harmful substances and (3) make sure that facilities follow best management practices that are consistent with these guidelines. In addition to ensuring environmentally safe recycling of old electronics, this guidance aims to promote and maintain adequate markets for the reuse and recycling of electronic equipment. For more information, go to:

<http://www.epa.gov/epaoswer/osw/consERVE/plugin/index.htm>

### **Winning Designs Reduce Environmental Impacts of Computers**

The selected winners of the Cradle to Cradle Electronics Design Challenge are being recognized for their creative electronic designs that contain fewer toxic components,

require fewer materials to make, and generate less waste at the end of the consumer electronics product's useful life. The winners were presented with awards today at the 2004 Institute of Electrical and Electronics Engineers (IEEE) Symposium for Electronics and the Environment in Scottsdale, AZ. The National Recycling Coalition predicts that 500 million computers will become obsolete by 2007. The first place winning design, called "LINC," was submitted by a University of Cincinnati student, Brett Christie. It features a compact, solar powered hand-held unit that replaces multiple electronic devices such as WiFi Internet, GPS Navigation, Movie Player, Music Player and E-Book. Customers return the LINC unit to the manufacturer, where its components are recycled to create new LINC units. The second place design, called "Ecoprojection," was submitted by a team of students, Junko Hosokawa, Stuart Ottenritter, John Gualtieri and Michael Dickson, from Virginia Tech at Blacksburg. "Ecoprojection" replaces the cathode ray tubes and plasma screen technologies in personal computers (PCs) by using a full color laser to project images onto a variety of surfaces. This uniquely designed PC also includes a modular CPU (central processing unit) with components that can be taken out while the machine is running. The components can be sent back to the manufacturer when upgrades are desired. This design showcases novel materials such as: a releasable adhesive for printed circuit boards, and plastics and metals that return to their standard shape with minimal reprocessing, thereby expediting reuse of the material. The third place design, called "bioPC," was submitted by a team of students, Summer Hill, Pooja Goyal, Joe Bradley and Ben Shao, from the University of Illinois at Urbana-Champaign. "bioPC" proposes the use of a type of bacteria, Bacteriorhodospin (BR) for information storage; the personal computer is made from biodegradable plastic materials, which are designed to be returned to a municipal composting facility at the end of the personal computer's useful life. The IEEE Symposium (<http://www.iee.org>) is the leading forum worldwide for electronics industry leaders to explore the latest environmental aspects of design, manufacturing, research, development, recycling and marketing of electronics products. The first and second place winners received \$5,000 each, donated by Hewlett-Packard and IBM. The third place winner received \$4,000, donated by Lexmark Corporation and the Consumer Electronics Association. More information on the Cradle to Cradle Electronics Design Challenge is available at: <http://www.greenblue.org/edesign>. More information on the Resource Conservation Challenge is available at: <http://www.epa.gov/rcc> .

### **Recycle America teams with Matsushita, Sharp to recycle electronics**

PORTLAND, CONN. (May 17) -- Recycle America Alliance LLC, Matsushita Electric Corporation of America and Sharp Electronics Corp. cooperated on the launch of electronic recycling services in Connecticut May 15.

The trio held a one-day collection event at Waste Management New England Environmental Transport Inc. in Portland to kick off Recycle America Alliance's entry into the New England market. They accepted Panasonic and Sharp brand products free of charge and collected fees for other companies' products

Waste Management Inc., the nation's largest integrated waste management services company, is the majority owner of Recycle America Alliance. (WASTE NEWS)

### **"Toxic dust" on computers linked to diseases**

**RACHEL KONRAD**

**Associated Press 6/2/04**

**SAN FRANCISCO** - "Toxic dust" found on computer processors and monitors contains chemicals linked to reproductive and neurological disorders, according to a new study by several environmental groups.

The survey, released Thursday by Silicon Valley Toxics Coalition, Computer TakeBack Campaign and Clean Production Action, is among the first to identify brominated flame retardants on the surfaces of common devices in homes and offices.

Electronics companies began using polybrominated diphenyl (PBDEs) and other flame retardants in the 1970s, arguing that the toxins prevent fires and cannot escape from plastic casings.

"This will be a great surprise to everyone who uses a computer," said Ted Smith, director of the Toxics Coalition. "The chemical industry is subjecting us all to what amounts to chemical trespass by putting these substances into use in commerce. They continue to use their chemicals in ways that are affecting humans and other species."

Researchers collected samples of dust from dozens of computers in eight states, including university computer labs in New York, Michigan and Texas, legislative offices in California, and an interactive computer display at a children's museum in Maine. They tested for three types of brominated flame retardants suspected to be hazardous.

Penta- and octa-brominated diphenyl will be taken off the market by the end of the year. Environmental groups are demanding legislation that would ban deca-brominated diphenyl, too.

PBDEs, which have caused neurological damage in laboratory rats, are related to polychlorinated biphenyls (PCBs), toxins believed to damage brains of human fetuses.

Scientists have not directly correlated exposure to PBDEs with specific diseases. Researchers at University of California, Davis, and elsewhere are conducting studies questioning a link between brominated flame retardants and autism, but results are years away.

Independent researchers who reviewed the new study say consumers shouldn't throw out their computers - but they should write to politicians and ask for stronger protection against such chemicals.

"The levels in the dust are enough to raise a red flag, but not enough to create a crisis," said Dr. Gina Solomon, senior scientist at the Natural Resources Defense Council and assistant professor of medicine at University of California, San Francisco. "I have an old computer monitor in front of me now, and I'm not about to throw it away. But when I get a new one, it darn well will be free of these chemicals."

The electronics industry has been reducing or eliminating some brominated flame retardants since the late 1990s, when European countries began prohibiting the sale of products that contain the chemicals.

Dell Inc. and many other computer makers continue using a flame retardant related to PBDEs on circuit boards, and they use lead, mercury and other toxins in the central processing units and monitors. But Dell, along with Apple Computer Inc. and others, stopped using PBDEs in 2002.

"People can be very confident about their new computer purchase," said Dell spokesman Bryant Hilton. "We've worked a lot with suppliers, and we require audits and material data sheets on all our products. It's an important topic to be aware of, and brominated flame retardants are something we've been very focused on and will continue to be focused on."