

COMPUTERS, ELECTRONIC EQUIPMENT, AND SMOKE DETECTORS

(For assistance, please contact EHS at (402) 472-4925, or visit our web site at <http://ehs.unl.edu/>)

Computers, color monitors, televisions, computer accessories (mice, keyboards, etc.), other electronic equipment/components (i.e., cellular telephones, TV remote controls, circuit boards, etc.), and smoke detectors usually contain toxic metals within their internal circuit boards or other parts (i.e., leaded glass in computer monitors). If placed in a municipal landfill, these metals can leach from the equipment over time and contaminate soils and groundwater. For this reason, the Nebraska Department of Environmental Quality (NDEQ) regulates some computer parts and other electronic equipment under the hazardous waste regulations when disposed or recycled, and has banned these items from disposal at landfills.

In addition to the toxic metals within the circuitry, some smoke detectors (ionization detectors) contain a small amount (approximately 0.9 microcurie) of Americium-241 (Am-241), a radioactive element. Am-241 is not dangerous unless it becomes airborne and is inhaled. Am-241 primarily emits alpha particles, which have penetration capabilities of less than that of the skin. In addition, alpha particles do not travel more than a few centimeters in air.

UNL's computer and electronics redistribution/recycling program was established to manage electronics in accordance with regulatory requirements, including State Accounting rules for surplus property. Under the redistribution/recycling program, unwanted computer and electronic equipment (other than smoke detectors) are picked up by UNL Moving Services and delivered to the UNL Inventory Department. This equipment is offered for redistribution to the campus. That which is not redistributed to the campus community is offered for public auction. Equipment that is not sold at auction is sent for refurbishment by Environmental Health and Safety.

Smoke detectors taken out of service are to be delivered to the EHS office or tagged for pickup by EHS staff. See EHS SOP **Hazardous Materials Collection Procedures**. Immediately upon removing a smoke detector from service, place it in a sturdy container and mark the container with the words "Universal Waste – Smoke Detector(s)." Also, label the container with the date that the first smoke detector was placed in the container. Deliver or tag the container for pickup as soon as it becomes full or within ten months of placing the first smoke detector in the container, whichever comes first. If a container is not used to accumulate several detectors, the individual detector must be immediately delivered to the EHS office or tagged for collection by EHS staff.

To ensure compliance with hazardous waste regulations and State Accounting rules:

- Do not dispose of computer parts, electronic equipment, smoke detectors, circuit boards, and other like items in the garbage.
- Do not disassemble.
- Manage these items only through UNL Moving Services and/or EHS, as described. Do not self-manage through other outlets.
- Promptly manage unwanted/unneeded electronic equipment or parts. Do not speculatively accumulate.
- Avoid the purchase of Am-241 smoke detectors. Use photoelectric whenever possible.

Contact the UNL Inventory Department at (402) 472-2085 with questions on how surplus electronics should be managed. Direct other waste management questions to EHS.