MEMORANDUM

To: Electronic Waste Recyclers

From: Joe Schieffelin, Compliance Program Manager
Hazardous Materials and Waste Management Division

Date: March 19, 2004

Re: Electronic Waste Recycling Interpretive Guidance

BACKGROUND

The Hazardous Materials and Waste Management Division is issuing this clarification of the hazardous waste regulations as they pertain to electronic waste recycling service providers doing business in Colorado. Charitable organizations, individuals and businesses that repair or refurbish electronic devices from non-residential sources are subject to the state regulations, as are businesses that disassemble electronic devices for materials recovery or disposal. Businesses that only provide brokering services between consumers and recyclers must manage all electronic devices and components under their control in a manner consistent with it being a product having real value. Failing to do this, they will be subject to regulation under Colorado’s hazardous waste regulations.

Most post-consumer electronic devices meet the definition of a hazardous waste because of the high heavy metals content of many of the component pieces. These metals include lead, chromium, silver and, in some older computers, mercury switches. In addition, many electronic devices contain batteries, such as nickel-cadmium, lithium or sealed lead acid, which are a hazardous waste. While electronic wastes from households are exempt from regulation as hazardous waste, color monitors and televisions, central processing units (CPU - the box containing the motherboard, hard drives, disc drives, etc.), telecommunications equipment, VCRs and other electronic devices from non-residential sources are considered to be regulated hazardous wastes, and as such, cannot be disposed of at municipal solid waste landfills, even in very small quantities.

Section 273.9 of the Colorado hazardous waste regulations (6 CCR 1007-3) define an electronic device as electronic equipment that contains one or more electronic circuit boards or other complex electronic circuitry, including but not limited to computer monitors, televisions, CPUs, laptops, printers, terminals, mainframes and stereo equipment. Because discarded electronic devices are a common hazardous waste generated by many companies that do not usually generate hazardous wastes, and because the state wanted to encourage recycling of electronic wastes, Colorado added waste electronic devices and components to the list of “universal wastes” in Part 273 of the state hazardous waste regulations. At the time these rules were adopted, the state determined that businesses, academic institutions and government
agencies that send their electronic devices and components to a legitimate electronics recycler are not considered to be hazardous waste generators for those materials. This is because the decision on whether a component or piece of electronic equipment is a waste or not is made by the recycler. If businesses, academic institutions or government agencies choose instead to send their electronic equipment directly for disposal, they are the generators of hazardous waste and are subject to the state hazardous waste regulations.

Universal wastes are hazardous wastes that have significantly reduced management requirements as compared to the full requirements of the hazardous waste regulations. These include shipping the waste without a hazardous waste manifest; shipping the waste by common carrier instead of a hazardous waste transporter; reduced notification and record-keeping requirements; and increased storage time limits. Requirements for universal waste handlers and transporters are included in 6 CCR 1007-3, Part 273, Subpart D. A compliance bulletin covering management of electronic wastes which explains the universal waste requirements in more detail is available at www.cdphe.state.co.us/hm/electronics.pdf. Electronic devices and components that are not managed as universal waste must be managed under the full requirements of the state hazardous waste regulations. The Guide to Generator Requirements is available at http://www.cdphe.state.co.us/hm/handbk01.pdf to help explain these requirements.

HOW ARE WASTE ELECTRONICS VIEWED BY THE DIVISION

When managing post-consumer electronic devices and components, the first question to be answered is “Are these materials waste or product?” If you, as the recycler, pre-screen materials before accepting them for recycling and have already determined what will be done with them, or if you only offer one type of recycling service, this should be a simple question to answer. If you haven’t pre-screened the material or if you offer more than one type of recycling service, the answer to this question may not be immediately known. Until you determine which individual devices or components are wastes and which are products, you should store and manage all materials as though they are products. Primarily, this means that they must be stored indoors or legitimately protected from wind, rain, snow, intense sunshine, physical damage, etc. State hazardous waste inspectors will expect you to be able to demonstrate that these materials are being carefully stored. When you subsequently determine which of the materials can be resold, repaired or refurbished, those materials can continue to be managed as product and do not fall under the jurisdiction of the hazardous waste program. Inspectors may ask to see records (sales receipts, etc.) that show you have actually returned similar materials back into the marketplace. When you determine which of the materials are wastes, or if you are not managing the electronic devices and components as if they are products, you will be required to manage them as hazardous waste or under the reduced requirements of universal waste.

The definition of “product” also needs to be clarified. For post-consumer electronic devices or components to be considered products, they must have reuse and/or resale value for their original intended purpose. Examples include a computer monitor that is resold for continued use as a monitor, a computer CPU that is refurbished for continued use as a computer, or a computer chip that can be removed from one CPU and used to repair another for continued use as a computer. This definition does not include value as scrap metal. Electronic devices and components destined for materials recovery as scrap metal are considered to be wastes, not product.

It should also be noted that while Section 261.4(a)(14) of the state hazardous waste regulations excludes scrap metal that is being recycled from being a solid waste, it is the Division’s position that electronic devices and components, prior to disassembly, do not fit any of the regulatory definitions of scrap metal. A used or broken CPU is still a CPU until disassembled. It is not scrap metal. This applies equally to other used electronic devices such as monitors, VCRs, printers, etc. Section 261.1(d)(6) of the state
hazardous waste regulations defines scrap metal as bits and pieces of metal parts (e.g., bars, turnings, rods, sheets, wire) or metal pieces that may be combined together with bolts or soldering (e.g., radiators, railroad box cars), which when worn or superfluous can be recycled. Sections 261.1(b)(9), (10), (11), and (12) further define subcategories of scrap metal.

Certain parts of electronic devices and components may fit the definition of “processed scrap metal” as defined in section 261.1(d)(10) after disassembly and sorting, however. Once disassembled and sorted, parts meeting the processed scrap metal description are no longer subject to state hazardous waste regulations as long as you are able to demonstrate that you have a viable market for the material as scrap metal.

The universal waste rules allow you to disassemble waste electronic devices without a permit as long as you ensure that your employees are thoroughly familiar with and implement written procedures that detail how to conduct these activities safely and that disassembled parts are immediately segregated and containerized. Your written procedures must specify how each of the segregated parts will be managed.

Other types of treatment, such as shredding or heat treating (melting) for data destruction purposes, may require a permit for treatment of hazardous waste depending on how and at what stage of management these activities occur. For example, if electronic devices such as CPUs, keyboards or printers are shredded by a machine that dumps all shredded material into one bin, you would need a permit for treating hazardous waste. On the other hand, if the machine magnetically segregated the shredded material into separate waste streams and automatically sent each to a different container, the Division would not require that you obtain a hazardous waste treatment permit if the purpose of the segregation process is to recover materials from the shredded wastes. Melting electronic devices and components for data destruction purposes is considered to be treatment of hazardous waste because it changes the physical character of the waste and a hazardous waste treatment permit would likely be required.

The universal waste regulations require that waste electronic devices and components be stored in containers that are structurally sound, adequate to prevent breakage and compatible with the device or component. The Division recognizes that because of their size and shape, computer monitors, CPUs, printers and other large peripherals are commonly shrink-wrapped or banded on pallets rather than being stored in containers. Bulky devices, such as mainframes, frequently don’t fit in containers and may not be on pallets due to their large size. If you securely palletize larger electronic devices like monitors and computer peripherals with shrink-wrap or strong banding, or if the individual device is too large to be put in a container or on a pallet, the Division will consider that equivalent to containerizing these materials. Smaller devices and electronic components should always be stored in containers.

**WHAT TO EXPECT ON AN INSPECTION**

Compliance inspections by state hazardous waste inspectors are usually announced in advance of the inspection. This ensures that the inspection is scheduled at a time that is mutually agreeable to you and to the inspectors. If a complaint is received by the Division regarding the potential mismanagement and/or disposal of hazardous wastes, you will not be provided with advance notice of the inspection.

Compliance inspections generally begin with an opening conference where the inspectors will ask you questions in order to get background information on your facility, the range of services you provide, the quantity of electronics managed at your facility, and how you classify and handle these materials. This is followed by a tour of your facility where the inspectors observe where and how electronic devices are stored, labeled, and otherwise managed. During the site tour, expect the inspectors to ask questions about your processes and at what point you determine that an electronic device or component is waste or
product. The inspectors will be looking to see if you are managing the electronics in a manner consistent with your waste determination and the information you provided.

After touring the facility, the inspectors will ask to review available records to verify that information is consistent with their observations and the information you provided. The inspector will ask for information such as whether or not you have an EPA identification number, how you are able to demonstrate that electronic wastes are not accumulated beyond the allowed time limit, shipping papers showing where various devices and components are sent for reuse, materials recovery or disposal, what training is provided to employees, and your written procedures for disassembly of electronic wastes. Although the universal waste rules don’t necessarily require that a lot of records be kept, a businessperson will often maintain such records for other purposes.

At the end of the inspection, a Notice of Inspection will be issued to you. Minor issues that are easily corrected may be noted along with a specific deadline for you to remedy the situation and return to compliance. More serious violations will be included on a Compliance Advisory, which may be issued at the conclusion of the inspection or shortly thereafter. A compliance advisory lists violations and potential violations noted during the inspection, requests additional information needed by the inspectors along with due-dates for submittal of this information and specifies due-dates for you to return to compliance. A formal enforcement action will be taken for significant violations that can or have already led to hazardous waste exposures, if your facility has deviated substantially from regulatory requirements and/or if you are a chronic violator of the state hazardous regulations. Formal enforcement actions can impose significant monetary penalties.

LEGITIMATE RECYCLING

For all recycling activities, the premise is that legitimate reclamation or reuse is taking place. Some facilities may claim that they are "recycling" a material in order to avoid being subject to regulation, when in fact the activity is not legitimate recycling. The US EPA has established guidelines for what constitutes legitimate recycling and has described activities it considers to be "sham recycling." As a legitimate recycler, you should be able to provide documentation on how you manage electronic devices and components that you receive, how they are processed and where you send various components for reuse, materials recovery or disposal. A lack of adequate records and/or an unwillingness to provide this information may indicate that a facility is not conducting legitimate recycling activities. The Division encourages your potential clients to audit your business in order to determine if you are conducting legitimate recycling activities. If you decline to provide this documentation, consumers are advised to look elsewhere for a service provider.

IMPACT OF THE RECENTLY ADOPTED SOLID WASTE RECYCLING REGULATIONS

In addition to regulation under state hazardous waste requirements, businesses that disassemble electronic devices and components for materials recovery or disposal are also covered by Section 8 of the Colorado Regulations Pertaining to Solid Waste Disposal Sites and Facilities 6 CCR 1007-2. Under these regulations, existing electronics dismantlers are required to register with the Division by October 1, 2004. New facilities will be required to register when they open. By May 1, 2005 and annually thereafter, recycling facilities are required to report on the types and volumes of materials that have been recycled during the previous calendar year. These recycling facilities must also meet minimum operational standards. Charitable organizations and businesses that repair or refurbish electronic devices and scrap metal businesses that collect and recycle the processed scrap generated by electronics dismantlers are excluded from regulation under Section 8. Businesses that provide brokering services between consumers and recyclers are not subject to the recycling regulations as long as they manage the electronics as product having real value (i.e., stored indoors or legitimately protected from the elements and physical damage).