

Kansas Department of Health and Environment  
Bureau of Waste Management Policy 05-02  
related to  
Electronic Waste Management in Kansas Landfills

revised April 22, 2008

**Background**

Electronic waste (E-waste) includes all types of obsolete, unused, or unwanted electronic equipment. Personal computers (PCs), consisting of central processing units (CPUs), monitors or cathode ray tubes (CRTs), keyboards, and miscellaneous peripheral items, comprise the largest volume of E-waste. The presence of lead in the monitor glass has caused some states and the U.S. Environmental Protection Agency (EPA) to express concerns about disposal in non-hazardous waste landfills. E-waste also includes a wide variety of other items such as televisions, video cassette recorders (VCRs), stereos, radios, personal digital assistants (PDAs), cell phones, electronic games, and digital versatile disk (DVD) players. It is estimated that Kansans will generate more than 500,000 unwanted PCs each year, plus a whole array of other E-wastes.

**Applicability of Current Laws and Regulations**

Kansas laws and regulations do not specifically address E-waste disposal. State and federal solid and hazardous waste regulations are applicable to any waste; however, it is difficult to determine if various E-waste components are characteristic hazardous wastes due to the presence of heavy metals. Some test results from other states indicate that certain processed and segregated components, such as the glass making up the neck of monitors, may fail the Toxicity Characteristic Leaching Procedure (TCLP) toxicity test for lead. However, questions have been raised regarding the validity of the test methods that may not have evaluated the entire waste, but only the portion containing the lead.

EPA adopted a CRT rule in July 2006 which establishes management standards for this single component of the E-waste stream. EPA believes their rule will facilitate recycling of CRTs by exempting these wastes from the definition of a “solid waste” if they are recycled according to certain standards. The Kansas Department of Health and Environment (KDHE) is unlikely to adopt this rule that is “more lenient” than existing rules because KDHE believes that E-waste processors should be required to obtain solid waste processing facility permits. The rationale for this belief is addressed later in this policy. In order to require a permit, it is necessary to maintain “waste” status even if the E-waste is recycled.

Nationwide attempts to regulate E-waste disposal at the state or federal levels have been complicated by the fact that E-waste is universally generated by businesses, institutions, and households. Households and small quantity generators of hazardous waste are not subject to the same rules as businesses that generate more than 25 kg of hazardous waste per month (i.e., Kansas and EPA generators). If KDHE applied

hazardous waste rules to E-waste, those rules would only address a portion of the waste. There is also uncertainty as to what part of E-waste should be counted when determining the weight of regulated waste generated by a business or institution. In addition, it would be impossible to tell if E-waste observed at a landfill was disposed of by a regulated hazardous waste generator, a household, or a small quantity hazardous waste generator.

### **Current E-Waste Management in Kansas**

Opportunities to recycle E-waste in Kansas are growing rapidly, but recycling service is still very limited in most rural counties. Despite the growth in E-waste recycling businesses, convenient service is not available in most small and medium-sized communities. State requirements to ban E-waste disposal in landfills at this time could result in significant open dumping because of the cost and lack of convenient services.

Even with these limitations in most Kansas counties, the volume of E-waste that is voluntarily recycled in Kansas has grown significantly. E-waste recycling in Kansas presently includes several private companies collecting and performing various degrees of processing, some permanent county collection programs, and temporary city, county, and private sector collection events (i.e., weekend, week-long, etc.). In addition, some private companies that manufacture and/or sell consumer electronics have established various types of “take-back” programs. Some retailers also offer various take-back services. These programs differ greatly in how they work and where they are available.

E-waste disposal in municipal solid waste landfills also remains significant at this time. Landfill operators report receiving variable amounts of E-waste on a routine basis. The initial version of this policy prepared in May 2005 stated “E-waste may be landfilled in Kansas permitted municipal solid waste (MSW) landfills” and “E-waste generators are not required to test this waste as part of their standard waste characterization practices.” These positions remain in effect and are further explained below in KDHE preferred E-waste management alternatives.

A great volume of E-waste continues to be stockpiled in homes, businesses, and institutions. It would be desirable to expand recycling services in Kansas before the generators decide to finally get rid of these items.

### **Current State Developments Related to E-Waste Management**

KDHE is working in multiple areas at the present time to facilitate the development of a better E-waste management system in Kansas including: (1) the preparation of E-waste management standards for “collection centers” and “processors,” (2) the implementation of a grant program to establish pilot collection centers in representative counties or regions, (3) the awarding of grants related to E-waste processing, (4) the solicitation and processing of solid waste permit applications for E-waste processors, and (5) the promotion of E-waste recycling through various public education initiatives. These efforts coincide with the updated KDHE E-waste policies listed in the following section.

### **Current KDHE E-Waste Management Policies**

These policies are designed to complement and support the E-waste collection system that has voluntarily developed in Kansas as private and public sector projects are implemented.

- Approved E-waste management methods in preferred order include:
  1. Equipment reuse (with or without repair)
  2. Materials recycling
  3. Landfill disposal in permitted municipal solid waste landfills (currently approved for all generators)
- E-waste collection centers that do not process items through destructive methods, except minimal activities related to data security, are not required to obtain a solid waste processing facility permit. The primary activities performed at collection centers relate to collection, storage, and transportation to another vendor that carries out further processing to recover usable components or materials. Collection centers may not speculatively accumulate E-waste. KDHE may require documentation that collected materials are being routinely transferred for further processing and/or use. An inability to provide such documentation could lead to a KDHE decision that “waste” is being illegally stored.
- E-waste processors that carry out mechanical processes (such as dismantling, crushing, or grinding) and/or chemical processes will be required to obtain solid waste processing permits. These facilities will be regulated as “reclamation facilities” in accordance with state laws because they are processing solid waste that contains hazardous constituents and the processing method increases the possibility for contaminant release to the environment or exposure to employees. A condition of every permit is the requirement to demonstrate financial assurance, meaning funds are available for a third party to remove the waste materials from the site if the permittee should ever go out of business. The fee to obtain a reclamation facility permit from KDHE is \$250. (See BWM Policy 97-01 that establishes a reduced permit application fee for reclamation facilities.) An application to obtain a processing facility permit can be found on-line at [www.kdheks.gov/waste](http://www.kdheks.gov/waste).
- Any county, regional authority, or private entity that receives a KDHE grant to serve as a “pilot collection center” must follow the E-waste management standards developed by KDHE.
- Every E-waste processor is encouraged to follow the E-waste standards. Some aspects of the standards will be voluntary; other aspects will be incorporated into the solid waste permits they will be required to obtain.
- Based upon the success of the pilot E-waste collection center grant program, KDHE will work with interested parties to update this policy and develop appropriate Legislative initiatives or proposed rules and regulations. This will be an ongoing evaluation; however, the final assessment will not be completed until after approximately 18 months of center operations (late 2009).

- KDHE will monitor national progress in enhancing E-waste recycling and the development of federal laws or regulations related to E-waste management and apply them in Kansas as appropriate.
- Companies that recycle E-waste should contact KDHE to initiate the process of applying for a solid waste processing facility permit.

For more information, contact the Bureau of Waste Management at (785) 296-1600 or visit the recycling website at [ksewaste.org](http://ksewaste.org).



William L. Bider  
Director, Bureau of Waste Management

April 22, 2008