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## **TITLE 329 SOLID WASTE MANAGEMENT BOARD**

### **FIRST NOTICE OF COMMENT PERIOD #05-181(SWMB)**

## **ADDITION OF 329 IAC 16 CONCERNING ELECTRONIC WASTE**

### **PURPOSE OF NOTICE**

Adds 329 IAC 16 concerning provisions for electronic waste (e-waste) management, which may include collection, reporting, processing, storage and disposal requirements. This rule would add pertinent definitions and minimal requirements. The rule might specify operational and facility design standards to protect surface and ground water.

IDEM seeks comment on the affected citations listed and any other provisions of Title 329 that may be affected by this rulemaking.

### **CITATIONS AFFECTED:** 329 IAC 16.

**AUTHORITY:** IC 4-22-2; IC 13-14-8-1; IC 13-14-8-2; IC 13-14-9; IC 13-15-2; IC 13-19-3-1; IC 13-30-2.

### **SUBJECT MATTER AND BASIC PURPOSE OF RULEMAKING**

#### **Basic Purpose and Background**

Electronic waste (e-waste) handling and disposal has become a pressing nationwide environmental issue of concern. The United States generates more e-waste than any other nation, according to the United States Environmental Protection Agency (U.S. EPA). Electronic waste, or e-waste, includes cathode ray tubes (CRTs) from televisions and computer monitors, hard drives or towers (CPUs), printers, circuit boards and keyboards, cellular and cordless phones, televisions, VCRs, and DVD players. E-waste can include any item that has an electric cord or a battery. E-waste is also known as WEEE, or waste from electrical and electronic equipment. In general, computer equipment is a complicated assembly of more than 1,000 materials, many of which are highly toxic, such as chlorinated and brominated substances, toxic gases, toxic metals, biologically active materials, acids, plastics and plastic additives.

Indiana has addressed white goods disposal for more than 13 years. White goods include clothes washers and dryers, refrigerators, stoves, and dishwashers. Indiana Solid Waste Management Districts must provide for the proper management and disposal of white goods as a part of their approved solid waste management plans. Generally, these items are repaired or recycled, so this background report will concentrate on electronic waste other than white goods.

The health impacts of the mixtures and material combinations in electronic products often are not known. However, there is evidence that computer recyclers have high levels of dangerous chemicals in their blood. (Sjodin, et al. "Flame Retardants Exposure—Polybrominated Diphenyl Ethers (PBDEs) in Blood from Swedish Workers." Environmental Health Perspectives. Vol. 107, Number 8, August 1999.)

Experts estimate that as of 2004 there were more than 315 million obsolete computers in the U.S., many of which were destined for landfills, incinerators or hazardous waste exports. Approximately, 6.3 million computers were obsolete in Indiana as of 2004.

The European Union is developing an e-waste solution that will make manufacturers responsible for taking back their old products for recycling. This legislation – which includes "take-back" requirements and toxic materials phase-outs - also encourages use of less hazardous materials in the product design and less waste generation. However, to date, no such initiative has occurred in North America. No national specific mandates exist at all for the collection and handling of e-waste in the United States. California, Maine, Massachusetts, and Minnesota have recognized the problem to the extent of banning cathode ray tubes (CRT) from municipal solid waste landfills.

This rule will be a true "one-stop shopping" rule. It will include the new exclusion under the hazardous waste rules at 40 CFR 260 et al and include provisions and standards for e-waste processing, storage and disposal under the solid waste rules.

#### **Alternatives to be Considered Within the Rulemaking**

Alternative 1. Specify minimal requirements. The minimal requirements are a registration notice, some sort of pad (asphalt, concrete, plastic liner with dirt cover, etc.) or plastic cover for the waste; run-on and run-off controls, and a closure bond.

Is this alternative an incorporation of federal standards, either by reference or full text incorporation? No, but this would cover any facility under the new federal regulations for the exclusion of CRTs from being a solid waste under the hazardous waste rules if

certain standards are met.

Is this alternative imposed by federal law or is there a comparable federal law? No, not specifically for e-waste.

If it is a federal requirement, is it different from federal law? It includes the federal exclusion at 40 CFR 260 et al, but is broader to include solid waste standards, too.

If it is different, describe the differences.

**Alternative 2. Permit as a solid waste processing facility**

Is this alternative an incorporation of federal standards, either by reference or full text incorporation? No

Is this alternative imposed by federal law or is there a comparable federal law? No

If it is a federal requirement, is it different from federal law? N/A

If it is different, describe the differences.

**Alternative 3. Permit for hazardous waste storage**

Is this alternative an incorporation of federal standards, either by reference or full text incorporation? Yes

Is this alternative imposed by federal law or is there a comparable federal law? Yes

If it is a federal requirement, is it different from federal law? No

If it is different, describe the differences.

**Applicable Federal Law**

Federal law that prohibits any solid waste management practice or disposal of solid or hazardous waste which constitutes the open dumping of solid waste or hazardous waste. (42 U.S.C. 6945) The regulations at 40 CFR 257.2 defines disposal as “the discharge, deposit, injection, dumping, spilling, leaking, or placing of any solid waste or hazardous waste into or on any land or water so that such solid waste or hazardous waste or any constituent thereof may enter the environment or be emitted into the air or discharged into any waters, including ground water.” Federal regulations (40 CFR 257.3) prohibit solid waste practices that violate the established environmental criteria and pose a reasonable probability of adverse effects on human health or the environment. Federal regulations at 40 CFR 260 et al., exclude CRTs from being a solid waste under the hazardous waste rules if certain standards are met.

**Potential Fiscal Impact**

**Potential Fiscal Impact of Alternative 1.** There would be a minimal cost for either covered storage or a pad or liner with run-on and run-off controls. This cost is approximately \$20,000 to \$50,000 per acre. There is no cost associated with sending in a registration form but there would be a cost for obtaining a closure bond. That amount has not been determined yet. There are no additional costs for a storm water permit, as applicable, as these are required by other rules. In contrast, if the site would become contaminated, the cost of soil and groundwater remediation is at a minimum \$400,000 to \$800,000 per acre.

**Potential Fiscal Impact of Alternative 2.** The cost of a full permit varies; however, to permit, construct and operate a solid waste processing facility the cost is approximately \$400,000 to \$750,000.

**Potential Fiscal Impact of Alternative 3.** The cost of a hazardous waste storage permit varies; however, the cost will include the application package development (\$20,000), the application fee (\$23,800), construction of the facility (\$200,000), annual operating fees (\$2,500 x 7’ \$17,500), renewal after 5 years (\$17,200) and financial assurance (\$5,000-\$100,000).

**Small Business Assistance Information**

IDEM established a compliance and technical assistance (CTAP) program under IC 13-28-3. The program provides assistance to small businesses and information regarding compliance with environmental regulations. In accordance with IC 13-28-3 and IC 13-28-5, there is a small business assistance program ombudsman to provide a point of contact for small businesses affected by environmental regulations. Information on the CTAP program, the monthly CTAP newsletter, and other resources available can be found at [www.in.gov/idem/ctap](http://www.in.gov/idem/ctap).

Small businesses affected by this rulemaking may contact the Small Business Regulatory Coordinator:

Sandra El-Yusuf

IDEM Compliance and Technical Assistance Program

OPPTA - MC60-04

100 N. Senate Avenue, W-041

Indianapolis, IN 46204-2251

(317) 232-8578

[selyusuf@idem.IN.gov](mailto:selyusuf@idem.IN.gov)

The Small Business Assistance Program Ombudsman is:

Eric Levenhagen

IDEM Small Business Assistance Program Ombudsman

External Affairs - MC50-01

100 N. Senate Avenue, IGCN 1301

Indianapolis, IN 46204-2251

(317) 234-3386

elevenha@idem.IN.gov

**Public Participation and Workgroup Information**

A workgroup is planned for this rulemaking. If you are interest in being a member of this workgroup, please contact Lynn West, Rules, Outreach and Planning Section, Office of Land Quality at (317) 232-3593 or (800) 451-6027 (in Indiana).

**STATUTORY AND REGULATORY REQUIREMENTS**

IC 13-14-8-4 requires the board to consider the following factors in promulgating rules:

- (1) All existing physical conditions and the character of the area affected.
- (2) Past, present, and probable future uses of the area, including the character of the uses of surrounding areas.
- (3) Zoning classifications.
- (4) The nature of the existing air quality or existing water quality, as the case may be.
- (5) Technical feasibility, including the quality conditions that could reasonably be achieved through coordinated control of all factors affecting the quality.
- (6) Economic reasonableness of measuring or reducing any particular type of pollution.
- (7) The right of all persons to an environment sufficiently uncontaminated as not to be injurious to human, plant, animal, or aquatic life or to the reasonable enjoyment of life and property.

**REQUEST FOR PUBLIC COMMENTS**

At this time, IDEM solicits the following:

- (1) The submission of alternative ways to achieve the purpose of the rule.
- (2) The submission of suggestions for the development of draft rule language.

Mailed comments should be addressed to:

#05-181(SWMB) [E-waste Rule]

Marjorie Samuel

Rules, Outreach, and Planning Section

Office of Land Quality

Indiana Department of Environmental Management

P.O. Box 6015

Indianapolis, Indiana 46206-6015.

Hand delivered comments will be accepted by the IDEM receptionist on duty at the eleventh floor reception desk, Office of Land Quality, Indiana Government Center-North, 100 North Senate Avenue, Indianapolis, Indiana.

Comments may be submitted by facsimile at the IDEM fax number: (317) 232-3403, Monday through Friday, between 8:15 a.m. and 4:45 p.m. Please confirm the timely receipt of faxed comments by calling the Marjorie Samuel in the Rules, Outreach and Planning Section at (317) 232-7995.

**COMMENT PERIOD DEADLINE**

Comments must be postmarked, faxed, or hand delivered by September 1, 2005.

Additional information regarding this action may be obtained from Lynn West, Rules, Outreach and Planning Section, Office of Land Quality, (317) 232-3593 or (800) 451-6027 (in Indiana).

Bruce H. Palin

Deputy Assistant Commissioner

Office of Land Quality