

EPA's Regulatory Program for "E-Waste"

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FOCUS OF PRESENTATION

- **THE BASICS OF HOW EPA HAZARDOUS WASTE RULES DO & DON'T APPLY**
- **THE CRT RULE**

EPA's POLICY APPROACH

- **THE WASTE MANAGEMENT HEIRARCHY**
 - 1. REUSE**
 - 2. RECYCLING**
 - 3. DISPOSAL**
- **EPA's REGULATORY AND VOLUNTARY PROGRAMS EMPHASIZE THIS HEIRARCHY**
- **ALTHOUGH NOT PREFERRED, "E-WASTE" CAN BE SAFELY DISPOSED IN NON-HAZARDOUS WASTE LANDFILLS**

EPA RULES

- **GENERALLY, MOST “E-WASTE” IN THE U.S. IS EITHER:**
 - **NON-HAZARDOUS WASTE**
 - **NON-WASTE**
- **SEVERAL HAZARDOUS WASTE EXCLUSIONS & EXEMPTIONS APPLY**
 - **TO ENCOURAGE REUSE & RECYCLING**

RCRA EXCLUSIONS & EXEMPTIONS

- **RCRA: Resource Conservation and Recovery Act**
 - **FEDERAL LAW re HAZARDOUS WASTE**
- **Under RCRA, a material must first be a waste in order to have the potential to be a hazardous waste**
- **EPA regulations under RCRA have many exclusions and exemptions**
 - **EXCLUSION: It is not a waste**
 - **EXEMPTION: It is a waste, but not a hazardous waste**

RCRA INCENTIVES for REUSE & RECYCLING

- **EQUIPMENT FOR POTENTIAL REUSE IS NOT WASTE**
- **WASTE CAN BE MADE NON-WASTE BY PROCESSING – i.e., raw materials/commodities can be produced**

HAZARDOUS WASTE EXEMPTIONS

■ NON-HAZARDOUS WASTES:

- HOUSEHOLD WASTES incl any electronics from households
- SCRAP METAL FOR RECYCLING
- WHOLE CIRCUIT BOARDS FOR RECYCLING
- PRECIOUS METALS FOR RECYCLING

HAZARDOUS WASTE EXCLUSIONS

- **NON-WASTES: (Products or commodities)**
 - MATERIALS OR EQUIPMENT FOR REUSE
 - PROCESSED SCRAP METAL FOR RECYCLING
 - SHREDDED CIRCUIT BOARDS FOR RECYCLING
 - Must be packaged to prevent release
 - Free of NiCd and Li batteries and mercury devices
 - PROCESSED CRT GLASS FOR RECYCLING
 - INTACT CRTs FOR RECYCLING
 - PARTIALLY PROCESSED CRTs FOR RECYCLING
 - CONDITIONS APPLY

EPA POLICY

■ JUNE 2002 FEDERAL REGISTER:

- BECAUSE OBSOLETE ELECTRONICS ARE OFTEN CAPABLE OF REUSE, THEY ARE NOT CONSIDERED WASTES UNTIL A DECISION IS MADE THAT THEY CANNOT OR WILL NOT BE REUSED
- SUCH DECISIONS ARE MADE BY PERSONS WITH SPECIALIZED EXPERTISE (unless destruction specified)
 - i.e., resellers & recyclers
- THIS ALLOWS COLLECTION TO OCCUR WITHOUT REGARD TO WASTE RULES.

HAZARDOUS WASTES

- **IF ALL FOUR ELEMENTS APPLY:**
 - **GENERATED BY NON-HOUSEHOLDS**
 - **GENERATED AT MORE THAN 220 lbs/mo**
 - **HAVE A HAZ WASTE “CHARACTERISTIC,”**
e.g., **FAIL TCLP. EXAMPLES:**
 - **CRTs**
 - **SOME LAPTOPS, CELL PHONES, ETC.**
 - ***SENT FOR DISPOSAL***

SUMMARY

COLLECTION, REUSE & RECYCLING

- **PERSONS OR BUSINESSES THAT SEND USED ELECTRONIC EQUIPMENT TO RECYCLERS:**
 1. **ARE NOT WASTE GENERATORS**
 - Unless they require destruction
 2. **GENERALLY AVOID RCRA LIABILITY**
- **MUCH OF WHAT A RECYCLER COLLECTS IS NOT WASTE**
- **RECYCLERS' OUTPUT INCLUDES:**
 - Used and unused products
 - Recyclable commodities
 - Both non-wastes & non-hazardous wastes
 - Wastes requiring special handling or disposal

WASTES REQUIRING SPECIAL HANDLING

- **UNIVERSAL WASTES ARE HAZARDOUS WASTES WITH SPECIAL CONTROLS TO FACILITATE TREATMENT/RECYCLING**
 - **Certain batteries**
 - **NiCd, Li, Pb acid**
 - **Lamps and other mercury devices**

STATE HAZARDOUS WASTE RULES

■ REMEMBER:

- BE AWARE OF STATE RULES
- STATE RULES MAY BE MORE STRINGENT THAN EPA
 - SOME STATES CLASSIFY E-WASTE AS UNIVERSAL OR HAZARDOUS WASTE

CRT RULE

- FINAL RULE ISSUED JULY 2006
- INTENDED TO STREAMLINE REQUIREMENTS AND ENCOURAGE RECYCLING
- THE RULE IS A CONDITIONAL EXCLUSION
- THUS, IF RULE IS COMPLIED WITH, CRTs CAN BE HANDLED AS NON-WASTE
- NON-COMPLIANCE CONSTITUTES A VIOLATION OF RCRA HAZARDOUS WASTE REQUIREMENTS
- THE RULE MAKES NO CHANGES TO HOW RCRA APPLIES TO DISPOSAL OF CRTs
- DOMESTIC REQUIREMENTS GO INTO EFFECT IF ADOPTED BY THE STATES
- EXPORT REQUIREMENTS WENT INTO EFFECT 1/29/07

CRT RULE

DOMESTIC REQUIREMENTS

- **INTACT CRTs SENT FOR RECYCLING IN U.S.**
 - **NO SPECULATIVE ACCUMULATION**
 - 75% by volume or weight must be recycled within a calendar year
- **BROKEN CRTs (i.e., vacuum released) SENT FOR RECYCLING IN U.S.**
 - **NO SPECULATIVE ACCUMULATION**
 - **UNIVERSAL-WASTE-TYPE PACKAGING & LABELING REQUIREMENTS FOR STORAGE & TRANSPORT**

CRT RULE

DOMESTIC REQUIREMENTS

■ GLASS PROCESSORS:

- MUST STORE BROKEN CRTs INDOORS OR IN CONTAINERS TO MINIMIZE RELEASES**
- NO SPECULATIVE ACCUMULATION OF BROKEN CRTs**
- MAY NOT USE TEMPERATURES HIGH ENOUGH TO VOLATILIZE LEAD**

CRT RULE DOMESTIC REQUIREMENTS

■ PROCESSED GLASS:

- NOT REGULATED IF SENT TO CRT GLASS MANUFACTURER OR LEAD SMELTER**
- IF SENT TO OTHER TYPES OF RECYCLING, MAY BE EXCLUDED ON A CASE-BY-CASE BASIS**
- NO SPECULATIVE ACCUMULATION**

CRT RULE EXPORT REQUIREMENTS

■ CRTs EXPORTED FOR RECYCLING

- EXPORTER MUST SEND NOTIFICATION TO EPA 60 DAYS PRIOR TO EXPORT**
- NOTIFICATION MAY COVER EXPORT OVER A 12 MONTH OR LESSER PERIOD**
- EPA FORWARDS THE NOTIFICATION TO TRANSIT & IMPORTING COUNTRIES**
- EPA NOTIFIES EXPORTER OF CONSENT OR DENIAL BY COUNTRIES**
- EXPORT CANNOT PROCEED WITHOUT CONSENT OF COUNTRIES INVOLVED**
- SAME PACKAGING & LABELING REQUIREMENTS AS IF DOMESTIC SHIPMENT**
- NO SPECULATIVE ACCUMULATION**

CRT RULE EXPORT REQUIREMENTS

- INTACT CRTs EXPORTED FOR REUSE**
 - EXPORTER MUST SEND A ONE-TIME NOTIFICATION TO EPA OR THE STATE**
 - EXPORTER'S CONTACT INFORMATION**
 - STATEMENT OF INTENT TO EXPORT**
 - EXPORTER MUST KEEP BUSINESS RECORDS FOR 3 YEARS DEMONSTRATING EXPORT FOR LEGITIMATE REUSE/REFURBISHMENT**