

# U-M's Pollution Prevention Program

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# Outline



- P2, OSEH, and the University
- Regulated vs. Non-Regulated
- Program Areas
  - Bulbs
  - Consumer Electronics
  - Mercury
  - Waste Minimization/Reduction

# P2, OSEH, and the University



- Compilation of numerous P2 initiatives throughout Ann Arbor campus
- Evolved from regulatory concerns with hazardous waste
- Some areas blend with other programs on campus
  - Energy Conservation
  - Grounds and Waste Management
  - Pest Management
  - Transportation Services
  - Recreational Sports and Athletics

# Regulated vs. Non-regulated



## *Regulated Programs - Universal Wastes*

- Specific types of hazardous waste generated by industries, businesses, agencies, hospitals, and other waste generators whose management has chosen to handle in an alternative manner identified in R299.9228 in place of the hazardous waste requirements.

## *Non-regulated Programs – Waste Reduction*

- Chemical redistribution
- Green chemistry initiatives

# Universal Waste



Universal Wastes are particular waste streams that have been granted permission, by federal or state regulators, to be recycled under less stringent requirements.

## *Advantages to not being classified as Hazardous Waste*

- Can reduce costs associated with disposal by recycling
- Longer accumulation time (up to one year)
- Less labeling required for storage compared to hazardous waste

# Program Areas – Electric Lamps



Universal Waste – Fluorescent bulbs, HID's, sodium vapor, mercury vapor, neon, and incandescent lamps. Also CRTs

Hazardous Material – Mercury

## Requirements

- Placed in suitable containers
- Labeled with location, date, number and type
- Stored in dry area
- Transferred to pick-up locations

# Program Areas – Consumer Electronics



Universal Waste – Any type of equipment containing circuit boards

Hazardous Materials – Lead, mercury, beryllium, cadmium, batteries, toner, phosphor compounds, PCBs and brominated fire retardants

## Requirements

- Transferred to Property Disposition\*
- Placed in suitable containers
- Labeled with location and date
- Stored in dry area

# Why Consumer Electronics?



- The National Safety Council projects that nearly 250 million computers will become obsolete in the next five years and mobile phones will be discarded at a rate of 130 million per year by 2005.
- According to various reports, electronics comprise approximately 1 – 4 percent of the municipal solid waste stream.
- The average lifespan of PC's is falling from 4.5 years in 1992 to an estimated 2 years in 2005.

# Program Areas – Mercury Elimination



Universal Waste (If contained in original package/  
equipment) – Thermometers, manometers, switches, etc

Hazardous Material – Mercury

## Requirements

- Placed in suitable containers
- Labeled with location, date, number and type
- Stored in dry area
- Transferred to pick-up locations

# Program Areas – Waste Minimization/Reduction



- Chemical Redistribution
- Waste Minimization
  - Reduction
  - Substitution
  - Recycling
- Green Chemistry
  - 12 Principles

# Review



OSEH's P2 program is primarily responsible for developing innovative methods for reducing or recycling regulated wastes...

...however, we are committed to overall reducing the University's impact to the environment.

Questions?