MERCURY- CONTAINING LAMP RECYCLING

2007 ENERGY STAR® Lighting Partner Meeting
March 12-14, 2007
Sponsored by Georgia Power
Brought to you by the Lamp Recycling Outreach Project (LROP) Partners:

The Association of Lighting and Mercury Recyclers

The National Electronic Manufactures Association

The Solid Waste Association of North America
Historical Lamp Disposal Problem

EPA Goal = 80% Recycling
Increasing CFL usage
Many People Handle Lamps

- Janitors
- Maintenance workers
- Truck drivers
- Trash handlers, etc.
500 million lamps per year
Break in the Solid Waste
Federal Statutes for Lamps

LAW: Resource Conservation & Recovery Act (RCRA) Major federal solid & hazardous waste law

REGULATIONS: Subtitle C of RCRA Regulations
- Imposes strict regulations for disposal of hazardous waste
- Code of Federal Regulations (CFR) 260-279
The Universal Waste Rule

- Part of Subtitle C
  - Code of Federal Regulation (CFR) 273
- Creates alternative to hazardous waste handling when lamps are RECYCLED!
  (in addition to batteries, thermostats and pesticides, devices and CRTs)

See Federal Register Vol. 64, No. 109, p.30434, June 8, 1999
Exemptions from Federal Hazardous Waste Laws

- Residential Households
- Conditionally Exempt Generators (CESQG)
  - Businesses generating no more than 100kg of hazardous waste per month
    - If 4’ fluorescent lamps, this could be 350-450 lamps
- Toxicity Characteristic Leachate Procedure (TCLP) Test
Important to Remember!

State Laws- Stringency

- Many states have stricter requirements
- and have the final word!
- A number of states have banned all mercury products from disposal - no matter what the source
WHAT IS State STRINGENCY?

• In the area of spent lamps, over half of the 50 states have standards that are more stringent. This is why we encourage you to make sure you know what is required in your state.

• In the area of hazardous and universal waste management, the EPA has developed minimum standards, which include some exemptions for waste and some for generators.

• While federal policy allows certain mercury-containing lamps to be landfilled, many the states prohibit this.
States that require wastes from CESQGs to be managed as HW
The changing landscape
Recycling Mercury-Containing Lamps is Easy

- Modern facilities & programs exist to safely contain and recover mercury from lamps
Cost to Recycling Mercury-Containing Lamps

- Pricing is competitive
- Based on volume
- $0.25-0.50 per lamp for many types
- Comprehensive services can be included
- Who pays is big concern for consumer lamps
Lamp Recycling Process

WASTE FLUORESCENT LAMPS

LAMP PROCESSING DEVICE

COMPONENT SEPARATOR

POWDER  METAL  GLASS

Hg  Al

THERMAL RETORT

Hg (99.999%)  Calcium Phosphate

RECYCLE
Lamp Recycling

- Smaller users:
  - “box program”
    - container is provided and when full it can be sent to any recycler via ground mail shipment.
    - prepaid program and
    - labels and shipping papers are provided.
Lamp Recycling Cont’d

- Business users:
  - Pick-ups arranged from the facility, in trailer loads, if needed.
  - Transport lamps to accumulation facilities throughout the country, where they are consolidated for shipment to destination facilities.
  - There are numerous collection locations around the country that ship large quantities of lamps to recycling “Destination Facilities” (state authorized recyclers) every day.
Lamp Recycling Cont’d

- Individuals can also take lamps to any locally operated household waste facility in their community.
- For a list of community programs see [www.earth911.org](http://www.earth911.org)
- This will increase with CFL use
Certificate of Recycling

Recycler’s Certification

- Total weight material received
- Date
- Confirmation that material was processed "in accordance with all state & federal laws"
Proper Management

- It’s easier to properly manage spent lamps than before…
- Nationally, movement is growing to require recycling for all mercury lamps
Resources

Find just about any information there is

- www.lamprecycle.org
- www.almr.org

- And each of these has plenty of links with state-specific requirements
Please recycle!

Do your part to keep the mercury from lamps out of the environment.