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# **PSEG Universal Waste Best Management Practices**

**Presentation at the  
NJDEP Universal Waste Seminar**

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## **BATTERIES - examples**

- PSEG universal waste batteries include:
  - Lead-acid (substation power backup, fleet vehicles, tools, relay applications, radio shop, construction equipment, forklifts, signs, trailers, electronics)
  - Nickel-cadmium (recloser controls, rechargeable tool battery packs, cell phones, portable radios)
  - Nickel metal hydride (meters, cameras, cellphones)
  - Lithium (meters, cameras, cell phones, electronics)
  - Mercury (miscellaneous small quantities)



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## BATTERIES - alkaline

- Alkaline batteries are not considered universal waste
  - Can be disposed of in normal trash; however,
  - Employees encouraged to recycle using designated collection containers
- Reminder that dry batteries greater than 9 volts must be protected from short-circuits during transportation (see 1/14/2009 DOT rulemaking, revised Special Provision 130, and DOT Letter of Interpretation dated 1/8/2010)



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## **BATTERIES** – labelling/marketing

- Label each battery, the container, pallet, or the shrink-wrap around the pallet
- Date each battery, or date of the oldest battery on the container or shrink-wrap label





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## **BATTERIES - shipping**

- Contain damaged or cracked lead-acid batteries in an overpack container, in order to still manage them as universal waste
- Ship to battery reclaimer using DOT exemption for lead-acid batteries (49 CFR 173.159(e)):
  - No other hazmat in vehicle
  - Block and brace
  - Protect against short-circuit
  - Vehicle is for shipper's exclusive use



# BATTERIES – due diligence

- Make sure you validate that your batteries are being recycled
  - Visit the recycler
  - Third-party audit
  - Inspection history (NJDEP Data Miner, other out-of-state equivalent such as PADEP eFACTS Facility Info Search, EPA Enforcement & Compliance History Online (ECHO) )
- PSEG has corporate contract
  - All universal wastes
  - Milk-run shipments used (more cost-effective)
  - Batteries sent to smelters



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# PESTICIDES

- PSEG does not use this provision of the universal waste regulations
- These services are contracted out and the products used belong to the contractor, as they are the licensed applicators



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## LAMPS - examples

- Fluorescent lamps (including CFLs)
- Street lights (High Pressure Sodium, Mercury Vapor or Metal Halide – presently considering replacement with LED technology)
- Incandescent lamps



# LAMPS – labelling/marketing

- Place streetlights in gaylords at central collection facility
- Place fluorescent lamps in tubes
- Label and date each container
- Keep containers closed

A purple rectangular label with white text. The top half contains the words 'UNIVERSAL WASTE' in large, bold, white capital letters. Below this, there are five horizontal lines for text entry, each preceded by a label: 'SHIPPER', 'ADDRESS', 'CITY, STATE, ZIP', 'CONTENTS', and 'ACCUMULATION START DATE'. At the bottom right corner of the label, there is a small URL: 'www.accuform.com • number 802018'.



## LAMPS - shipping

- Not regulated by DOT
- Protect against breakage
- Have mercury spill cleanup kits nearby
- Cleanup and containerize broken lamps before shipping



## LAMPS – due diligence

- Make sure you validate that your lamps are being recycled
  - Visit the recycler
  - Third-party audit
  - Inspection history (NJDEP Data Miner, other out-of-state equivalent such as PADEP eFACTS Facility Info Search, EPA ECHO)
- PSEG has corporate contract
  - All universal wastes
  - Milk-run shipments used (more cost-effective)
  - Lamps are demanufactured and separated into their components of glass, metal and mercury



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## MERCURY-CONTAINING EQUIPMENT examples

- Natural gas regulators
  - Older vintages only
  - Newer versions are mercury-free
- Thermostats
  - Older vintages only
  - Newer versions are mercury-free
- Manometers
- Switches / devices



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## MERCURY-CONTAINING EQUIPMENT labelling/marketing

- Individual plastic bag for each thermostat in case of breakage
- Place in 55-gallon drum at central collection facility
- Label each drum as “Universal Waste – Mercury-Containing Equipment” (note the revised description) with the date that the first piece was placed in the container



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## MERCURY-CONTAINING EQUIPMENT packaging/shipping

- Calculate the amount of mercury in each package
- If  $\geq 1$  pound, then the shipment is DOT-regulated:
  - Use proper shipping name “RQ Mercury Contained in Manufactured Articles”
  - Follow 49 CFR 173.164(c)(1) specification packaging exemption
    - For manufactured articles or apparatus of which metallic mercury is a component part, such as manometers, pumps, thermometers, switches, etc.
    - Must be in strong outer packagings, having sealed inner liners or bags of strong leakproof and puncture-resistant material impervious to mercury, which will prevent the escape of mercury from the package irrespective of its position
  - Mercury switches and relays are excepted from the above packaging requirements if they are totally enclosed, leakproof and in sealed metal or plastic units



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## MERCURY-CONTAINING EQUIPMENT due diligence

- Make sure you validate that your mercury-containing equipment is being recycled
  - Visit the recycler
  - Third-party audit
  - Inspection history (NJDEP Data Miner, other out-of-state equivalent such as PADEP eFACTS Facility Info Search, EPA ECHO)
- PSEG has corporate contract
  - All universal wastes
  - Milk-run shipments used (more cost-effective)
  - Mercury recovered by recycler



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# OIL-BASED FINISHES

- A small or large quantity universal waste handler shall use an NJDEP-licensed solid or hazardous waste transporter per NJAC 7:26-3.2(a) or NJAC 7:26G-7.2(a), respectively, to ship the oil-based finishes to a RCRA-permitted TSDF
- A hazardous waste manifest per 40 CFR 262.20(a)(1) is not required
- The RCRA-permitted TSDF shall recycle the oil-based finishes, with processing for reuse or burning for energy recovery (either on-site or off-site) acceptable as recycling per EPA 530-E-00-001d "Safe Hazardous Waste Recycling" dated October 2000



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# CONSUMER ELECTRONICS

## examples

- Computers, keyboards, mice
- Monitors (CRT, flat panel)
- Printers
- Copiers
- Fax machines
- Photocells from street lights
- TVs, VCRs
- Cellphones, Blackberrys
- Poletop solar panels



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## CONSUMER ELECTRONICS labelling/marketing

- Label each piece of equipment (or container that it/they are in) “Universal Waste – Consumer Electronics”
- Remember that if you are still evaluating a piece of equipment for use, it is not a waste yet (i.e. computers for donation or sale)



# CONSUMER ELECTRONICS shipping

- Not regulated by DOT
- Remember to differentiate from DOT-regulated hazmat if on the same shipping paper



# CONSUMER ELECTRONICS due diligence

- Make sure you validate that your consumer electronics are being recycled
  - Visit the recycler
  - Third-party audit
  - Inspection history (NJDEP Data Miner, other out-of-state equivalent such as PADEP eFACTS Facility Info Search, EPA ECHO)
- PSEG has corporate contract
  - All universal wastes
  - Milk-run shipments used (more cost-effective)
  - Shipped to domestic facility where equipment is shredded and sorted into its secondary material components
  - No shipments overseas
- E-waste is an inspection priority for EPA



# QUESTIONS?

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