



PSEG

We make things work for you.

We make things more reliable.



PSEG Universal Waste Best Management Practices

**Presentation at the
NJDEP Universal Waste & Used Oil Seminar
May 6, 2009**

**By Don Bowman & Dave Potts
PSEG Environment, Health & Safety**



PSEG
We make things work for you.

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)



PSEG
We make things work for you.

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 January 14, 2009 DOT rulemaking clarifies that dry batteries must be protected from short-circuits during transportation (see revised Special Provision 130) – mandatory compliance beginning January 1, 2010



PSEG
We make things work for you.

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





PSEG
We make things work for you.

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



PSEG

We make things work for you.

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



PSEG

We make things work for you.

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'.



PSEG
We make things work for you.

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



PSEG

We make things work for you.

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



PSEG
We make things work for you.

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



PSEG
We make things work for you.

MERCURY-CONTAINING EQUIPMENT packaging/shipping

- Calculate the amount of mercury in each package
- If ≥ 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



PSEG

We make things work for you.

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



PSEG

We make things work for you.

OIL-BASED FINISHES

- No Class D facilities currently permitted by NJDEP to accept and manage oil-based finishes as universal waste
- PSEG manages these as hazardous waste until such time



PSEG

We make things work for you.

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 (future – TBD)



PSEG

We make things work for you.

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



PSEG
We make things work for you.

QUESTIONS?

- Don Bowman
Environmental Policy Manager – Waste
(856) 224-1640 donald.bowman@pseg.com
- Dave Potts
Resource Recovery Manager
(856) 224-1635 david.potts@pseg.com

