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)
• 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)
BATTERIES – labelling/marking

• 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
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
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
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/marking

- Place streetlights in gaylords at central collection facility
- Place fluorescent lamps in tubes
- Label and date each container
- Keep containers closed
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
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
MERCURY-CONTAINING EQUIPMENT labelling/marking

• 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
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
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
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.
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
• 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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