

SUMMARY OF UNIVERSAL WASTE HANDLING REQUIREMENTS

Federal, New Jersey, New York

CYCLE CHEM, Inc.

The purpose of this guide is to explain the general requirements for universal generators in New Jersey and New York. It is not designed to be a definitive or comprehensive listing of every specific requirement or possible exemption. This guide covers the basic requirements only and does not discuss specifics behind waste determinations or exemptions nor does this guide discuss on site treatment requirements. While all attempts have been made to ensure the accuracy of this document the specific regulations should be consulted for definitive regulatory requirements.

Detailed inspection checklists listing the requirements and regulatory citations can be obtained from:
<http://www.nj.gov/dep/enforcement/hw-chklists.html>

2009 by:
Cycle Chem. Inc.
217 South First Street
Elizabeth, NJ 07206
Phone 908-355-5800

UNIVERSAL WASTES

A generator may choose to manage these wastes either under the universal waste regulations or under the hazardous waste regulations.

The universal waste regulations are a relaxed management standard for specific types of hazardous waste. These materials are firstly RCRA hazardous wastes then universal waste. If a material is not a RCRA hazardous waste then it cannot be considered universal waste. The universal waste standards are designed for reduced handling requirements for low hazardous article type materials.

- An used item becomes a waste on the date it is discarded {ie no longer usable}.
- A new/unused item becomes a waste on the date it was decided to discard.

The Federal EPA recognized four types of universal waste.

- *Batteries*: “a device consisting of one or more electrically connected electrochemical cells that is designed to receive, store, and deliver electric energy.” These are typically hazardous for corrosives {D002} or metals {lead-D008, cadmium-D006, mercury-D009}
- *Lamps*: “the bulb or tube portion of an electric lighting device. A lamp is specifically designed to produce radiant energy, most often in the ultraviolet, visible, and infrared regions of the electromagnetic spectrum” These bulbs may include fluorescent, and high-intensity discharge, mercury vapor. These are typically hazardous for mercury-D009.
- *Mercury-containing equipment*: “a device or part of a device (including thermostats, but excluding batteries and lamps) that contains elemental mercury integral to its function.” If the mercury is in the device accidentally, or if the device has been contaminated by an external source of mercury, the device may not be managed as universal waste. These are typically hazardous for mercury-D009.
- *Pesticides*: This includes only recalled pesticides collected under a government operated collection operations.

The individual states are allowed to designate other materials as universal waste. New Jersey has designated two additional materials while New York and not.

- *Consumer electronics {NJ only}*: devices run by electricity containing circuit boards commonly found in offices and homes such as computers, printers, fax machines, telephones, printers, televisions, etc.
- *Oil based finishes {NJ only}*: This included paints, varnishes etc. but is only applicable for oil based finishes that are recycled. At present recycling options are limited and specifically does not include burning for energy recovery.

Handler Classification

Universal Waste Handlers include waste generators and facilities consolidating universal waste for shipment to a destination facility for recycling, treatment, or disposal. Universal Waste Handlers may not treat universal waste. Universal Waste Handlers cannot dispose, dilute or treat universal waste.

Note that this universal waste treatment prohibition does not preclude RCRA waste treatment providing material is handled as a RCRA hazardous waste. Example is bulb crushing.

Do not confuse the universal waste handler categories with the hazardous waste generator status levels of small quantity generator and large quantity generator.

Small quantity handler of universal waste

A small quantity handler of universal waste cannot store more than 5,000 kilograms of all types of universal waste at any one time.

- Is not required to get a site identification number specifically for universal waste activity.
- Is not required to keep a record of universal waste shipments

A four foot fluorescent lamp weights about 0.66 lbs so it will take around 16666 four foot lamps to reach the Large Quantity Handler category. The actual number of bulbs will depend on the brand and length of bulbs.

For a 40 lb. car battery it will take 275 batteries to reach the large quantity handler category.

This calculation is based on the total of all types of universal wastes accumulated collectively in storage.

Large quantity handler of universal waste

A Large quantity handler is a handler whom store more 5,000 kilograms of all types of universal waste, calculated collectively, at any one time.

- Is required to get a site identification number for universal waste activity
- Is required to keep records of universal waste shipments

The calculation is based on the total of all types of universal wastes accumulated collectively in storage.

This designation as a large quantity handler of universal waste is retained through the end of the calendar year in which the 5,000 kilogram limit is met or exceeded.

General Handler Requirements for all type waste

Both Small & Large Handlers

Storage, accumulation & time limits

Universal waste handlers can accumulate universal waste for up to one year. Universal waste handlers whom accumulates universal waste must be able to demonstrate the length of time that the universal waste has been accumulated from the date it becomes a waste. This can be demonstrated as follows:

- Mark the container, or individual item, with the earliest date that the item became a waste.
- Maintaining an inventory system identifying the date the item, or group of items became a waste.
- Placing the items in a specific accumulation area and identify the earliest date that any item in the area became a waster.
- Any other method which clearly demonstrates length of time.

EPA does not require universal waste to be managed in a specific area (e.g., satellite accumulation point or accumulation area); however, containers (including tanks and transport vehicles) for universal wastes must be structurally sound; compatible with the waste; and have no evidence of leaks, spills, or damage that could cause leaks under reasonably foreseeable conditions.

Response to releases

A universal handler must manage release for spills or broken items as follows.

- Immediately contain all releases of universal wastes and residues.
- Determine whether any material resulting from the release is hazardous waste, and if so, must manage the hazardous waste

Off site shipments

A Universal Waste Handler must send universal wastes off site as follows:

- Must send to another universal waste handler, a destination facility, or a foreign destination.
- If the shipment of universal waste is rejected by the receiving facility, the originating handler must either:
 - a) Receive the waste back when notified that the shipment has been rejected, or
 - b) Arrange with the receiving facility on a alternate destination facility.

Small handler additional requirements

Small Quantity Handler of Universal Waste means a universal waste handler whom does not accumulate more than a total of 5,000 kilograms of all types of universal waste (batteries, pesticides, mercury-containing equipment, or lamps, calculated collectively) at any time.

- Is not required to notify EPA of universal waste handling activities.
- Must inform all employees who handle or have responsibility for managing universal waste the or the proper handling and emergency procedures appropriate to the type(s) of universal waste handled at the facility.
- Is not required to keep records of shipments of universal waste.

The designation as a large quantity handler of universal waste is retained through the end of the calendar year in which the 5,000 kilogram limit is met or exceeded.

Large handler additional requirements

Large Quantity Handler of Universal Waste means a universal waste handler whom accumulates 5,000 kilograms or more than a total of all types of universal waste (batteries, pesticides, mercury-containing equipment, or lamps, calculated collectively) at any time.

Id Number

A large quantity handler is required to get a EPA site identification number before meeting or exceeding 5,000 Kg [11,000 lbs] of universal waste. A large quantity handler whom has already notified EPA of his hazardous waste management activities and has received an EPA Identification Number is not required to renotify under this section.

Recordkeeping/ Tracking universal waste shipments

A large quantity handler must maintain documentation of their universal waste shipments for at least three years. This documentation can take the form of a bill of lading, a manifest, invoice, a log or other shipping document. The following must be recorded:

- Name and address where the waste or where it was shipped to.
- Quantity of each waste type (e.g. batteries, electric lamps, pesticides, or mercury containing devices) shipped out.
- Date when shipment was shipped.

Employee Training

A large quantity handler of universal waste must ensure that all employees are thoroughly familiar with proper waste handling and emergency procedures, relative to their responsibilities during normal facility operations and emergencies.

For NJ Only

A large quantity handler of universal waste shall submit a report to the Department in the form of a letter, by March 1st, of the types and amounts of universal waste which were received, stored and shipped in the preceding calendar year. The report shall also indicate the municipality of origin of

New York

In 2005, stringent management standards for low mercury, or green-tip, lamps, which often pass the TCLP test but are not actually mercury-free, became effective in New York State under the "Mercury-Added Consumer Products Law", Chapter 145 of New York's Laws of 2004 ("Chapter 145"). This law requires that all "low mercury", or "green end cap", fluorescent lamps be stored and delivered intact (i.e., not cracked or broken) to a recycler or other authorized facility. The law also prohibits generators or waste collectors from disposing of any mercury-added consumer products, including lamps, to an incinerator or other facility where wastes are burned for energy. Under the new law, only small businesses that have 100 or fewer employees (total for all locations) and discard no more than fifteen green end cap lamps per month are exempt from these requirements.

any universal waste that was shipped out-of-State for recycling. This report shall be submitted to the following address:

Universal Waste Project Manager
New Jersey Department of Environmental Protection
Solid and Hazardous Waste Management Program
401 East State Street
PO Box 414
Trenton, NJ 08625-0414

Bulbs/Lamps

Description

Universal waste lamps/bulbs are bulbs that typically contain toxic heavy metals, such as lead and mercury, at levels that can exceed hazardous waste limits. These include:

- Fluorescent bulbs, which include linear, U-tube and circline fluorescent tubes, bug zappers, tanning bulbs, black lights, germicidal bulbs, high output bulbs, cold-cathode fluorescent bulbs, and compact fluorescent bulbs;
- High intensity discharge bulbs, which include metal halide, ceramic metal halide, high pressure sodium, and mercury vapor;
- Mercury short-arc bulbs; and
- Neon bulbs.

Fluorescent bulbs: Commonly used as overhead lighting in offices, and compact shapes for home and office. There are no completely mercury-free fluorescent lamps, but some have a reduced amount of mercury or contain a chemical that binds with the mercury to reduce its mobility. Bulbs managed as universal waste are only those that would otherwise be hazardous for mercury.

Mercury vapor/ Metal halide/High-pressure sodium-vapor bulbs: These are the high-intensity discharge (HID) lamps commonly found as outdoor lights or in large open warehouses. Mercury vapor lamps are blue/white light while sodium vapor lamps are yellowish in color.

Low-pressure sodium vapor bulbs are orange HID lights used primarily in commercial settings.

Neon bulbs: These may be small 'red' indicator bulbs or 'neon signs' of multi colors. The small 'red' neon indicator lamps typically do not contain mercury while the 'neon signs' may contain mercury, lead and other metals. However not all 'Neon signs' contain mercury and the actual composition depends upon color and construction methods. The mercury/metals content of any neon bulbs should be verified before disposing in trash. Verification is not necessary if managed as hazardous or universal wastes.

Note on 'Green Tip' Bulbs

All fluorescent bulbs contain some level of mercury. Some bulbs are manufactured with lower levels of mercury that are not considered hazardous by RCRA TCLP. The National Electrical Manufacturers Association (NEMA) standard designated these low mercury bulbs with green tips.

However, this is a voluntary and non-enforceable standard and only relevant if the bulbs are being disposed of as non-hazardous waste. The RCRA hazardous waste requirements require a generator to determine whether or not their solid waste is a hazardous waste. This determination can be made either by applying knowledge of the waste, or testing a representative sample of the waste. Methods can include TCLP data from manufacture {see appendix for some web sites} or other manufacture information

Mercury containing waste lamps may be considered hazardous waste under the Resource Conservation and Recovery Act (RCRA) Subtitle C. To determine whether or not a waste lamp is considered a hazardous waste, the Toxicity Characteristic Leaching Procedure (TCLP) test for mercury is performed. TCLP is a laboratory procedure that is designed to estimate the leaching potential of a waste when it is disposed of in a municipal solid waste landfill. If the leachate produced by the TCLP test contains 0.2 mg/L of mercury, or more, the waste is considered hazardous by the Environmental Protection Agency (EPA).

Caution: Regulatory agencies generally do not officially recognize 'green tip' lamps as universally non-hazardous. EPA does not have a separate policy regarding the disposal or recycling of "green tip" lamps. It is up to the individual generator to demonstrate the non-hazardous nature of these bulbs if they are being disposed.. The general statement 'their green tipped everybody knows there not hazardous' is not sufficient. This demonstration does not need to be done if the lamps are being handled as hazardous or universal waste.

Storage

The handling and storage of universal waste lamps/bulbs must be managed in a way that prevents releases of any universal waste or component of a universal waste to the environment, as follows:

- Bulbs/lamps must be stored in containers/packages that are structurally sound, adequate to prevent breaks, and compatible with the contents of the lamps.
- The containers/packages must remain closed and have no evidence of leaks, spills, or damage that could cause leaks under reasonably foreseeable conditions.
- Any lamps/bulbs that is broken or that shows evidence of breakage, leakage, or damage that could cause the release of mercury or other hazardous constituents to the environment immediately clean up and place in a container.

Allowable Activities

Only handling/storage activities are allowed for bulbs/lamps classified as universal waste. The intentional crushing {bulb crushers} of lamps is considered hazardous waste treatment and crushed bulbs/lamps must be managed as hazardous waste.

Labeling Requirements

Each lamp or a container or package in which such lamps are contained must be labeled or marked clearly with one of the following phrases:

- Universal Waste—Lamp(s)
- Waste Lamp(s)
- Used Lamp(s)

Consumer Electronics

For NJ Only

Description

"Consumer electronics" means any appliance used in the home or business that includes circuitry. Consumer electronics includes the components and sub-assemblies that collectively make up the electronic products and may, when individually broken down, include batteries, mercury switches, capacitors containing PCBs, cadmium plated parts and lead or cadmium containing plastics. Examples of consumer electronics include, but are not limited to, computers, printers, copiers, telefacsimiles, VCRs, stereos, televisions, and telecommunication devices.

Storage

The handling and storage of universal waste consumer electronics must be managed in a way that prevents releases of any universal waste or component of a universal waste to the environment, as follows

- Any consumer electronic that shows evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions must be placed in a container.
- The container shall be closed, structurally sound, compatible with the contents of the consumer electronics, and shall lack evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions.

Consumer electronics that are complete articles such as computers, CRT's etc may be stored on pallets or other open packaging provided they are intact and do not show signs of damage.

Allowable Activities

Small Quantity Handlers Only

A small quantity handler of universal waste may disassemble ("demanufacture") consumer electronics into its marketable components but cannot process or treat these components (examples: including, but not limited to, crushing, shredding or thermally altering) Any waste generated as a result of demanufacturing must be determined whether or not exhibits a characteristic of hazardous waste and handle accordingly.

Large Quantity Handlers Only

A large quantity handler of universal waste may not conduct disassembling ("demanufacturing") or processing (examples: including, but not limited to, crushing, shredding or thermally altering) activities on consumer electronics. A large quantity handler in New Jersey who wants to demanufacture or process consumer electronics must apply for a Class D Approval.

Note: Companies that are strictly refurbishing electronics for resale or donation do not need an approval to operate. These facilities are only handling products that are still usable and are therefore not regulated by the Department. However, if the company will be storing any unusable electronics, they would be regulated as a universal waste handler.

Labeling Requirements

When managing as universal waste, label the container with either of the following:

- Universal Waste Electronics
- Universal Waste Consumer Electronics

For NY Only

New York does not currently recognize 'consumer electronics' as an universal waste. However NY considers discarded electronics to contain sufficient quantities of scrap metal parts that they can be regarded as scrap metal themselves, and, thus, would be exempted from regulation (scrap metal exemption) as hazardous waste provided the following conditions are met:

- *Prior Notification* [6 NYCRR371.1(c)(7)]: Non Conditionally Exempt Small Quantity Generator Hazardous Waste generators are required to submit a "c7" notification to DEC. The "c7" notification gives certain basic information, such as the locations of generating and receiving facilities.
- *Scrap metal must ultimately be recycled.* The scrap metal exemption requires that scrap metal pieces actually be reclaimed from the hazardous electronics and that they be recycled.

The EPA considers printed circuit boards [and "bare" cathode ray tubes (CRT's)] scrap metal (unless certain batteries and certain mercury-containing switches are present on the boards). If the individual scrap metal pieces within the CRTs are ultimately reclaimed, these bare CRTs qualify for the scrap metal exemption, at least until the scrap metal pieces are separated from the glass.

Electronic products that are directly resold or even donated for continued use are not considered to be discarded. Nonworking electronic products that are serviced by repair shops and then returned to the user are not considered to be wastes, but all other nonworking electronic products must be managed as wastes.

Note that the scrap metal exemption cannot apply to a part separated from the whole component unless that separated part independently contains scrap metal pieces that will ultimately be reclaimed. For example, an all-plastic case that was separated from a computer monitor could no longer qualify for the scrap metal exemption, nor could cathode ray tube (CRT) glass, once the scrap metal pieces have been separated from the glass. An item which qualifies as hazardous scrap metal is still a hazardous waste. It is merely exempted from regulation

Mercury Containing Equipment

Description

Mercury-containing equipment means a device or part of a device that contains elemental mercury integral to its function. Examples include: thermostats, thermometers, manometers and electric switches (but excluding batteries and lamps).

Many of these devices with an open original housing are designed to be sealed for transportation in a way that prevents mercury escape because it is likely that during their lifecycles, they will have to be moved from one location to another. If, however, the device cannot be sealed in such a way to prevent release of mercury to the environment during universal waste accumulation and transportation, it is not eligible for management in the universal waste program because it cannot meet the management standards in §§ 273.13 and 273.33

Integral to its function is key in identifying items that can be managed as mercury containing equipment universal waste. This precludes such items as mercury flasks, contaminated debris or other similar items.

Storage

The handling and storage of mercury-containing equipment must be managed in a way that prevents releases of any universal waste or component of a universal waste to the environment, as follows.

- Any mercury-containing equipment that shows evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions must be placed in a container.
- The container shall be closed, structurally sound, compatible with the contents of the consumer electronics, and shall lack evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions and must be reasonably designed to prevent the escape of mercury into the environment by volatilization or any other means.

Allowable Activities

Removing Mercury Ampoules

Both Large and Small handlers may remove mercury-containing ampoules only under the following conditions:

- Ampoules are removed and managed in a manner designed to prevent breakage and only over or in a containment device (e.g., a tray or pan) sufficient to contain any mercury released from an ampoule in case of breakage.
- A mercury cleanup system is readily available to immediately transfer any mercury resulting from spills or leaks from broken ampoules, from the containment device, to a container.
- Any spilled or leaked mercury from broken ampoules is transferred immediately from the containment device to a container.
- The area in which ampoules are removed is well-ventilated and monitored to ensure compliance with applicable OSHA exposure limits for mercury.
- Employees removing ampoules are thoroughly familiar with proper waste mercury handling and emergency procedures, including transfer of mercury from containment devices to appropriate containers.
- Removed ampoules are stored in closed, nonleaking containers that are in good condition.
- Removed ampoules are packed in a container with packing materials adequate to prevent breaks during storage, handling, and transportation.
- Must determine whether the mercury or cleanup residues resulting from spills or leaks and/or other solid waste generated as a result of removing ampoules exhibits a hazardous waste characteristic.

Mercury Equipment without Ampoules

Some equipment contains mercury in non-ampoule 'open' housings. Examples include pressure measuring devices, such as barometers and manometers that contain mercury in a tube that is open

New York
The NY rules currently only recognizes thermostats as mercury containing devices. Enforcement policy CP-39 addresses this issue by: This Policy authorizes the exercise of the Department's prosecutorial discretion to not enforce the limitations in New York State's current hazardous waste regulations of Title 6 New York Codes of Rules and Regulations (6 NYCRR) for the management of MCE waste, as defined in 40 CFR Part 273, provided that there is compliance with the newly adopted USEPA MCE waste regulations in 70 FR 45507-45522 (August 5, 2005).

at one end. A handler of universal waste can remove the open original housing holding the mercury from universal waste mercury-containing equipment provided the handler:

- Immediately seals the original housing holding the mercury with an air-tight seal to prevent the release of any mercury to the environment; and
- Follows all requirements for ampoules management.

It the mercury housing cannot be sealed in such a way to prevent release of mercury to the environment during storage and transportation is must be managed as hazardous waste.

Labeling Requirements

Universal waste mercury containing equipment labeled or marked clearly with any one of the following phrases:

- Universal Waste—Mercury-Containing Equipment
- Waste Mercury-Containing Equipment
- Used Mercury-Containing Equipment

Batteries

Description

Battery means a device consisting of one or more electrically connected electrochemical cells which are designed to receive, store, and deliver electric energy. An electrochemical cell is a system consisting of an anode, cathode, and an electrolyte, plus such connections (electrical and mechanical) as may be needed to allow the cell to deliver or receive electrical energy. The term battery also includes an intact, unbroken battery from which the electrolyte has been removed.

Examples of Universal Waste {hazardous waste} Batteries

Battery Type	Common Name	Sizes Available	Examples of Use
Button	Mercuric Oxide, Silver Oxide, Lithium, Zinc-Air	Sizes vary	Watches, hearing aids, toys, greeting cards, remote controls
Lithium / Lithium Ion	Usually has "lithium" label on the battery	3V, 6V, button	Cameras, calculators, computer memory back-up, tennis shoes
Nickel-Cadmium (Rechargeable)	Either unlabeled or labeled "Ni-Cd"	AAA, AA, C, D, 6V, 9V	Flashlights, toys, cellular phones, power tools, computer packs
Sealed Lead Acid	"Gel," Dynasty, Gates, Panasonic, Yuasa	Mu2V, 6V, 12V	Video cameras, power tools, wheelchairs, ATV's, metal detectors, clocks, cameras
Lead Acid Vehicle	Autozone, Sears Die Hard, Yuasa	12V, 6V	Cars, trucks, motorcycles
Silver Oxide/Mercury	Panasonic Silver Oxide	Sizes vary	Watches, hearing aids, toys, greeting cards, remote controls

Examples of non- Hazardous {not universal waste} Batteries
{Still recyclable}

Battery Type	Common Name	Sizes Available	Examples of Use
Alkaline/ Reusable Alkaline Manganese/zinc	Coppertop, Alkaline	AAA, AA, C, D, 6V, 9V	Flashlights, calculators, toys, clocks, smoke alarms, remote controls
Carbon Zinc	"Classic", Heavy Duty, General Purpose, All Purpose, Power Cell	AAA, AA, C, D 6V, 9V	Flashlights, calculators, toys, clocks, smoke alarms, remote controls, transistor radios, garage door openers
Nickel Metal Hydride	Either unlabeled or labeled "Ni-Li" or "Ni-Hydride"	AAA, AA, C, D, 6V, 9V	Flashlights, toys, cellular phones, power tools, computer packs

Storage

The handling and storage of batteries must be managed in a way that prevents releases of any universal waste or component of a universal waste to the environment under reasonably foreseeable conditions, as follows.

- Placed into another container if showing signs of leaking or damage that could cause it to leak.

Allowable Activities

Both Large and Small handlers of universal waste batteries may conduct the following activities as long as the casing of each battery cell is not breached and remains intact and closed:

- Remove the electrolyte but the cells must be immediately closed after removal of the liquid.
- Sort the batteries by type.
- Mix the batteries into one container.
- Discharge batteries to remove the electric charge.
- Regenerate used batteries.
- Disassemble batteries or battery packs into individual batteries or cells.
- Remove batteries from consumer products.

Handlers who remove electrolytes from batteries, or who generate other solid waste (e.g., battery pack materials, discarded consumer products) as a result of the activities listed above, must determine whether the electrolyte and other solid waste exhibit hazardous waste characteristics.

Labeling Requirements

Label each battery or containers storing batteries with any of the following:

- Universal Waste-Battery(ies)
- Waste Battery(ies)
- Used Battery(ies)

Note for shipping a specific DOT proper shipping name may apply. Packages containing such batteries must be labeled with the proper DOT shipping name for transportation in addition to universal waste labeling. Examples include: 'Batteries, wet filled with acid', Lithium Batteries etc.

References, additional information

New Jersey Universal Waste information:

<http://www.nj.gov/dep/dshw/lrm/uwaste/uwindex.htm>

New York Universal Waste information:

Use of Enforcement Discretion for Discarded Mercury-Containing Equipment Policy (CP-39) <http://www.dec.ny.gov/chemical/8840.html>

Home page for 'special waste' including bulbs and electronic equipment: <http://www.dec.ny.gov/chemical/8480.html>

Mercury-Added Consumer Products Law: <http://www.dec.ny.gov/chemical/8512.html>

How to clean up a small mercury spill:

http://www.health.state.ny.us/environmental/chemicals/hsees/mercury/cleaning_up_a_small_mercury_spill.htm

Federal EPA Universal Waste information:

Home page: <http://www.epa.gov/epawaste/hazard/wastetypes/universal/index.htm>

Mercury lamp/thermometers cleanup guidance: <http://www.epa.gov/mercury/spills/index.htm#fluorescent>

Mercury Bulb Data:

GE TCLP bulb data: http://www.gelighting.com/na/business_lighting/education_resources/environmental/tclp_results.htm

Sylvania

<http://www.sylvania.com/Sustainability/EnvironmentalSustainability/ReductionofHeavyMetals/Mercury/default.htm>

Philips

http://www.lighting.philips.com/us_en/browseliterature/bulletins/fluorescent.php?main=us_en&parent=0&id=us_en_browse_literature&lang=en

Short Summary of Handler Requirements

Types of universal waste:

- Types: Batteries, Lamps/bulbs, Mercury containing equipment, Consumer Electronics {NJ only} and Oil based finishes {NJ only}
- A used item becomes a waste on the date it is discarded {ie no longer usable}.
- A new/unused item becomes a waste on the date it was decided to be discarded.

Small Quantity Handler Classification

Storage of not more than 5,000 kilograms of all types of universal waste, calculated collectively, at any one time.

- Is not required to get a site identification number specifically for universal waste activity.
- Is not required to keep a record of universal waste shipments but can only send to another universal waste handler, a destination facility, or a foreign destination.
- Can accumulate universal waste for up to one year but must document dating in some manner.
- Storage must be structurally sound; compatible with the waste; and have no evidence of leaks, spills, or damage that could cause leaks under reasonably foreseeable conditions.
- Release/spills or broken items must immediately be contained, cleaned up and hazardous waste determination.
- Must inform all employees who handle or have responsibility for managing universal waste of the proper handling and emergency procedures appropriate to the type(s) of universal waste handled at the facility

Large Quantity Handler Classification

Storage of more than 5,000 kilograms of all types of universal waste, calculated collectively, at any one time.

- Is required to get a site identification number for universal waste activity.
- Is required to keep records of universal waste shipments, sent only to another universal waste handler, a destination facility, or a foreign destination and maintain documentation of shipments & amounts for three years.
- Can accumulate universal waste for up to one year but must document dating in some manner.
- Storage must be structurally sound; compatible with the waste; and have no evidence of leaks, spills, or damage that could cause leaks under reasonably foreseeable conditions.
- Release/spills or broken items must immediately be contained, cleaned up and hazardous waste determination.
- Must ensure that all employees are thoroughly familiar with proper waste handling and emergency procedures, relative to their responsibilities during normal facility operations and emergencies.
- For NJ only file annual universal waste handling report with NJDEP.

Short Summary of Requirements

Bulbs/Lamps

- Only storage activities are allowed. Intentional crushing of universal waste lamps is not allowed.
- Labeling: Universal Waste—Lamp(s); Waste Lamp(s) or Used Lamp(s)

Consumer Electronics {For NJ Only}

- A small quantity handler of universal waste may disassemble ("demanufacture") consumer electronics into its marketable components but cannot processing or treat these components (examples: including, but not limited to, crushing, shredding or thermally altering).
- A large quantity handler of universal waste may not conduct disassembling ("demanufacturing") or processing (examples: including, but not limited to, crushing, shedding or thermally altering) activities on consumer electronics. A large quantity handler in New Jersey who wants to demanufacture or process consumer electronics must apply for a Class D Approval.
- Labeling: Universal Waste Electronics or Universal Waste Consumer Electronics
- For NY only: NY considers discarded electronics to contain sufficient quantities of scrap metal parts that they can be regarded as scrap metal themselves, and, thus, would be exempted from regulation (scrap metal exemption) as hazardous waste provided there is prior NY {c7} notification and the scrap metal is ultimately recycled.

Mercury Containing Equipment

- Intact mercury-containing ampoules can be removed following specific procedures.
- Equipment contains mercury in non-ampoule 'open' housings {ex. barometers, manometers} can have the mercury containing item removed providing it is immediately sealed to prevent release of mercury to the environment. Items that cannot be sealed are not universal waste.
- Labeling: Universal Waste—Mercury-Containing Equipment; Waste Mercury-Containing Equipment; Used Mercury-Containing Equipment

Batteries

- Handler can:
 - Remove the electrolyte but the cells must be immediately closed after removal of the liquid.
 - Sort the batteries by type.
 - Mix the batteries into one container.
 - Discharge batteries to remove the electric charge.
 - Regenerate used batteries.
 - Disassemble batteries or battery packs into individual batteries or cells.
 - Remove batteries from consumer products.
- Labeling: Universal Waste-Battery(ies); Waste Battery(ies); Used Battery(ies)