WasteStrategies

Zero Waste. Infinite impact.

Universal Waste Management Plan prepared for:

Neumann University

One Neumann Drive

Aston, PA 19014

Telephone: 610-558-5555

Plan Applicability:

The Pennsylvania Universal Waste Management Plan establishes the requirements that Neumann University's faculty and staff must meet in order to manage Universal Waste (UW) located on the University's campuses.

Date Submitted:

August 19, 2015

Developed by:

WasteStrategies

Table of Contents

1 Plan Goals and Objectives

1.1 Purpose

Neumann University is committed to managing its universal waste in the safest manner possible, with concern for the individual and the protection of the environment in accordance with all applicable Federal and State statutes. This Universal Waste (UW) Management Plan, as outlined in the following sections, outlines streamlined regulations for handling commonly generated, relatively low-risk hazardous wastes in compliance with universal waste regulations from the United States Environmental Protection Agency (EPA), the Pennsylvania Department of Environmental Protection (DEP), and local regulations.

1.2 Scope and Application

The requirements for the Universal Waste (UW) Management Plan are based upon the EPA regulations found in 40 CFR 273, and in the Pennsylvania Code found in 25 Pa Code 266b.

Universal wastes, as defined by the Pennsylvania regulations are those hazardous wastes which are "universal" to all work environments. Currently, the list of universal wastes consists of four categories of commercial products at the federal level and three more that are state-mandated. This program describes general management requirements for all universal wastes, and focuses on each universal waste with specific management requirements. These include prohibited and allowed activities, procedures for notification, management, labeling, accumulation time limits, training, and response to releases, shipping documentation, and record keeping.

Universal wastes in the Commonwealth of Pennsylvania include the following items:

- Fluorescent Lamps (Federally regulated)
- Mercury Containing Equipment (Federally regulated)
- Batteries (all rechargeable) (Federally regulated)
- Pesticides (Federally regulated)
- Oil-based Finishes (Regulated by the Commonwealth)
- Photographic Solutions (Regulated by the Commonwealth)
- Mercury Thermostats (Specifically regulated by the Commonwealth)

1.3 Exclusions

The following items are not covered by the requirements of this Universal Waste (UW) Management Plan:

1. **Oil-based finishes:**
    - That are not yet determined to be waste (either because they are in storage and still usable, or because a hazardous waste determination has not yet been completed).
    - That are not hazardous waste because it does not exhibit a characteristic for hazardous waste (i.e., it does not exhibit the characteristic for flammability).

2. **Photographic solutions:**
    - That are not yet determined to be waste (either because they are in accumulation/storage and still usable, or because a hazardous waste determination has not yet been completed).
    - That are not hazardous waste because it does not exhibit a characteristic for hazardous waste (i.e., it does not exhibit the characteristic for corrosivity or toxicity).
3. **Spent lead acid batteries being reclaimed**

1.4 Regulatory Authority

Title 40 CFR 273, Standards for Universal Waste Management

Title 25 Pa Code 266b, Standards for Universal Waste Management.

1.5 Implementation on Campus

Neumann University, and each of the individual shops and work areas located within the campus community, shall make every effort to maintain compliance with Small Quantity Handler of Universal Waste (SQHUW) standards found in this Universal Waste Management Plan.

Any work area generating universal waste must notify the Physical Plant, who will assign them a Storage Area.

2 Universal Waste (UW) Management Requirements

2.1 Responsibilities

2.1.1 Chemical Hygiene Officer (Dr. Matt Mastropaolo, Ph.D. Bachmann 349)

- Maintain records associated with universal waste shipments, including analytical results conducted on any containers or shipments.
- Periodically inspect accumulation areas to ensure containers are properly labeled, closed and not leaking or damaged.

2.1.2 Physical Plant

- Properly remove all universal wastes from the solid waste stream.
- Properly label each universal waste container or accumulation site.
- Ensure lids are closed except when universal wastes are being added or removed.
- Schedule and maintain regular shipments of universal wastes using a reputable vendor.
- Establish a central accumulation area for universal waste and separate collection containers for different types of batteries.
- Establish lamp accumulation sites across campus for the collection of fluorescent lamps and a monthly pickup schedule.
- Maintain records associated with any training or briefings for individuals who manage universal waste.

2.1.3 Departments

- Properly remove all universal wastes from the solid waste stream.
- Properly label each universal waste container or accumulation site.
- Ensure lids are closed except when universal wastes are being added or removed.

2.2 Universal Waste Accumulation Site

The University has a dedicated, central location for the collection and storage of universal wastes:

- Bachmann basement, One Neumann Drive Neumann University Aston, PA 19014

In addition, to facilitate the collection of fluorescent lamps across the campus, lamp accumulation sites have been established in the following locations. These will be collected on a monthly basis and taken to the central location. While in the lamp accumulation sites, they must meet all management requirements noted in Section 2.5.4.

- Bachmann building room 64, Maintenance shop
- Bachmann building room 350, Chemical waste accumulation area
- Mirenda Center room 230

2.3 General Requirements for All Universal Waste Types

2.3.1 Accumulation Time Limits

Universal waste can be accumulated for up to year from the date the universal waste became a waste. The University will transport all stored UW containers from the campus using a reputable transporter to a permitted, offsite recycle, treatment, or disposal facility. All universal wastes will be managed according to local, state, and federal law and every effort will be made to reduce the potential long-term financial and legal liability to the University.

Furthermore, as an institution, Neumann University will make every effort to reduce the quantity and/or toxicity of the universal waste it generates through material substitution, modified process practices, or other pollution prevention activities where possible.

The amount of time that a universal waste has been accumulated must be demonstrated, in one of the following ways:

- Direct marking of the universal waste
- Marking the container the waste is in with the earliest date that waste began accumulating in that container
- Marking a designated accumulation area with the earliest date that waste began accumulating in that area
- Keeping an inventory that identifies the date that each universal waste became waste
- Keeping an inventory that identifies the earliest date that a universal waste became waste in a designated accumulation area

2.3.2 Universal Waste Management Requirements

As with other hazardous waste, proper storage and handling of universal waste is critical to ensuring personnel safety and compliance with appropriate regulations. General management requirements for all types of universal wastes are as follows:

- Universal wastes cannot be disposed of as municipal wastes (trash) or residual wastes
- Universal wastes may not be diluted or treated, except in response to a release
- Universal wastes must be managed in a way that prevents a release of any component
- If containment of a universal waste is required, the container will be closed at all times except when adding or removing waste, the container must be compatible with the universal waste and its contents, and free of defects, design characteristics or damage that would lead to leakage, spillage or other environmental releases
- Universal waste stored outside must be covered, to prevent precipitation from coming into contact with the waste

2.3.3 Notification

A small quantity handler of universal waste is not required to notify EPA of universal waste handling activities.[1]

2.4 Universal Waste – Specific Management Requirements

2.4.1 Requirements for Batteries

A battery either becomes universal waste on the date that it is removed from service, because it is no longer operable, or because it is no longer wanted or needed.

The materials of construction of the anode, cathode, and the electrolyte determine the waste battery's regulatory status:

Table I. Common battery types that should be handled as Universal Wastes, and their uses.

Battery Type	Uses
Alkaline*	• Most common battery type, found in cell sizes AAA to D
Nickel/Cadmium (NiCd)	• Some laptop computers • Rechargeable 9-volt, AA, or D cell batteries • Some walkie talkies
Lithium ion or nickel hydride	• Cell phones • Cameras • Newer laptop computers
Lead acid batteries	• Cars and motorcycles • Deep cycle electric backup power for lights and communications • (Sealed lead acid batteries can be as small as a D-cell battery.)
Mercury or silver oxide	• Hearing aids • Watches

Batteries have traditionally contained large amounts of mercury and other heavy metals, which pose numerous threats to the environment. If disposed in a landfill, these metals could leach into ground water reserves and possibly contaminate surface waters and living organisms.

***** Since the mid-1980s, an ongoing effort by manufacturers has been made to reduce mercury content in alkaline batteries. As of 2000 there has been a 97 percent reduction. Most municipal waste authorities now accept alkaline batteries for disposal in a landfill, although they may also be collected and managed as a hazardous waste.

---

[1] Notification (40 CFR 273.12 vs. 40 CFR 273.32). The SQH has no Notification requirements. The LQH must send written notification of universal waste management to the Regional EPA Administrator, and received an EPA Identification Number (unless they already have one), before the 5,000-kilogram storage limit is hit. The notification must include five items of information about the handler. See the regulations for details.

Key Management Issues of Batteries:

- Batteries should be segregated into categories when storing and when a request for a pick-up is made. Battery type is usually indicated on battery labels. Note: Battery types may be mixed in one container, although it is not recommended.
- To prevent a buildup of heat or sparks, batteries that are, lithium, 9-volt or larger should be stored such that the terminals are not touching. It is best to tape off all terminals to prevent contact.
- Store in a container that is closed except when adding or removing batteries.
- Each battery, container of batteries, or battery accumulation area must be labeled with the date that the battery was taken out of service, and one of the following: *Universal Waste — Battery(ies)*, *Waste Battery(ies),* or *Used Battery(ies)*.
- Separate any universal waste battery that shows evidence of leakage, spillage, or damage that could cause leakage in another container. The container must also be closed, structurally sound, compatible with the contents of the battery, and must lack evidence of leakage, spillage, or damage that could cause leakage.

A small quantity handler of universal waste may conduct the following activities, as long as the casing of each individual battery cell is not breached, and remains intact and closed (with the exception that cells may be opened to remove electrolyte but must be immediately closed after removal):

- Removing the electric charge by discharging
- Regenerating used batteries
- Disassembling battery packs into individual batteries or cells
- Removing batteries from consumer products
- Removing electrolyte from batteries (cells may be opened to remove the electrolyte but must be immediately closed after removal)

A small quantity handler of universal waste who removes electrolyte from batteries must determine whether the electrolyte and/or other solid waste exhibit a characteristic of hazardous waste (e.g., ignitability, corrosivity, reactivity and/or toxicity (40 CFR 261.20) Note: They are typically corrosive and/or toxic).

If the electrolyte and/or other solid waste exhibits a characteristic of hazardous waste, it is subject to all applicable requirements of management as a hazardous waste (40 CFR 260 through 272). The handler is considered the generator of the hazardous electrolyte and/or other waste and is subject to the hazardous waste generator regulations (40 CFR 262), not the universal waste regulations.

2.4.2 Requirements for Pesticides

A recalled pesticide will become waste on (a) the date that the manufacturer of the recalled pesticide agrees to participate in the recall and the person conducting the recall decides to discard the pesticide, or (b) when the handler decides to discard an unused pesticide.

Storage requirements for universal waste pesticides are as follows:

- Universal waste pesticides must be containerized in containers that remain closed, structurally sound, compatible with the pesticide and which lack evidence of leaks or damage that could cause leaks. If the container does not meet these requirements it must be over-packed in a waste container that does.
- Universal waste pesticides may be stored in a tank system that meets the requirements of 40 CFR Part 265, Subpart J, or in a transport vehicle or vessel that is closed, compatible with the pesticide, and which lacks evidence of leaks or damage that could cause leaks.
- Universal waste pesticides must be stored on an impervious surface. An impervious surface may be concrete or asphalt (without cracks or holes). Earth, wood, and gravel surfaces are not considered impervious surfaces.
- Waste pesticides that contain free liquid may not be stored in an area with functional floor drains or manholes unless secondary containment is present. If secondary containment is necessary, it must be sufficient to contain a spill from the largest container in the secondary containment.
- Alternatively, a container with free liquid, or one that exhibits evidence of leakage, spillage, or damage, may be over-packed in a container that is closed, structurally sound, compatible with the pesticide, and lacks evidence of leakage, spillage, or damage.
- Containment is not required in areas with functional floor drains or manholes if the following conditions are met:
    - The waste pesticide contains no free liquid.
    - The area is sloped or drained to remove precipitated liquid or containers are elevated or otherwise protected from accumulated precipitation.
- The universal pesticide waste container (container, tank system, or transport vehicle), or accumulation area, must clearly be labeled or marked with:
    - The label that was on the product when purchased, if still legible.
    - The appropriate label as required under the Department of Transportation regulation (49 CFR part 172).
    - If using the labels described above is not feasible, another label prescribed or designated by the waste pesticide collection program administered or recognized by a state.
    - The words “Universal Waste-Pesticide(s)” or “Waste-Pesticide(s).”

2.4.3 Requirements for Mercury Containing Devices

Devices containing only mercury, such as mercury switches, older thermostats, sphygmomanometers, thermometers, manometers, or pressure gauges that are unbroken, may be managed as Universal Waste. Call the Chemical hygiene officer (Dr. Matt Mastropaolo, Ph.D.) at 610-358-4240 to have it picked up. If the device is a result of work being done on campus in a location where it would otherwise be left, you may bring the device directly to your own work area,

provided you double bag the device. This will help prevent any possible release of mercury should it be dropped.

Any used or unused mercury-containing device becomes a waste on the date that it is no longer operable or on the date that the handler decides to discard it.

To manage a mercury-containing device as a universal waste, the following requirements must be met:

- Mercury containing devices that show any sign of leaking, spilling, or damage that could cause spillage must be stored in a container that is closed structurally sound container, compatible with the waste, and free of defects that could cause a leakage.
- Ampules containing mercury may be removed from a mercury containing device if:
    - Ampules are removed in a manner designed to prevent breakage of the ampules.
    - Ampules are removed only in or over a containment device.
    - A mercury clean-up system is in place to transfer any spilled mercury to a container that meets the requirements of 40 CFR 262.34.
    - The area where the ampule is removed is well ventilated and monitored to ensure compliance with applicable OSHA exposure levels for mercury[2].
    - Employees removing ampules are familiar with proper waste mercury handling and emergency procedures, including transfer of mercury from containment devices to appropriate container.
    - Removed ampules are collected and stored in appropriate containers.
    - Removed ampules are stored in closed, non-leaking containers that are in good condition.
    - Removed ampules are packed in a container with packing materials adequate to prevent breakage during storage, handling and transportation.
- If any waste is generated from mercury containing device breakage or emptying of ampules (ampules themselves, spill clean-up debris, *etc.*), the individual must determine if it exhibits the characteristic of hazardous waste for mercury. If the waste does meet the characteristic, it must be managed as a hazardous waste.
- Mercury containing devices or mercury device storage areas must be labeled with the date that it was removed from service and one of the following: *Universal Waste—Mercury-Containing Device(s)*, *Waste Mercury-Containing Device(s)*, or *Used Mercury-Containing Device(s)*.

2.4.4 Requirements for Fluorescent Lamps

A lamp becomes a waste on the day that it is removed from service, either because it is burned out or is no longer wanted or needed.

---

[2] **OSHA Vacated PELs:** Mercury: TWA 0.05 ppm [0.5 mg(Hg)/m3 TWA (vapor)]; NIOSH: REL: 0.005 ppm (0.05 mg(Hg)/m3); ACGIH Threshold Limit Value (TLV): Mercury: 0.0025 ppm [0.025 mg(Hg)/m3 (TWA), skin].

Proper management of lamps includes:

- Universal waste lamps must be protected to prevent breakage, leaks or damage. This is best accomplished by returning them to the original shipping container (with protectant baffles) and ensuring that the box is closed to prevent damage. Do not mix new and used bulbs in the same container.
- Containers must be closed, structurally sound, compatible with the contents of the lamps and must not show evidence of leaks, spills or damage that could cause releases of mercury or other hazardous substances.
- Lamps may not be intentionally crushed or dismantled unless a permit is obtained from the Pennsylvania DEP.
- If lamps are unintentionally broken, the broken lamps and residue must immediately be cleaned up using proper mercury clean up procedures, the area decontaminated, and the debris placed in a container. If the broken lamps and clean-up debris exhibit a characteristic of hazardous waste, it must be managed as a hazardous waste.
- Lamps or lamp accumulation areas must be marked with the date it is removed from service and one of the following: *Universal Waste—Lamp(s), Waste Lamp(s),* or *Used Lamp(s)*.

2.4.5 Requirements for Oil-Based Finishes

Used and unused oil-based finishes become a waste on the date they are discarded or sent for reclamation.

- Used and unused oil-based finishes must be containerized in containers that remain closed, structurally sound, compatible with the product, and which lack evidence of leaks or damage that could cause leaks. If the container does not meet these requirements it must be over-packed in a waste container that does.
- Each container or over-packed drum of used and unused oil-based finishes shall have a waste determination to determine if it exhibits a characteristic of hazardous waste, (e.g., ignitability, corrosivity, reactivity and/or toxicity) (40 CFR 261.20) or if it is a listed waste. If so, then it is subject to all applicable requirements of management as a hazardous waste (40 CFR 260 through 272) not the universal waste regulations.
- Each container or over-packed drum of used and unused oil-based finishes must be labeled with the date that the oil-based finished was determined to be a waste and one of the following: *Universal Waste—Oil-Based Finishes*.

2.4.6 Requirements for Photographic Solutions

Used and unused photographic solutions become a waste on the date they are discarded or sent for reclamation.

- Used and unused photographic solutions must be containerized in containers that remain closed, structurally sound, compatible with the pesticide and which lack evidence of leaks or damage that could cause leaks. If the container does not meet these requirements it must be over-packed in a waste container that does.

- Each container or over-packed drum of used and unused photographic solutions shall have a waste determination to determine if it exhibits a characteristic of hazardous waste, (e.g., ignitability, corrosivity, reactivity and/or toxicity) (40 CFR 261.20) or if it is a listed waste. If so, then it is subject to all applicable requirements of management as a hazardous waste (40 CFR 260 through 272) not the universal waste regulations.
- Each container or over-packed drum of used and unused photographic solutions must be labeled with the date that the oil-based finished was determined to be a waste and one of the following: *Universal Waste—Photographic Solutions*.

2.5 Employee Training

A small quantity handler[3] of universal waste must inform all employees who handle or have responsibility for managing universal waste. The information must describe proper handling and emergency procedures appropriate to the type(s) of universal waste handled at the facility.

Additionally, employees who handle or manage universal waste pesticides must be trained in accordance with the requirements of the hazardous waste training requirements (40 CFR 265.16). Neumann University personnel who manage universal waste are trained annually in accordance with the requirements of the Hazardous Waste Regulations. See the *Hazardous Waste Management Plan* for details of this training. This training meets the training requirements for hazardous waste and universal waste (including universal waste pesticides).

Hourly and student employees, whose duties require them to handle universal waste, complete on-the-job training. This training includes proper waste handling techniques, storage practices and emergency procedures.

2.6 Security Measures

The following security measures will be provided at all outdoor storage areas for universal waste:

- An artificial or natural barrier that completely surrounds the universal waste storage area to prevent unauthorized entry by people
- An entry that is controlled at all times
- A sign at all entries to the storage area with the legend “Danger – Unauthorized Personnel Keep Out” or other words indicating that only authorized personnel are allowed entry and that the area is potentially dangerous

2.6.1 Response to Releases

The handler of universal waste must immediately contain all releases of universal wastes and other residues from universal wastes.

The handler of universal waste must determine whether any material resulting from the release is hazardous waste, and if so, must manage the hazardous waste in compliance with all applicable

---

[3] Employee Training (40 CFR 273.16 vs. 40 CFR 263.36--**A small quantity handler** of universal waste must inform all employees, describing proper handling and emergency procedures appropriate to the type(s) of universal waste handled at the facility. **A large quantity handler** of universal waste must ensure all employees are thoroughly familiar with appropriate handling and emergency procedures).

requirements of 40 CFR parts 260 through 272. The handler is considered the generator of the material resulting from the release, and must manage it in compliance with Title 40 CFR Part 262.

2.6.2 Inspection

There are no inspection requirements for large or small quantity handlers of universal waste. Prudence dictates that periodic and documented inspections of universal wastes storage areas, and the containers stored there, should be performed.

2.7 Off-site Shipment/Transportation

The following requirements apply to all forms of universal waste that is removed from the Neumann University campus.

- A small quantity handler of universal waste is prohibited from sending or taking universal waste to a place other than another universal waste handler, a destination facility, or a foreign destination.
- If a small quantity handler of universal waste self-transports universal waste off-site, except from one University-owned site to another, the handler becomes a universal waste transporter for those self-transportation activities and must comply with the RCRA transporter requirements.
- If a universal waste being offered for off-site transportation meets the definition of hazardous materials under US Department of Transportation regulations, the handler must comply with the DOT shipping regulations. The handler must have the universal waste shipment packaged, labeled, marked and placarded, have the proper shipping papers prepared in accordance with the applicable DOT regulations, and register annually with the Department of Transportation.
- Prior to sending a shipment of universal waste to another universal waste handler, the originating handler must ensure that the receiving handler agrees to receive the shipment.
- If a small quantity handler of universal waste sends a shipment of universal waste to another handler or to a destination facility and the shipment is rejected by the receiving handler or destination facility, the originating handler must either:
    - Receive the waste back when notified that the shipment has been rejected, or
    - Agree with the receiving handler on a destination facility to which the shipment will be sent.

2.8 Record Keeping and Tracking

2.8.1 Record Keeping

The universal waste generator should keep a record of each shipment of universal waste in Bachmann 349 in the Chemical hygiene officer's (Dr. Matt Mastropaolo) office. The record can be in the form of a log sheet, an invoice, a manifest, a bill of lading or another type of shipping document. The record must include the following information:

- The name and address of the universal waste handler
- Destination facility

- Quantity of each type of universal waste
- Date of shipment

These records will be kept for at least three years from the date of shipment.

2.8.2 Tracking Universal Waste Shipments

A small quantity handler of universal waste is not required to keep records of shipments of universal waste.[4]

.

[4] Tracking Universal Waste Shipments (40 CFR 273.19 vs. 40 CFR 273.39--**A small quantity handler** of universal waste is not mandated to keep records of shipments of universal waste, although it is recommended. **A large quantity handler** of universal waste must keep records of each shipment of universal waste received at the facility, and each shipment off-site. The records may take the form of a log, invoice, manifest, bill of lading or other shipping document. The records must contain the name and address of the delivering handler, or receiving handler, the quantity of each type of universal waste, and the date. The records must be kept for at least three years from the date of receipt of a shipment of universal waste.

Appendix A – Neumann Universal Waste Label

Neumann University

Physical Plant

(###)###-####

UNIVERSAL WASTE

☐ Batteries

☐ Lamps

☐ Mercury-Containing Devices

☐ Pesticides

☐ Oil-Based Finishes

☐ Photographic Solutions

Accumulation Start Date _____

Month/Day/Year

Appendix B – Definitions

ACGIH – American Conference of Governmental Industrial Hygienists; a private, professional society for industrial hygienists who work for the government.

Battery – a device consisting of one or more electrically connected electrochemical cells which is 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.

Cd – Chemical symbol for Cadmium

CFR – Code of Federal Regulations

DOT – Department of Transportation

EHS – Environmental, Health and Safety, as in EHS personnel

EPA – Environmental Protection Agency

Hg – Chemical symbol for Mercury

ID – Identification, as in EPA ID Number

kg – Kilogram; one kilogram equals 2.2 pounds

Lamp – fluorescent lamp, also referred to as a "universal waste lamp" – 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 infra-red regions of the electromagnetic spectrum. Examples of common universal waste electric lamps include, but are not limited to, fluorescent, high intensity discharge, neon, mercury vapor, high-pressure sodium, and metal halide lamps.

Large Quantity Handler of Universal Waste (LQHUW or LQH) - a universal waste handler who accumulates 5,000 kilograms or more total universal waste (batteries, pesticides, thermostats, or lamps, calculated collectively) at any time. This designation as a large quantity handler of universal waste is retained through the end of the calendar year in which 5,000 kilograms or more total of universal waste is accumulated.

lbs – Pounds

LQH – Large Quantity Handler

LQHUW – Large Quantity Handler of Universal Waste

m^3 – Cubic meters; one cubic meter equals 35.3 cubic feet or 1.3 cubic yards

Mercury-containing device – a product or component of a product (including thermostats, but excluding batteries and lamps), which contains elemental mercury that is necessary for operation of the device.

mg – Milligrams; there are 28.3 milligrams in one ounce.

Ni – Chemical symbol for Nickel

NIOSH – National Institute of Occupational Safety and Health; a part of the Department of Health and Human Services' Centers for Disease Control and Prevention.

Oil-based finishes - (i) Any paint or other finish that may exhibit, or is known to exhibit, a hazardous waste characteristic as specified in 40 CFR Part 261, Subpart C, or which contains a listed hazardous waste as specified in 40 CFR Part 261 Subpart, and is in original packaging, or otherwise appropriately contained and clearly labeled. **OR** (ii) Examples of oil-based finishes include, but are not limited to, oil-based paints, lacquers, stains and aerosol paint cans.

On-site - the same or geographically contiguous property which may be divided by public or private right-of-way, provided that the entrance and exit between the properties is at a cross-roads intersection, and access is by crossing as opposed to going along the right of way. Non-contiguous properties owned by the same person but connected by a right-of-way which he controls and to which the public does not have access, are also considered on-site property.

OSHA – The Occupational Safety and Health Administration, a part of the U.S. Department of Labor

PA DEP – Pennsylvania Department of Environmental Protection

Pa Code – Pennsylvania Regulations Codified

PEL – Permissible Exposure Limit; the name OSHA uses for the occupational exposure limits of air contaminants in the workplace that it establishes.

Pesticide – any substance or mixture of substances intended for preventing, destroying, repelling, or mitigating any pest, or intended for use as a plant regulator, defoliant, or desiccant. It does not include new animal drugs or feeds that contain animal drugs.

Photographic solutions - Silver-bearing waste streams resulting from photographic processing solutions or rinse water.

ppm – Parts per million; 1% may be expressed as one part per hundred. There are 10,000 ppm in 1 ppm. In solids and liquids it is part of a constituent, by weight, per million parts of the whole weight.

RCRA – Resource Conservation and Recovery Act

REL – Recommended Exposure Limits; the occupational exposure limits of air contaminants in the workplace recommended by NIOSH. OSHA is obligated to research the literature itself when establishing its PELs. OSHA may rely in part on original or literature research performed by NIOSH.

Small Quantity Handler of Universal Waste (SQHUW or SQH) - a universal waste handler who does not accumulate 5,000 kilograms or more total universal waste (batteries, pesticides, thermostats, or lamps, calculated collectively) at any time.

SQG – Small Quantity Generator

SQH – Small Quantity Handler

SQHUW – Small Quantity Handler of Universal Waste

Thermostat – a temperature control device that contains metallic mercury in an ampule attached to a bimetal sensing element, and mercury-containing ampules that have been removed from these temperature control devices in compliance with the requirements of 40 CFR 273.13(c)(2) or 273.33(c)(2).

TLV – Threshold Limit Value; the occupational exposure limits of air contaminants in the workplace established by the ACGIH as a part of their public services.

TWA – Time-Weighted Average. One of three conditions under which occupational exposure limits may be set, and the most common. The TWA is the maximum average concentration to an air contaminant, which a worker maybe exposed during an 8-hour workday. The others are the Short-Term Exposure Limit (STEL), the maximum average concentration for a 15-minute duration, and the Ceiling (C) limit, a concentration, which at no time should be exceeded.

US EPA – United States Environmental Protection Agency

UW – Universal Waste

Universal Waste - any of the following hazardous wastes that are subject to the universal waste requirements of this part 273:

(1) Batteries as described in §273.2

(2) Pesticides as described in §273.3

(3) Mercury-containing equipment as described in §273.4

(4) Lamps as described in §273.5

Universal Waste Handler - A generator (as defined in this section) of universal waste, or the owner or operator of a facility, including all contiguous property, that receives universal waste from other universal waste handlers, accumulates universal waste, and sends universal waste to another universal waste handler, to a destination facility, or to a foreign destination. This does not mean a person who treats (except under the provisions of 40 CFR 273.13 (a) or (c), or 273.33 (a) or (c)), disposes of, or recycles universal waste; or a person engaged in the off-site transportation of universal waste by air, rail, highway, or water, including a universal waste transfer facility.

Universal Waste Transfer Facility - any transportation-related facility including loading docks, parking areas, storage areas and other similar areas where shipments of universal waste are held during the normal course of transportation for ten days or less.

Universal Waste Transporter - a person engaged in the off-site transportation of universal waste by air, rail, highway, or water.