

## TABLE OF CONTENTS

<b>1.</b>	<b>WHAT IS THIS GUIDE ABOUT? . . . . .</b>	<b>1</b>
<b>2.</b>	<b>DO THE UNIVERSAL WASTE REGULATIONS APPLY TO YOU? . . . . .</b>	<b>3</b>
<b>3.</b>	<b>WHAT ARE THE REQUIREMENTS FOR MANAGING UNIVERSAL WASTES? . . . . .</b>	<b>5</b>
3.1	What Type of Universal Waste Activity Do You Conduct?.....	5
3.2	General Requirements for Large and Small Quantity Handlers and Transporters of Universal Wastes .....	6
3.2.1	Notification Requirements for LQHUWs .....	6
3.2.2	Accumulation Time Limits .....	7
3.2.3	Employee Training Requirements for SQHUWs and LQHUWs.....	8
3.2.4	Release Response Requirements for SQHUWs, LQHUWs, and Transporters .....	8
3.2.5	Exports of Universal Wastes .....	9
3.2.6	Imports of Universal Wastes .....	9
3.2.7	Prohibitions .....	10
3.2.8	Requirements for Off-Site Shipments .....	10
3.3	Requirements for Destination Facilities .....	12
<b>4.</b>	<b>WASTE-SPECIFIC MANAGEMENT STANDARDS FOR SMALL AND LARGE QUANTITY HANDLERS OF UNIVERSAL WASTES . . . . .</b>	<b>14</b>
4.1	Batteries.....	14
4.2	Pesticides .....	15
4.3	Mercury Thermostats .....	16
4.4	Lamps .....	17
4.5	Mercury-Containing Devices.....	17

**APPENDIX I – PETITIONS TO INCLUDE OTHER WASTES AS UNIVERSAL  
WASTES . . . . .19**

**APPENDIX II – ALTERNATE STANDARDS FOR MANAGING SPENT LEAD-ACID  
BATTERIES . . . . .21**

**APPENDIX III – SOURCES OF INFORMATION FOR PERSONS MANAGING  
UNIVERSAL WASTES . . . . .24**

**APPENDIX IV – WASTE MINIMIZATION AND POLLUTION PREVENTION  
ASSISTANCE . . . . .28**

## WHAT'S NEW?

---

The Pennsylvania Department of Environmental Protection (DEP) has made a number of changes to its universal wastes program. The major changes are described below.

1. The regulations are now found in Chapter 266b of Title 25 of the Pennsylvania Code (25 Pa. Code). These regulations incorporate by reference the federal regulations for universal wastes in Part 273 of Title 40 of the Code of Federal Regulations (40 CFR). The requirements for managing universal wastes are unchanged, with the two exceptions highlighted below.
2. Since DEP's regulations were amended in May 1999, the U.S. Environmental Protection Agency (EPA) added another universal waste category (universal waste lamps) to the federal regulations and redesignated several sections to accommodate additional wastes (see 64 FR 36487; July 6, 1999). Because DEP incorporates changes to the federal regulations by reference, hazardous waste lamps are now universal wastes in Pennsylvania. (See 30 *Pa. Bulletin* 1136.)
3. In December 2000, the Pennsylvania Environmental Quality Board (EQB) amended DEP's universal waste regulations to include mercury-containing devices in Chapter 266b. (See 30 *Pa. Bulletin* 6587.)

**This page intentionally left blank.**

## 1. WHAT IS THIS GUIDE ABOUT?

This guide describes the requirements that apply to handlers of universal waste under the Commonwealth's hazardous waste regulations. These requirements were adopted by the Environmental Quality Board (EQB) on Feb. 16, 1999. They were published in the *Pennsylvania Bulletin* and became effective on May 1, 1999 (29 *Pa. Bulletin* 2367). In addition, the EQB added mercury-containing devices to DEP's universal waste program on December 23, 2000 (30 *Pa. Bulletin* 6587).

This guide first describes how to determine if you handle a universal waste and, if so, what requirements apply to you. The standards for managing universal wastes vary, based both on the waste management activity and on the type of waste being managed. The regulations apply to four types of universal waste management: large quantity handlers of universal waste (LQHUWs), small quantity handlers of universal waste (SQHUWs), universal waste transporters and destination facilities. Each category is regulated according to a specific set of requirements. In some instances, the requirements are the same for different universal waste activities. This guide presents the requirements that apply to different universal waste activities and to different types of universal wastes.

Universal wastes are widely dispersed hazardous wastes that are generated in a variety of places, and often in small quantities. In the past, they were frequently mixed with other wastes and sent to municipal solid waste landfills or combustors. To prevent this, the requirements in the federal regulations (40 CFR Part 273) and the Pennsylvania regulations (25 Pa. Code Chapter 266b) allow universal waste handlers to collect the wastes so they can be sent to appropriate treatment or recycling facilities that are subject to hazardous waste regulatory controls. Appendix III provides some sources available for obtaining additional information or materials on the Commonwealth's regulations. Appendix IV provides information on waste minimization and pollution prevention assistance.

Federal agencies administer numerous federal statutes applicable to hazardous waste management activities. The Resource Conservation and Recovery Act (RCRA) (42 U.S.C. 6901-6992) and federal regulations in 40 CFR Parts 260-279 contain the basic requirements of the federal hazardous waste program administered by the U.S.

Environmental Protection Agency (EPA). Under RCRA, EPA may delegate authority to the states to administer and enforce the RCRA program in lieu of EPA. A state's program must be equivalent to, and at least as stringent as, the federal program. The Pennsylvania Department of Environmental Protection (DEP) received initial authorization from EPA in 1986 and updated authorization in 2000 to administer most of the RCRA program within the Commonwealth.

Until recently, Pennsylvania administered hazardous waste regulations that were significantly different from the federal regulations. In response to the Regulatory Basics Initiative and Executive Order 1996-1, DEP reviewed its existing hazardous waste regulations. DEP determined that continuing to regulate hazardous waste in Pennsylvania under its own regulatory regime creates confusion for the regulated community. Accordingly, DEP deleted most of the regulations specific to Pennsylvania's program and aligned its requirements more closely with the federal program. The new regulations are found in Title 25 of the Pennsylvania Code (Pa. Code) and incorporate most of the federal regulations by reference. "Incorporation by reference" means that the federal regulations act as Pennsylvania's regulations, except where Pennsylvania has modified the federal requirements.

Because the Commonwealth has incorporated by reference most of the federal regulations that apply to handlers of universal waste, this document describes many requirements by referring to the appropriate federal regulations (i.e., 40 CFR Part 273). However, the EQB made additions or modifications to some of the federal regulations, and the added or modified regulatory language appears in the Pa. Code. These modified requirements are referenced in this document by their Pa. Code citations and, where appropriate, by the corresponding 40 CFR citations. The new Pa. Code citations are noted with the lower-case letter "a" or "b" after the chapter number (e.g., Chapter 266b). Federal requirements incorporated by reference without modification are referenced using a 40 CFR citation.

## 2. DO THE UNIVERSAL WASTE REGULATIONS APPLY TO YOU?

The universal waste regulations apply to you if you generate, import, treat, accumulate, transport, store, dispose or recycle a universal waste. If you are engaged in one or more of these activities, you may follow the standards in 40 CFR Part 273 and 25 Pa. Code Chapter 266b in lieu of many of the hazardous waste regulations in 40 CFR Parts 260-266, 268, and 270 and 25 Pa. Code Chapters 260a-266a, 268a, and 270a.

EPA considered a number of wastes for inclusion in Part 273 and accepts petitions to add new categories of universal wastes. DEP also considers additional wastes for inclusion in its universal waste program. DEP accepts petitions for review to add new categories of universal wastes to Chapter 266b (see Appendix I). Currently, there are five types of materials that may be universal wastes in Pennsylvania and subject to state and federal standards. As defined in Exhibit 1, these are batteries, pesticides, mercury thermostats, lamps and mercury-containing devices.

In some cases, materials in these categories are not considered universal wastes. Universal waste standards apply to these materials when they become wastes and the wastes meet the definition of hazardous waste under 40 CFR Part 261, "Identification and Listing of Hazardous Waste." These

### **Exhibit 1 – Definitions**

**(40 CFR 273.9; 25 Pa. Code 266b.3)**

#### **Battery:**

A device consisting of one or more electrically connected electrochemical cells that is designed to receive, store and deliver electric energy. The electrochemical cells contain an anode, cathode, and an electrolyte, plus connections. The term battery also includes an intact, unbroken battery from which the electrolyte has been removed.

#### **Pesticide:**

Any substance intended for preventing, destroying, repelling or mitigating any pest, or intended for use as a plant regulator, defoliant or desiccant.

#### **Mercury 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 federal requirements.

#### **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.

#### **Mercury-Containing Device:**

A product or component of a product (excluding batteries) which contains elemental mercury that is necessary for operation of the device.

materials become wastes when they are discarded (e.g., sent for reclamation) or, in the case of pesticides, when the generator of the recalled pesticide agrees to participate in the recall and the person conducting the recall discards the pesticide.

Once these materials become wastes, they are hazardous wastes if they exhibit any of the characteristics described in 40 CFR Part 261, Subpart C. If materials meeting a definition in Exhibit 1 are discarded and they exhibit one or more of the hazardous waste characteristics, they are universal wastes and are subject to the requirements of 40 CFR Part 273 and 25 Pa. Code Chapter 266b.

Certain pesticides and batteries are not subject to the universal waste standards, as follows.

Pesticides not covered under 40 CFR Part 273/25 Pa. Code Chapter 266b:

- ▶ Recalled or unused pesticides that are managed by farmers on their own farms (40 CFR 262.70);
- ▶ Unused pesticides that are not wastes because the generator has not yet decided to discard them; and
- ▶ Recalled pesticides that are not wastes because the person recalling the waste has decided to treat the waste in such a way that the pesticide is not a solid waste (e.g., use or reuse).

The definition of pesticide in Exhibit 1 does not include the following:

- 1) A new animal drug under the Federal Food Drug and Cosmetic Act (FFDCA) section 201(w);
- 2) An animal drug determined by regulation of the U.S. Department of Health and Human Services not to be a new animal drug; and
- 3) An animal feed under FFDCA 201(x) that bears or contains substances described in numbers 1 and 2 above.

Batteries not covered under 40 CFR Part 273/25 Pa. Code Chapter 266b:

- ▶ Spent lead-acid batteries that are managed under 40 CFR Part 266, Subpart G and 25 Pa. Code Chapter 266a, Subchapter G, "Spent Lead-Acid Batteries Being Reclaimed."

For a summary of the different requirements applicable to batteries, see Appendix II.

### **3. WHAT ARE THE REQUIREMENTS FOR MANAGING UNIVERSAL WASTES?**

The standards for managing universal wastes vary, based both on the waste management activity and on the type of universal waste being managed. This chapter describes the requirements applicable to different universal waste management activities, regardless of the type of universal waste that you manage.

#### **3.1 WHAT TYPE OF UNIVERSAL WASTE ACTIVITY DO YOU CONDUCT?**

The universal waste regulations address three major categories of universal waste activity, each of which is regulated differently. The entities that conduct these different activities are defined in 40 CFR 273.9, as follows:

- ▶ **Universal Waste Handlers.** A universal waste handler is someone who generates universal wastes; receives universal wastes from other universal waste handlers; accumulates universal wastes; or sends universal wastes to another handler, a destination facility, or a foreign destination. There are two categories of universal waste handlers, based on the amount of universal wastes accumulated on site (see definitions below). Universal waste handlers are prohibited from treating universal wastes, except under the provisions of 40 CFR 273.13 or 273.33. If you treat universal wastes in a manner other than those specified in the regulations, you are subject to the requirements for destination facilities.
  - a. **Small Quantity Handler of Universal Waste (SQHUW):** Someone who accumulates a total of not more than 5,000 kilograms of one or more types of universal waste at one time (40 CFR Part 273, Subpart B and 25 Pa. Code Chapter 266b, Subchapter B).
  - b. **Large Quantity Handler of Universal Waste (LQHUW):** Someone who accumulates a total of more than 5,000 kilograms of one or more types of universal waste at one time. They retain this designation through the end of the calendar year in which they accumulated more than 5,000 kilograms of universal waste (40 CFR Part 273, Subpart C and 25 Pa. Code Chapter 266b, Subchapter C).
- ▶ **Universal Waste Transporters.** A universal waste transporter is someone who is engaged in off-site transportation of universal waste by air, rail, highway or water (40 CFR Part 273, Subpart D and 25 Pa. Code Chapter 266b, Subchapter D).

- ▶ Destination Facilities. A destination facility treats (in a manner other than those specified in 40 CFR 273.13, 273.33 and 25 Pa. Code 266b.11 and 266b.31), disposes or recycles any type of universal waste. Destination facilities are subject to the requirements in 40 CFR Part 273, Subpart E.

## **3.2 GENERAL REQUIREMENTS FOR LARGE AND SMALL QUANTITY HANDLERS AND TRANSPORTERS OF UNIVERSAL WASTES**

### **3.2.1 NOTIFICATION REQUIREMENTS FOR LARGE QUANTITY HANDLERS OF UNIVERSAL WASTES (LQHUWS)**

If you are an LQHUW, before accumulating 5,000 kg of universal wastes on-site, you must notify DEP of your universal waste management activities and obtain an EPA Identification (ID) Number (40 CFR 273.32). You do not need to renotify DEP or get an additional EPA ID number if you have previously notified and received an EPA ID number for one of the following reasons: (1) you manage hazardous wastes; or (2) you manage recalled universal waste pesticides and have sent notification to EPA under 40 CFR Part 165.

You must include the following information in your notification:

- ▶ Your name and mailing address;
- ▶ The name and phone number of the on-site person who should be contacted regarding universal waste management activities;
- ▶ The address or physical location of the universal waste management activities;
- ▶ A list of all the types of universal wastes that you handle (e.g., pesticides, batteries, thermostats, lamps, mercury-containing devices); and
- ▶ A statement indicating that you are accumulating more than 5,000 kilograms of universal waste at one time and the types of universal waste that you are accumulating.

### **3.2.2 ACCUMULATION TIME LIMITS**

#### **SQHUs and LQHUs (40 CFR 273.15 and 273.35)**

You may accumulate universal wastes for no longer than one year from the date the universal waste is generated<sup>1</sup> or received from another handler. If, in order to accumulate enough waste to facilitate proper recovery, treatment or disposal, you need to accumulate wastes for more than one year, you may do so as long as you can demonstrate that such accumulation is necessary.

You must be able to demonstrate how long the universal wastes have been accumulated. You may do this by any of the following methods:

- ▶ Place the universal waste in a container and label the container with the earliest date that any universal waste in the container became a waste or was received;
- ▶ Mark each individual item of universal waste with the date it became a waste or was received;
- ▶ Maintain an on-site inventory system that identifies the earliest date that any universal waste in a group of universal waste items or containers became a waste or was received;
- ▶ Place the universal waste in a specific accumulation area and identify the earliest date that any universal waste in the area became a waste or was received; or
- ▶ Use any other method that clearly demonstrates the length of time that the universal waste has been accumulated, from the date it became a waste or was received.

<sup>1</sup> Universal wastes are generated (i.e., they become wastes) when they are discarded (e.g., sent for reclamation). Recalled pesticides are generated (become wastes) when the generator agrees to participate in a recall and the person conducting the recall decides to discard the pesticide.

## Universal Waste Transporters

You may store universal wastes at a transfer facility for 10 days or less if the transfer facility has an in-transit storage preparedness, prevention and contingency (PPC) plan approved by DEP under 25 Pa. Code 263a.12. (See the definition of transfer facility in Exhibit 2.) If you exceed this time limit, you become a universal waste handler and must comply with all applicable requirements while storing the waste.

### Exhibit 2

#### **Definition of Transfer Facility**

Any transportation-related facility, including loading docks, parking areas, storage areas, and other similar areas where shipments of universal wastes are held during the normal course of transportation.

### **3.2.3 EMPLOYEE TRAINING REQUIREMENTS FOR SQHUWS AND LQHUWS**

#### **SQHUWs (40 CFR 273.16)**

If you qualify as a SQHUW, you must inform all employees who handle or have responsibility for managing universal wastes of the proper handling and emergency procedures appropriate to the types of universal wastes handled at the facility.

#### **LQHUWs (40 CFR 273.36)**

If you qualify as a LQHUW, you must ensure that all employees are thoroughly familiar with proper waste handling and emergency procedures based on their responsibilities during normal facility operations and emergencies.

### **3.2.4 RELEASE RESPONSE REQUIREMENTS FOR SQHUWS, LQHUWS, AND TRANSPORTERS**

If any universal wastes are released at your facility, you must immediately contain the wastes and their residues (40 CFR 273.17; 273.37; and 273.54). You also must determine whether any material resulting from the release is hazardous waste and, if so, you must manage the waste in compliance with all applicable requirements of 40 CFR Parts 260-266, 268 and 270 and 25 Pa. Code Chapters 260a-266a, 268a and 270a. You are considered the generator of any hazardous waste resulting from the release, and you must comply with 40 CFR Part 262 and 25 Pa. Code Chapter 262a.

### **3.2.5 EXPORTS OF UNIVERSAL WASTES**

#### **SQHUs and LQHUs (40 CFR 273.20 and 273.40)**

If you send universal wastes for recovery to a member country of the Organization for Economic Cooperation and Development (OECD) specified in 40 CFR 262.58(a)(1), you are subject to the requirements of 40 CFR Part 262, Subpart H and 25 Pa. Code Chapter 262a, Subchapter H. If you send universal wastes to another foreign destination, you must:

- ▶ Comply with the requirements applicable to a primary exporter in 40 CFR 262.53; 262.56(a)(1)-(4), and (6), and (b); and 262.57;
- ▶ Export the waste only upon consent of the receiving country and in conformance with the EPA Acknowledgment of Consent as defined in Subpart E of 40 CFR Part 262; and
- ▶ Provide a copy of the EPA Acknowledgment of Consent for the shipment to the transporter transporting the shipment for export.

#### **Universal Waste Transporters (40 CFR 273.56)**

If you transport universal wastes to or from an OECD country specified in 40 CFR 262.58(a)(1), you are subject to the requirements of 40 CFR Part 262, Subpart H and 25 Pa. Code, Chapter 262a, Subchapter H. If you transport universal wastes to or from another foreign destination, you may not accept a shipment if you know it does not conform to the EPA Acknowledgment of Consent. In addition, you must ensure that:

- ▶ A copy of the EPA Acknowledgment of Consent accompanies the shipment; and
- ▶ The shipment is delivered to the facility designated by the person initiating the shipment.

### **3.2.6 IMPORTS OF UNIVERSAL WASTES**

If you import universal wastes from a foreign country into the United States, you are subject to the requirements of 40 CFR Part 273. In addition, if you manage universal wastes that have been imported for recovery from an OECD country (as specified in 40 CFR 262.58(a)(1)), you also are subject to the requirements of 40 CFR Part 262, Subpart H and 25 Pa. Code Chapter 262a, Subchapter H (see 40 CFR 273.70).

### **3.2.7 PROHIBITIONS**

#### **SQHUs and LQHUs (40 CFR 273.11 and 273.31)**

If you are an SQHU or an LQHU, you are prohibited from disposing, diluting or treating universal wastes, except for the treatment activities described in Chapter 4 of this document.

#### **Universal Waste Transporters (40 CFR 273.51)**

If you are a universal waste transporter, you are prohibited from disposing, diluting or treating universal wastes, except for the treatment activities described in Chapter 4 of this document, or if you are responding to a release, as provided in 40 CFR 273.54.

In addition, a universal waste transporter is prohibited from transporting universal wastes to a place other than a universal waste handler, a destination facility or a foreign destination (40 CFR 273.55(a)).

### **3.2.8 REQUIREMENTS FOR OFF-SITE SHIPMENTS OF UNIVERSAL WASTES**

#### **SQHUs and LQHUs (40 CFR 273.18 and 273.38)**

If you are an SQHU or an LQHU, you must send or take waste only to another universal waste handler, a destination facility or a foreign destination.

#### **Sending Wastes Off Site**

- ▶ If you self-transport universal wastes off site, you are a universal waste transporter and must comply with the transporter requirements in 40 CFR Part 273, Subpart D.
- ▶ If the wastes you are preparing for transport meet the definition of hazardous materials under 49 CFR Parts 171-180, you must package, label, mark and placard the shipment, and prepare the proper shipping papers in accordance with U.S. Department of Transportation (DOT) regulations under 49 CFR Parts 172-180.
- ▶ Prior to sending a shipment of universal wastes to another universal waste handler, you must ensure that the receiving handler agrees to receive the shipment.
- ▶ If you send waste to another handler or to a destination facility and it is rejected, you must either: 1) take back the waste; or 2) agree on a destination facility where the

waste can be sent that is mutually agreeable to you and the facility that rejected the waste. The alternate facility must agree to accept the waste and must comply with the requirements for destination facilities described in Section 3.3 of this document.

### Receiving Wastes From Off Site

- ▶ If you receive wastes from another handler, you may reject a shipment or a portion of a shipment. At that time, you must notify the handler who sent the wastes and discuss reshipment of the load. You must send the shipment back to the handler or send it to an agreed-upon destination facility.
- ▶ If you receive a hazardous waste that is not a universal waste, you must notify DEP of the illegal shipment and provide the name, address and phone number of the originating shipper. DEP will provide instructions for managing the hazardous waste.
- ▶ If you receive a non-hazardous, non-universal waste, you must manage the waste in compliance with applicable federal, state and local solid waste regulations.

### Keeping Records of Universal Waste Shipments

SQHUWs are not required to keep records of universal waste shipments. If you are an LQHUW, you must keep a record of each universal waste shipment that you send or receive (40 CFR 273.39). The records you maintain must include the following information:

- ▶ Name and address of the facility to which you are sending a shipment, or from which you are receiving a shipment, as appropriate;
- ▶ Quantity of each type of waste sent or received; and
- ▶ Date of shipment or receipt of shipment.

The record may take any of the following forms:

- ▶ Log;
- ▶ Invoice;
- ▶ Manifest;

- ▶ Bill of lading; or
- ▶ Other shipping document.

You must retain these records for at least three years from the date a shipment left the facility or the date of receipt of a shipment.

### **Universal Waste Transporters (40 CFR 273.55)**

If you are a universal waste transporter, you must transport universal wastes only to a universal waste handler, a destination facility or a foreign destination. If the waste being shipped is a hazardous material, based on the U.S. DOT definition at 49 CFR 171.8, the shipment must be properly described on a shipping paper in accordance with applicable U.S. DOT regulations under 49 CFR Part 172.

For purposes of the U.S. DOT regulations, universal wastes are not considered hazardous wastes because they do not require a hazardous waste manifest under EPA rules. However, some universal wastes may be regulated by the DOT as hazardous materials (not hazardous wastes) because they meet the criteria described in 49 CFR 173.2. These wastes may not be described by the U.S. DOT proper shipping name “hazardous waste(s), n.o.s.,” nor may the proper shipping name be modified by adding the word “waste.” If the waste you are transporting is a hazardous material under 49 CFR 171.8, you must comply with all applicable U.S. DOT regulations in 49 CFR Parts 171-180 for transporting that waste.

### **3.3 REQUIREMENTS FOR DESTINATION FACILITIES**

If you own or operate a destination facility, you are subject to all applicable requirements of 40 CFR Parts 264-266, 268, 270 and 124 and 25 Pa. Code Chapters 264a-266a, 268a and 270a. You also must notify DEP and obtain an EPA identification number (40 CFR Part 273, Subpart E).

#### **Sending Wastes Off Site**

If you own or operate a destination facility, you must send or take wastes only to a universal waste handler, another destination facility or a foreign destination (40 CFR 273.61).

## Receiving Wastes From Off Site

- ▶ When you receive universal wastes from a handler or another destination facility, you may reject a shipment or a portion of a shipment. At that time, you must notify the originator of the shipment to discuss reshipment of the load. The wastes must be sent back to the handler who initiated the shipment or to another agreed-upon destination facility.
- ▶ If you receive a hazardous waste that is not a universal waste, you must notify DEP of the illegal shipment and provide the name, address and phone number of the originating shipper. DEP will provide instructions for managing the hazardous waste.
- ▶ If you receive a non-hazardous, non-universal waste, you may manage the waste in any way that is in compliance with applicable federal, state and local solid waste regulations.

## Keeping Records of Universal Waste Shipments

If you own or operate a destination facility, you must keep a record of each universal waste that you receive (40 CFR 273.62). The record must include the following information:

- ▶ Name and address of the facility from which you receive a shipment; and
- ▶ Quantity of each type of waste received and the date of receipt of the shipment.

The record may take any of the following forms:

- ▶ Log;
- ▶ Invoice;
- ▶ Manifest;
- ▶ Bill of lading; or
- ▶ Other shipping document.

You must retain these records for at least three years from the date of receipt of a shipment.

## **4. WASTE-SPECIFIC MANAGEMENT STANDARDS FOR SMALL AND LARGE QUANTITY HANDLERS OF UNIVERSAL WASTES**

You must manage universal wastes in a way that prevents releases to the environment. Many waste management activities result in the generation of additional solid wastes, such as electrolyte from batteries, mercury residues from thermostats or packaging materials from a pesticide. If you generate such wastes from any of the activities described below, you must determine if those wastes exhibit a characteristic of hazardous waste identified in 40 CFR Part 261, Subpart C. If the solid waste exhibits a characteristic of hazardous waste, it is subject to all applicable requirements of 40 CFR Parts 260-266, 268, 270 and 124 and 25 Pa. Code Chapters 260a-266a, 268a and 270a. You are considered the generator of the hazardous waste and are therefore subject to 40 CFR Part 262 and 25 Pa. Code Chapter 262a. If the solid waste is not hazardous, you must manage the waste in compliance with applicable federal, state and local regulations for solid waste management.

The waste management standards that are specific to each type of universal waste are described below. The standards apply to both small and large quantity handlers of universal wastes.

### **4.1 BATTERIES**

If a battery shows evidence of leakage or damage that could cause leakage, you must place the battery in a closed, structurally sound container. You may conduct the following activities, so long as the casing of each individual battery cell is not breached and remains intact and closed (40 CFR 273.13(a) and 273.33(a)):

- ▶ Sort the batteries by type;
- ▶ Mix battery types in 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; and
- ▶ Remove the electrolyte from batteries (cells may be opened to remove the electrolyte but must be immediately closed after removal).

You must label batteries or a container filled with batteries with any one of the following (40 CFR 273.14(a) and 273.34(a)):

- ▶ “Universal Waste-Battery(ies);”
- ▶ “Waste Battery(ies);” or
- ▶ “Used Battery(ies).”

## **4.2 PESTICIDES**

You must contain universal waste pesticides in one of the following ways (40 CFR 273.13(b) and 273.33(b)):

- ▶ 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 overpacked in a container that does.
- ▶ In a tank that meets the tank system requirements of 40 CFR Part 265, Subpart J and 25 Pa. Code Chapter 265a, Subchapter J. The tanks must meet all the requirements of Subpart J, with the following exceptions:
  - a. 40 CFR 265.197(c) — related to closure and post-closure plans;
  - b. 40 CFR 265.200 — related to waste analysis and trial tests; and
  - c. 40 CFR 265.201 — special requirements for generators of between 100 and 1,000 kilograms per month that accumulate hazardous waste in tanks.
- ▶ 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.

You must label recalled universal waste pesticides held in a container (or a multiple container package unit), tank, transport vehicle or vessel with both of the following (40 CFR 273.14(b) and 273.34(b)):

- ▶ The label that accompanied the product as sold or distributed; and
- ▶ The words “Universal Waste-Pesticide(s)” or “Waste-Pesticides.”

You must label unused universal waste pesticides in a container (or multiple container package unit), tank, transport vehicle or vessel with both of the following:

- ▶ The label that was on the product when purchased. If it is illegible or unavailable, use the appropriate label as required under U.S. DOT regulations at 49 CFR Part 172. If use of such a label is not feasible, use another label prescribed or designated by a pesticide collection program; and
- ▶ The words “Universal Waste-Pesticide(s)” or “Waste-Pesticides.”

### **4.3 MERCURY THERMOSTATS**

If a thermostat shows evidence of leakage or damage that could cause leakage, you must place it in a closed, structurally sound container. The primary waste management activity associated with thermostats is removing mercury-containing ampules from universal waste thermostats. This activity is allowed under 40 CFR 273.13(c) and 273.33(c), provided you comply with the following requirements:

- ▶ Remove ampules in a manner designed to prevent breakage of the ampules;
- ▶ Remove ampules only in or over a containment device;
- ▶ Ensure that 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;
- ▶ Ensure that the work area is well ventilated and monitored to ensure compliance with applicable OSHA exposure levels for mercury;
- ▶ Train employees in proper waste mercury-handling and emergency procedures;
- ▶ Store removed ampules in closed, non-leaking containers that are in good condition; and
- ▶ Pack removed ampules in a container with packing materials adequate to prevent breakage during storage, handling and transportation.

You must label thermostats or a container holding thermostats with any one of the following (40 CFR 273.14(c) and 273.34(c)):

- ▶ “Universal Waste-Mercury Thermostat(s);”

- ▶ “Waste Mercury Thermostat(s);” or
- ▶ “Used Mercury Thermostat(s).”

#### **4.4 LAMPS**

You must contain universal waste lamps to prevent breaking, leaks or damage. You must immediately clean up broken lamps or lamps that show evidence of damage and place them in a 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 (40 CFR 273.13(d) and 273.33(d)).

You must label lamps or a container holding lamps with any one of the following (40 CFR 273.14(d) and 273.34(d)):

- ▶ “Universal Waste-Lamp(s);”
- ▶ “Waste Lamp(s);” or
- ▶ “Used Lamp(s).”

#### **4.5 MERCURY-CONTAINING DEVICES**

If a mercury-containing device shows evidence of leakage or damage that could cause leakage, you must place it in a closed, structurally sound container. Like thermostats, the primary waste management activity associated with mercury-containing devices is removing mercury-containing ampules from the devices. This activity is allowed under 25 Pa. Code 266b.11 and 266b.31, provided you comply with the following requirements:

- ▶ Remove ampules in a manner designed to prevent breakage of the ampules;
- ▶ Remove ampules only in or over a containment device;
- ▶ Ensure that 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;
- ▶ Ensure that the work area is well ventilated and monitored to ensure compliance with applicable OSHA exposure levels for mercury;
- ▶ Train employees in proper waste mercury-handling and emergency procedures;

- ▶ Store removed ampules in closed, non-leaking containers that are in good condition; and
- ▶ Pack removed ampules in a container with packing materials adequate to prevent breakage during storage, handling and transportation.

You must label mercury-containing devices or a container holding mercury-containing devices with any one of the following (25 Pa. Code 266b.12 and 266b.32):

- ▶ “Universal Waste-Mercury-Containing Device(s);”
- ▶ “Waste Mercury-Containing Device(s);” or
- ▶ “Used Mercury-Containing Device(s).”

## APPENDIX I: PETITIONS TO INCLUDE OTHER WASTES AS UNIVERSAL WASTES

### How to Petition DEP to Include Additional Wastes in the Universal Waste Program

You may petition DEP to add a waste or category of wastes to the universal waste program. To do so, you should review the factors for considering an additional universal waste (see below) to determine if it is appropriate for universal waste regulation. Then, write a petition to demonstrate to DEP that the universal waste regulations are appropriate for the waste and that managing it as a universal waste will improve implementation of the hazardous waste program. A blank petition form may be obtained from DEP.

#### Universal Waste Petitions to DEP

##### **Your Petition Should Include:**

- Your name and address and a statement of your interest in the proposed addition to the universal waste program;
- A description of the proposed addition, including (where appropriate) suggested regulatory language, and addressing as many of the factors for considering an additional universal waste (see below) as are appropriate for the waste or waste category addressed in the petition;
- A statement of the need and justification for the proposed addition, including any supporting tests, studies or other information.

These items should be sent to DEP by certified mail.

### Factors to Consider in Evaluating Candidates for Universal Waste Designation:

DEP considers the following factors in evaluating petitions to add universal wastes to the program:

- ▶ The waste is listed in Subpart D of 40 CFR Part 261, or a proportion of the waste stream exhibits a characteristic of hazardous waste as identified in 40 CFR Part 261, Subpart C (as with the current regulations, only the portion of the waste stream that is hazardous would be subject to the universal waste regulations);

- ▶ The waste is not exclusive to a specific industry or group of industries;
- ▶ The waste is commonly generated by a wide variety of types of establishments (office complexes, households, government organizations, large industrial facilities, etc.);
- ▶ The waste is generated by a large number of generators (more than 1,000 nationally) and is frequently generated in relatively small quantities by each generator;
- ▶ Systems to be used for collecting the waste or category of waste would ensure close stewardship of the waste;
- ▶ The risk posed by the waste during accumulation and transport is relatively low compared to other hazardous wastes;
- ▶ Specific management standards would protect human health and the environment during accumulation and transport;
- ▶ Regulation of the waste will increase the likelihood that the waste will be diverted from non-hazardous waste management systems (such as the municipal waste stream) to recycling, treatment or disposal in compliance with applicable hazardous waste regulations;
- ▶ Regulation of the waste will improve implementation of and compliance with the hazardous waste regulatory program; and
- ▶ Other factors, as appropriate.

### **DEP Actions:**

DEP will base its decision concerning the petition on the weight of evidence showing that:

- ▶ Regulation as a universal waste is appropriate for the candidate waste stream;
- ▶ Adding the waste will improve management practices for that waste; and
- ▶ Adding the waste to the universal wastes program will improve implementation of the hazardous waste program as a whole.

## **APPENDIX II: ALTERNATE STANDARDS FOR MANAGING SPENT LEAD-ACID BATTERIES**

### **Alternatives for Managing Spent Lead-Acid Batteries**

If you manage spent lead-acid batteries, you may choose to comply with the universal waste standards in 40 CFR Part 273 and 25 Pa. Code Chapter 266b, or you may follow the regulations for “Spent Lead-Acid Batteries Being Reclaimed” in 40 CFR Part 266, Subpart G and 25 Pa. Code Chapter 266a, Subchapter G. The regulations in Part 266 and Chapter 266a apply to lead-acid batteries that are reclaimed. To determine which set of regulations is best for you, review this appendix to determine the requirements that apply to your specific reclamation activity. If you need further information to make a determination, the complete language of each regulation is available online at [www.pacode.com](http://www.pacode.com) and [www.epa.gov/epahome/rules.html](http://www.epa.gov/epahome/rules.html).

### **Major Provisions of the Universal Waste Rule for Spent Lead-Acid Batteries (40 CFR Part 273 and 25 Pa. Code Chapter 266b):**

If you choose to follow the universal waste rule, no matter what reclamation method you choose, the requirements are based on the type of universal waste activity you conduct. As outlined in this guide, the standards allow handlers to collect universal waste batteries, sort them and prepare them for transport to appropriate treatment or recycling facilities that are subject to hazardous waste regulations.

### **Major Provisions of the Rules for Spent Lead-Acid Batteries Being Reclaimed (40 CFR 266.80 and 25 Pa. Code 266a.80):**

If you generate, collect, transport, store or regenerate lead-acid batteries for reclamation, you may be exempt from certain hazardous waste management requirements. The federal regulations outline the hazardous waste management requirements that apply to you, based on the way you manage lead-acid batteries. The table in 40 CFR 266.80 summarizes the requirements that apply to different lead-acid battery reclamation activities. These requirements are described on the next page.

► **If your batteries will be reclaimed through regeneration (such as by electrolyte replacement):**

- You are subject to the requirements of 40 CFR Part 261 and 25 Pa. Code Chapter 261a, Identification and Listing of Hazardous Waste. You must determine if your waste exhibits a hazardous waste characteristic, which may include testing your waste or applying knowledge of the hazardous characteristics of the waste in light of the materials or processes used (see 40 CFR 262.11).
- You are exempt from the rest of 40 CFR Part 262, and all of 40 CFR Parts 124, 263-266, 268 and 270 and 25 Pa. Code Chapters 262a-266a, 268a and 270a. You also are exempt from the requirement to notify DEP and obtain an EPA identification number.

► **If your batteries will be reclaimed other than through regeneration and you**

- a. generate, collect and/or transport the batteries;
  - b. store but do not reclaim the batteries; or
  - c. reclaim but do not store the batteries:
- You are subject to the requirements of 40 CFR Part 261 and 25 Pa. Code Chapter 261a. You must determine if your waste exhibits a hazardous waste characteristic, which may include testing your waste or applying knowledge of the hazardous characteristics of the waste in light of the materials or processes used (see 40 CFR 262.11).
  - You are subject to the applicable requirements of 40 CFR Part 268, "Land Disposal Restrictions." These requirements may include submitting petitions to allow land disposal of the waste, testing the waste, notification of shipment of the waste, development of a waste analysis plan, notification of waste generation, or treating the wastes to meet applicable standards prior to final disposal.
  - You are exempt from the rest of 40 CFR Part 262, and all of 40 CFR Parts 124, 263-266 and 270 and 25 Pa. Code Chapters 262a-266a and 270a. You also are exempt from the requirement to notify DEP and obtain an EPA identification number.

► **If your batteries will be reclaimed other than through regeneration and you store these batteries before you reclaim them:**

- You are subject to 40 CFR 266.80(b) and 25 Pa. Code 266a.80(b), which require you to comply with various sections of 40 CFR Parts 264, 265, 270 and 124 and 25 Pa. Code Chapters 264a, 265a and 270a. These are standards for owners and operators of hazardous waste treatment, storage and disposal facilities, including RCRA permitting and worker protection standards. The federal regulations (40 CFR 266.80(b)) also require you to notify DEP and obtain an EPA identification number.
- You are subject to the requirements of 40 CFR Part 261 and 25 Pa. Code Chapter 261a. You must determine if your waste exhibits a hazardous waste characteristic, which may include testing your waste or applying knowledge of the hazardous characteristics of the waste in light of the materials or processes used (see 40 CFR 262.11).
- You are subject to the applicable requirements of 40 CFR Part 268, Land Disposal Restrictions. These requirements may include submitting petitions to allow land disposal of the waste, testing the waste, notification of shipment of the waste, development of a waste analysis plan, notification of waste generation, or treating the wastes to meet applicable standards prior to final disposal.

## **APPENDIX III: SOURCES OF INFORMATION FOR PERSONS MANAGING UNIVERSAL WASTES**

### **RESOURCE DIRECTORY**

#### **Pennsylvania Department of Environmental Protection**

##### **Contact Information**

The Pennsylvania Department of Environmental Protection (DEP) is in charge of administering Pennsylvania's environmental laws and regulations. DEP operates six regional offices, which issue permits and conduct inspections at various facilities and locations throughout the Commonwealth. In addition, the six regional offices oversee emergency response activities.

**DEP Emergency Response Hotline: 800-541-2050**

**DEP General Information: 717-783-2300**

##### **Division of Hazardous Waste Management**

Bureau of Land Recycling and Waste Management  
14th Floor, Rachel Carson State Office Building  
PO Box 8471  
Harrisburg, PA 17105-8471  
717-787-6239

##### **Southeast Regional Office**

Suite 6010, Lee Park, 555 North Lane  
Conshohocken, PA 19428-2233  
General: 610-832-6000  
Division of Hazardous Waste Management: 610-832-6213

##### **Northeast Regional Office**

Two Public Square  
Wilkes Barre, PA 18711-0790;  
General: 570-826-2511  
Division of Hazardous Waste Management: 570-826-2511

**Southcentral Regional Office**

909 Elmerton Avenue  
Harrisburg, PA 17110-8200  
General: 717-705-4700  
Division of Hazardous Waste Management: 717-705-4706

**Northcentral Regional Office**

208 West 3rd Street, Suite 101  
Williamsport, PA 17701-6448;  
General: 570-327-3636  
Division of Hazardous Waste Management: 570-327-3636

**Southwest Regional Office**

400 Waterfront Drive  
Pittsburgh, PA 15222-1745  
General: 412-442-4000  
Division of Hazardous Waste Management: 412-442-4000

**Northwest Regional Office**

230 Chestnut Street  
Meadville, PA 16335-3481  
General: 814-332-6945  
Division of Hazardous Waste Management: 814-332-6848 (8 am - 4 pm)  
1-800-373-3398 (after 4 pm)

**Environmental Protection Agency Resources**

RCRA, Superfund and EPCRA Hotline: 800-424-9346  
Pollution Prevention Information Clearinghouse: 202-260-1023  
RCRA Information Center: 703-603-9230

**Electronic Resources**

DEP Web Site: [www.dep.state.pa.us](http://www.dep.state.pa.us)  
EPA Web Site: [www.epa.gov](http://www.epa.gov)

## Additional Ways to Obtain the Regulations

You can obtain copies of the Pennsylvania regulations cited in this document in one of the following ways:

- ▶ Paper copies of the Pennsylvania Code are available to the general public by writing to Fry Communications, Attn: Pennsylvania Bulletin, 800 W. Church Road, Mechanicsburg, PA 17055-3198 or by calling 717-766-0211, ext. 2340; 800-334-1429, ext. 2340 (toll free, out-of-state); or 800-524-3232, ext. 2340 (toll free, in-state).
- ▶ The Pennsylvania Code is available online by visiting [www.pacode.com](http://www.pacode.com). You can search the environmental regulations by keyword or citation by selecting "Search" on the left-hand side of your screen, then entering appropriate keywords or the citation, selecting "Title 25 Environmental Protection," and clicking "Search." You can browse through the Pennsylvania Code and locate specific citations by clicking on "Browse" on the left-hand side of your screen, selecting "25 Environmental Protection," clicking "Select," and then clicking on links for the appropriate chapters and sections.

You can obtain copies of the federal regulations cited in this document in several ways, including the following:

- ▶ Paper, microfiche and electronic copies can be purchased from the U.S. Government Printing Office (GPO). You may purchase books, periodicals and electronic information products from the Documents Sales Service by mail, phone or fax, or by visiting one of 24 United States Government Bookstores nationwide. The GPO Order Desk is open from 8 a.m. to 4 p.m. Eastern time, Monday through Friday, at 202-512-1800 (phone) or 202-512-2250 (fax).
- ▶ The full text of Title 40 CFR is retrievable by chapters, subchapters and parts in Adobe Portable Document Format (PDF) or text versions on the World Wide Web. Begin at [www.gpo.gov](http://www.gpo.gov), then under "Quicklinks" select "Code of Federal Regulations," then click on "Code of Federal Regulations" in the far left box. Next, scroll down and select Title 40 - July 1, 2001. You can retrieve specific sections linked to this page or search Title 40 by keyword.

- ▶ 40 CFR is also available in PDF at [www.epa.gov/epahome/rules.html](http://www.epa.gov/epahome/rules.html). Select “Codified Regulations,” “CFR Title 40: Protection of the Environment,” then “CHAPTER I ENVIRONMENTAL PROTECTION AGENCY.” You can select links to specific subchapters that address various areas regulated by U.S. EPA.
- ▶ You may have free access to federal government information by visiting one of the approximately 1,400 Federal Depository Libraries located throughout Pennsylvania. A list of the Federal Depository Libraries in Pennsylvania is available at [www.access.gpo.gov/su\\_docs/locators/findlibs/index.html](http://www.access.gpo.gov/su_docs/locators/findlibs/index.html) or by calling DEP at 717-787-6239.

## APPENDIX IV: WASTE MINIMIZATION AND POLLUTION PREVENTION ASSISTANCE

### Waste Minimization and Source Reduction Strategies

Waste minimization is an important element of DEP's hazardous waste program. DEP has established special requirements for waste reduction that go beyond the scope of the federal program. As a generator, you have many incentives for reducing the amount of hazardous waste you generate. For example, waste reduction will reduce your hazardous waste management costs, protect employee health and the environment, and reduce the possibility of future liability due to mismanagement of the waste. (See Exhibit IV-1.)

#### Exhibit IV-1

##### **Ideas for Waste Reduction Strategy**

- Substituting raw materials.
- Modifying or redesigning end products.
- Reformulating or redesigning production processes.
- Changing material usage, handling or storage practices.
- Using closed-loop reclamation, reuse or recycling.
- Using on-site or off-site recycling technologies.

### Persistent, Bioaccumulative and Toxic (PBT) Chemicals in Waste

The RCRA Waste Minimization PBT Chemical List identifies the chemicals that are the highest national priorities for RCRA hazardous waste minimization efforts. EPA is tracking reductions of these chemicals to measure progress toward the national goal of reducing the most persistent, bioaccumulative and toxic chemicals in hazardous waste by 50 percent by 2005. By working together, industry and the public are reducing the potential threat these chemicals can pose in hazardous waste. A list of these chemicals is available from EPA Region 3 in Philadelphia or on the Waste Minimization website at [www.epa.gov/reg3wcmd/wasteminimization.htm](http://www.epa.gov/reg3wcmd/wasteminimization.htm).

### Use these helpful websites and contacts to learn more about Waste Minimization, Source Reduction and Preventing Pollution.

- ▶ Pennsylvania Department of Environmental Protection at 717-783-2300 or online at [www.dep.state.pa.us](http://www.dep.state.pa.us)
- ▶ DEP's Office of Pollution Prevention and Compliance Assistance at 717-783-0540 or online at [www.dep.state.pa.us](http://www.dep.state.pa.us) (directLINK "pollution prevention").

- ▶ Pennsylvania Small Business Assistance Program at 717-787-1663 or online at [www.dep.state.pa.us](http://www.dep.state.pa.us) (directLINK “small business”)
- ▶ Pennsylvania ENVIROHELP at [www.pa-envirohelp.org](http://www.pa-envirohelp.org) or 800-722-4743
- ▶ Pennsylvania Environmental Assistance Network at [www.pean.state.pa.us](http://www.pean.state.pa.us) or 717-948-6520

### **Contact Pennsylvania’s Waste Minimization Team Member**

Glenn Mitzel, 717-787-6239  
e-mail: [gkmitzel@state.pa.us](mailto:gkmitzel@state.pa.us)

To obtain a copy of DEP’s Source Reduction Strategy Manual call or write to any DEP Regional Office or:

PADEP  
Division of Hazardous Waste Management  
14th Floor, Rachel Carson State Office Building  
PO Box 8471  
Harrisburg, PA 17105-8471  
717-787-6239

### **Environmental Protection Agency Waste Minimization Resources**

Contact EPA’s Region III Waste Minimization Team Leader  
Noah Borenstein, 215-814-5366  
e-mail: [borenstein.noah@epa.gov](mailto:borenstein.noah@epa.gov)

The Waste Minimization Resource directory:  
<http://www.epa.gov/epaoswer/hazwaste/minimize/p2.htm>

The National Pollution Prevention Roundtable’s P2 Hotline at 888-745-7272

The RCRA Hotline at 800-424-9346

**This page intentionally left blank.**