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Universal Waste Rule: Final Rule Issued

Introduction

On February 11, 1993, EPA proposed to streamline the management requirements for certain hazardous wastes that were generated in large quantities by a variety of generators (i.e., residential, small businesses, industries, etc.). EPA's intention was to facilitate the environmentally sound collection and disposal of these types of wastes. In this proposed rule, EPA termed these types of hazardous wastes "universal wastes" and developed a management system which was less stringent than the existing Subtitle C regulations. EPA proposed that the following three types of hazardous wastes be managed as universal wastes: batteries, certain pesticides, and thermostats. Because EPA believed that the authority to propose the promulgation of the universal waste rule was not significantly linked to HSWA provisions, the Agency proposed the promulgation of the universal waste rule under pre-HSWA authority. On May 11, 1995, at FR 25492, EPA promulgated a pre-HSWA rule that streamlined hazardous waste management regulations for universal wastes.

Statutory Authority

Because it is less stringent than existing Subtitle C regulations and is a pre-HSWA amendment, the universal waste rule has certain implications in regard to its adoption by States. It is important that handlers, transporters, and disposal facilities ascertain the status of the adoption of these regulations in States in which they plan to manage universal wastes. The following are two possible scenarios concerning adoption of the rule by States:

- Unauthorized States: The universal waste rule became effective on May 11, 1995, in those States that are not authorized for administering and enforcing the RCRA Program.

- Authorized States: Authorized States are not required to promulgate this rule because it is less stringent than existing hazardous waste management standards. EPA, however, indicated that Program Offices of 28 States strongly supported the rulemaking in their responses to the proposed rule. *Note: Even if a State adopts this rule, it has the authority under Section 3009 of RCRA to add more stringent provisions.*

Provisions of the New Rule

The new rule incorporates the universal waste management system into the existing hazardous waste regulations. Universal wastes have three characteristics: (1) they are generated widely in non-industrial settings; (2) they are generated by a vast community, the size of which poses implementation difficulties for both the regulators and the regulated community; and (3) they may be present in large volumes in nonhazardous waste management systems. All universal wastes are hazardous wastes. Nonhazardous wastes are not subject to the universal waste regulations. Requirements for managing universal wastes are contained in 40 CFR 273, in which EPA has divided the regulated community into the following categories: handlers, transporters, and destination facilities. Although the three types of hazardous wastes that EPA has classified as universal wastes in this rulemaking are batteries, certain pesticides, and mercury thermostats, EPA has included provisions for adding other hazardous wastes to the universal waste management system in the future.

The Regulated Community

Handlers of Universal Waste:

There are two types of handlers of universal waste: (1) An entity that generates or creates universal waste (e.g., a person who uses pesticides, batteries, or thermostats and decides they are no longer usable and discards them) and (2) an entity that receives universal waste from generators or other handlers, consolidates the waste, and then sends it to recyclers, other handlers, or treatment/disposal facilities. Universal waste handlers accumulate universal waste but do not treat, recycle, or dispose of universal wastes.

EPA has categorized handlers into two groups: Small Quantity Handlers of Universal Waste (SQHUW) and Large Quantity Handlers of Universal Waste (LQHUW). SQHUWs are handlers that accumulate less than 5,000 kilograms (kg) of universal waste at any given time. LQHUWs accumulate 5,000 kg or greater of universal waste at any given time. EPA realized that there may be circumstances where handlers typically classified as SQHUW may infrequently accumulate 5,000 kg or greater of universal waste at one time. Under this circumstance, EPA requires that the handler follow LQHUW standards for the remainder of the calendar year in which the

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5,000 kg or greater of universal waste was accumulated. A handler may reevaluate his status as a LQHUW in the following calendar year.

Standards for SQHUWs and LQHUWs are generally similar. Subpart B of 40 CFR 273 contains the requirements for SQHUWs. Subpart C of 40 CFR 273 contains the requirements for LQHUWs. Table 1 provides a brief description of management requirements for handlers of universal wastes. In addition, the table, on a section-by-section basis, provides the differences between any management requirements for SQHUWs and LQHUWs.

Transporters of Universal Wastes:

EPA defines a transporter of universal waste as "a person engaged in the off-site transportation of universal waste by air, rail, highway, or water". Transporters of universal wastes must comply with Subpart D of 40 CFR 273. The main difference between universal and hazardous waste transporters is that universal waste transporters are not required to carry hazardous waste manifests. However, they are required to comply with all Department of Transportation (DOT) requirements. Table 2 summarizes requirements for hazardous waste transporters.

Interstate Transportation:

Interstate transportation can be a complex issue. Universal waste handlers who plan to transport universal wastes to an accumulation point or destination facility located in another State must determine if the waste being shipped has been classified as a universal waste in the generator's state, the state(s) the shipment will pass through, and the consignment state. States that have not adopted the universal waste rule will require that a hazardous waste manifest accompany the shipment. In addition, the transporter will have to comply with all requirements of 40 CFR 263.

Table 1. Standards for Universal Handlers

Section	SQHUW Citation	LQHUW Citation	Requirements
Applicability	40 CFR 273.10	40 CFR 273.30	Subpart B of 40 CFR 273 provides standards for SQHUW. Subpart C of 40 CFR 273 provides standards for LQHUW.
Prohibitions	40 CFR 273.11	40 CFR 273.31	Handlers are prohibited from disposing, diluting, or treating universal waste except in certain circumstances.
Notification	40 CFR 273.12	40 CFR 273.32	SQHUWs are not required to notify EPA or the authorized State of their universal waste activities and are not required to obtain an EPA Identification Number. LQHUWs, however, are required to notify EPA or the authorized State and obtain an EPA Identification Number.
Waste Management	40 CFR 273.13	40 CFR 273.33	Handlers are required to comply with management standards for universal waste batteries, certain pesticides, and thermostats.
Labeling and Marking	40 CFR 273.14	40 CFR 273.34	Handlers must label and mark universal wastes for storage and transport.
Accumulation Time	40 CFR 273.15	40 CFR 273.35	Handlers may accumulate universal waste up to one year. Handlers must demonstrate that universal wastes were not accumulated over a period greater than one year.
Employee Training Requirements	40 CFR 273.16	40 CFR 273.36	SQHUWs must distribute basic handling and emergency information to employees handling universal waste. LQHUWs must ensure that employees are familiar with waste handling and emergency procedures appropriate to their responsibilities.
Response to Releases	40 CFR 273.17	40 CFR 273.37	Handlers must immediately contain any releases of universal waste and handle residues appropriately. Any releases of hazardous substance(s) above Reportable Quantities (RQ) for that substance(s) must be reported under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA).
Off-site Shipments	40 CFR 273.18	40 CFR 273.38	Handlers must send universal waste only to persons within the universal waste system and comply with procedures to be followed when a shipment is rejected by the receiving facility.
Tracking Universal Waste Shipments	40 CFR 273.19	40 CFR 273.39	SQHUWS do not have any requirements. LQHUWs must maintain basic records documenting shipment sent from the facility.
Exports	40 CFR 273.20	40 CFR 273.40	Handlers must follow notification procedures for shipping universal wastes to foreign destinations.

Table 2. Standards for Universal Waste Transporters		
Section	**Citation**	**Requirements**
Applicability	40 CFR 273.51	Transporters of universal waste must comply with Subpart D of 40 CFR Part 273.
Prohibitions	40 CFR 273.52	Transporters are prohibited from disposing, diluting, or treating universal waste.
Waste Management	40 CFR 273.53	Transporters must comply with applicable DOT requirements if they are transporting universal wastes that are considered hazardous material by DOT.
Accumulation Time Limites	40 CFR 273.54	Transporters may store universal waste for up to 10 days at a transfer facility during the course of transportation. Transfer facilities may include the following: loading docks, parking areas, and storage areas. If a transporter stores universal waste for more than 10 days at one location, the transporter must comply with handler requirements.
Response to Releases	40 CFR 273.55	Transporters are required to immediately contain any releases of universal waste and to handle residues appropriately. Any releases of hazardous substance(s) above an RQ for that substance(s) must be reported under CERCLA.
Off-site Shipments	40 CFR 273.56	Shipment of universal wastes to any facility or other than a universal waste handler, destination facility, or foreign destination is prohibited.
Exports	40 CFR 273.57	Transporters must comply with certain requirements for exports of universal waste to foreign destinations.

Destination Facilities:

Destination facilities are those that treat, dispose of, or recycle universal wastes. Destination facilities must comply with Subpart E of 40 CFR 273. Facilities that only accumulate universal wastes are not subject to destination facility standards; they are subject to handler requirements. Destination facilities are subject to permitting, general facility standards, unit-specific standards, and corrective action requirements (i.e., all applicable requirements of 40 CFR Parts 264, 265, 266, 268, 270, and 124, and the notification requirements under Section 3010 of RCRA).

In order to be "permitted," destination facilities must (1) have received a permit (or interim status) in accordance with the requirements of 40 CFR 270 and 124, or (2) have received a permit (or interim status) from a State authorized in accordance with 40 CFR 271, or (3) be a recycler regulated under 40 CFR 261.6 (c)(2).

There are two sections (i.e., 40 CFR 273.61 [off-site shipments] and 40 CFR 273.62 [tracking universal waste shipments]) that specifically address the management of universal wastes. In general, destination facility off-site shipment requirements mirror the requirements for the LQHUW requirements for receipt of universal wastes. In regard to tracking universal waste shipments, the owner or operator of a destination facility must keep a record of each shipment of universal waste received by the facility. The record must include the name and address of the universal waste handler, the quantity of each type of universal waste received, and the date of receipt of shipment. The owner or operator must keep these records for a period of three years.

Types of Universal Wastes

Batteries:

EPA, in this rulemaking, has allowed hazardous waste batteries as defined in 40 CFR 260.10 and 273.6 to be managed as universal wastes. EPA defines battery as "a device consisting of one or more electrically connected electrochemical cells which is designed to receive, store, and deliver electrical energy. An electrochemical cell is a system consisting of an anode, cathode, and an electrolyte, plus any 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."

Lead-Acid Batteries:

Lead-acid batteries which are regulated under 40 CFR 266 Subpart G can also be regulated under the universal waste management program. Under 40 CFR 266 Subpart G regulations, persons who generate, transport or store lead-acid batteries but do not reclaim them are not subject to hazardous waste regulations. However, persons that accumulate spent lead-acid batteries before reclaiming them (e.g., cracking, and/or smelting the batteries) must notify EPA or the authorized State and obtain a RCRA permit for storage. EPA indicated that it is likely that generators of spent automotive lead-acid batteries will continue to choose 40 CFR 266 as the program for battery management and that generators of other types of sealed lead-acid batteries will choose to manage batteries under the universal waste management system.

Regenerated Batteries:

This rule removes the 40 CFR 261.6 exemption for used batteries that are to be regenerated and adds a provision at 40 CFR 273.13(a) and 273.33(a) such that facilities regenerating used batteries are now subject to the 40 CFR 273 standards for SQHUWs or LQHUWs of universal wastes, depending on the quantity of batteries that they accumulate. 40 CFR 266.80(a) and (b) have been revised to clarify that lead-acid batteries that are regenerated remain exempt from the hazardous waste regulations through the management cycle.

Managing Universal Waste Batteries:

The new rule provides three provisions for managing batteries as universal wastes:

- Any batteries that show evidence of leakage, spillage, or damage that potentially could cause leakage must be containerized. The container must be closed, structurally sound, compatible with the contents of the battery, and lack evidence of potential for leakage or spillage.
- Handlers are allowed to conduct certain activities associated with battery management under this rule including: sorting batteries by type, mixing battery types in one container, discharging batteries to remove the electric charge, disassembling batteries or battery packs into individual batteries or cells, and removing batteries from discarded consumer products. These activities are allowed as long as the battery or cell casings are not breached and remain closed and intact.
- Any wastes (e.g., electrolytes) removed from batteries may be regulated as hazardous waste (i.e., the generator is required to comply with 40 CFR 262). If the electrolyte or other waste generated as a result of managing batteries is not hazardous, they may be managed under applicable solid waste regulations.

Labeling and Marking Provisions:

Labeling and marking provisions are contained at 40 CFR 273.14 and 273.34. Handlers of universal waste batteries are required to label each battery or battery container with the words "Universal Waste Battery(ies)", or "Waste Battery(ies)", or "Used Battery(ies)".

Pesticides:

EPA has allowed certain hazardous waste pesticides to be managed in the universal waste management system. EPA defines pesticide as 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, other than any article that: (1) is a new animal drug under the Federal Food, Drug, and Cosmetic Act (FFDCA) Section 201(w), or (2) is an animal drug that has been determined by regulation of the Secretary of Health and Human Services not to be a new animal drug, or (3) is an animal feed under FFDCA Section 201(x) that bears or contains any substances described by condition (1) or (2) of this definition.

Pesticides Regulated by 40 CFR 273:

- Recalled pesticides that are (1) stocks of suspended or canceled pesticides that are part of voluntary or mandatory recalls under Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), Section 19(b), including but not limited to those owned by the registrant responsible for conducting the recall or (2) stocks of a suspended or canceled pesticide, or a pesticide that is not in compliance with FIFRA, that are a part of a voluntary recall by the registrant.
- Stocks of other unused pesticide products that are collected and managed as part of a waste pesticide collection program.

Pesticides Not Regulated by 40 CFR 273:

- Pesticides not meeting the conditions set forth in paragraph (a) of 40 CFR 273.3. These pesticides must be managed in compliance with the hazardous waste regulations in 40 CFR parts 260 through 272.
- Pesticides that are not hazardous wastes. A pesticide is a hazardous waste if it is listed in Subpart D of 40 CFR Part 261, or if it exhibits one or more characteristics identified in Subpart C of 40 CFR 261.
- Pesticides that do not meet the criteria for waste generation in Paragraph (c) of 40 CFR 273.3 or those that are not wastes as described in paragraph (d) of 40 CFR 273.3.

When a Pesticide Becomes a Waste:

A pesticide becomes a waste on the first date on which either of the following conditions apply: (1) The generator of the recalled pesticide (as described in paragraph (a)(1) of 40 CFR 273.3) agrees to participate in the recall and the person conducting the recall decides to discard the pesticide (e.g., burn the pesticide for energy recovery), or (2) an unused pesticide product (as described in paragraph (a)(2) of 40 CFR 273.3) becomes a waste on the date the generator decides to discard it.

Pesticides That Are Not Wastes:

- Recalled pesticides described in paragraph (a)(1) of 40 CFR 273.3 are not wastes provided that the person conducting the recall has not made a decision to discard the pesticide. Until such a decision is made, the pesticide does not meet the definition of "solid waste" under 40 CFR 261.2; thus the pesticide is not subject to hazardous waste requirements, including 40 CFR 273. These pesticides remain subject to the requirements of FIFRA.

- Pesticides for which the generator has made a decision to use a management option that, under 40 CFR 261.2, does not cause the pesticide to be a solid waste (i.e., the selected option is use (other than use constituting disposal) or reuse (other than burning for energy recovery or reclamation)). Such a pesticide is not a solid waste and therefore is not a hazardous waste, and is not subject to hazardous waste requirements, including 40 CFR 273.

- Unused pesticide products described in paragraph (a)(2) of 40 CFR 273.3 if the generator of the unused pesticide products has not decided to discard them (e.g., burn them for energy recovery). These pesticides remain subject to the requirements of FIFRA.

Managing Universal Waste Pesticides:

Pesticides may be managed in a container that remains closed, is structurally sound, is compatible with the pesticide, and that lacks evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions. Pesticides managed in a container not meeting these conditions must be over-packed in a structurally sound container. Tanks that are used for managing pesticides classified as universal wastes must comply with hazardous waste tank requirements (i.e, 40 CFR 265, Subpart J, except for 40 CFR 265.197(c), 265.20, and 265.201). Handlers must use transport vehicles or vessels that are closed, structurally sound, compatible with the pesticide, and that lack evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions.

Labeling and Marking Provisions:

Handlers must label containers that contain pesticides with the words "Universal Waste-Pesticide(s)"or "Waste-Pesticide(s)." Additional labeling is required for universal waste pesticides based upon whether or not the pesticide is a recalled product or an unused pesticide.

- Universal waste handlers managing recalled pesticides are required to mark or label tanks or containers holding the recalled pesticide with the original FIFRA label that would be required under FIFRA if the pesticide were a product.

- Unused pesticides that will fall under the universal waste category will be products whose registration has been canceled, which are no longer marketed, or which are no longer used by farmers. There are three options for labeling these types of pesticides: (1) label the pesticide tank or container with a label that was on the accompanied product as sold or distributed (if still legible), or (2) label the container or containing unit with a label required by DOT under 49 CFR 172, or (3) if these two options are not possible, use another label that is approved in advance by the state or local pesticide collection program.

Universal Waste Thermostats:

Thermostats are defined as temperature control devices that contain 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 273.12(c)(2) and 273.33 (c)(2).

Managing Universal Waste Thermostats:

Handlers of universal waste thermostats must comply with the following requirements: (1) leaking thermostats must be contained in a non-leaking container and (2) handlers removing mercury-containing ampules must comply with the following procedures to ensure that ampule removal is conducted in an environmentally protective manner:

- The handler must remove the ampules in a manner designed to prevent breakage of the ampules. Furthermore, the handler must remove the ampules over or in a containment device (e.g., pan or tray sufficient to contain any mercury released from an ampule in case of breakage).

- The handler must ensure that a mercury clean-up system is readily available to immediately transfer any mercury resulting from spills or leaks from broken ampules.

- The handler must immediately transfer any mercury in the containment device (as a result of spills or leaks from broken ampules) to a container that meets the requirements of 40 CFR 262.34.

- The handler must ensure that the area in which ampules are removed is well ventilated and monitored to ensure compliance with applicable Occupational Safety and Health Administration levels for mercury.

- The handler must ensure that all employees removing ampules are thoroughly familiar with proper waste mercury handling and emergency procedures including transfer of mercury from containment devices to appropriate containers.

- The handler must accumulate removed ampules in closed, non-leaking containers that are in good condition (e.g., no severe rusting, structural defects, or deterioration).

- The handler must pack removed ampules in the container with packing materials adequate to prevent breakage during accumulation, handling, and transportation.

  Please note: Handlers not complying with these requirements for ampule removal are subject to the full hazardous waste requirements of 40 CFR Parts 262 through 270.

EPA realizes that spills or leaks resulting from ampule removal may occur. In such cases, the handler must determine if the spill residual exhibits the "toxicity characteristic" for mercury. If so, then it is subject to all full hazardous waste requirements of 40 CFR Parts 260

through 272. In addition to spill residues, any other solid waste (e.g., thermostat casings) generated during management activities must be tested to determine whether or not they are hazardous wastes.

Labeling and Marking Provisions:

Handlers of universal waste thermostats must label each universal waste item or container holding these wastes with the following words: "Universal Waste - Mercury Thermostats(s)" or "Waste Mercury Thermostat(s)" or "Used Mercury Thermostat(s)."

Petitions to Include Other Wastes

The regulated community has an option to petition for the addition of a hazardous waste to the universal waste management system by following procedures contained in Subpart G of 40 CFR 273 and 40 CFR 260.20 and 260.23. Waste categories as well as individual types of waste can be considered candidates for inclusion in the universal waste management system. EPA's decision to classify an individual waste stream or waste category as a universal waste is based on the Agency's evaluation of factors contained in 40 CFR 273.81. These factors are listed in Table 3.

Commenters suggested that several types of hazardous wastes be added to the universal waste management system as described in the proposed rule: electronic components, photographic wastes, solvent contaminated rags and wipers, aerosol cans, auto shredder fluff, spent antifreeze, and mercury-containing equipment other than thermostats. EPA decided that even though some of these wastes are good candidates, it would abstain from including additional wastes in the universal waste management system in this rulemaking. EPA's objective for this rulemaking was to focus it's efforts on developing a basic universal waste management structure.

Table 3. Factors for Evaluating Waste for Inclusion into the Universal Waste Management System

Citation	Comments
40 CFR 273.81(a)	Wastes must be hazardous (i.e., are listed in 40 CFR 261 Subpart D or exhibit one or more characteristics of hazardous waste per 40 CFR 261 Subpart C).
40 CFR 273.81(b)	Wastes should not be exclusive to a specific group or industry and should be commonly generated by a wide variety of types of establishments (e.g., households, commercial businesses, service businesses, office complexes, government organizations, etc.)
40 CFR 273.81(c)	Wastes should be generated by a large number of generators (EPA used 1,000 generators as an example in the proposed rule).
40 CFR 273.81(d)	Collection systems should exist that ensure close stewardship of the wastes.
40 CFR 273.81(e)	Wastes should pose relatively low risks compared to other hazardous wastes during accumulation and transport.
40 CFR 273.81(f)	Regulation of the waste under 40 CFR 273 will increase the likelihood that the waste will be diverted from non-hazardous waste management systems (e.g., municipal waste streams, sewers, or stormwater systems)
40 CFR 273.81(g)	Regulation of the waste under 40 CFR 273 will improve implementation of and compliance with the hazardous waste regulatory program.
40 CFR 273.81(h)	Other appropriate factors. EPA believes that there may be other factors unique to a particular waste stream or category of waste adequate to demonstrate that the waste or waste category is appropriate to be managed as a universal waste.

Please note: EPA will not automatically disqualify a waste for inclusion in the universal waste management system because not every factor was addressed. EPA will consider the overall weight of the evidence demonstrating the waste candidate's appropriateness of being included in the universal waste management system.

Please direct questions about the Univeral Waste Final Rule to:
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