

3745-273-33**Waste management - standards for large quantity handlers of universal waste.**

(A) Universal waste batteries. A large quantity handler of universal waste shall manage universal waste batteries in a way that prevents releases of any universal waste or component of a universal waste to the environment, as follows:

(1) A large quantity handler of universal waste shall contain any universal waste battery that shows evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions in a container. The container shall be closed, structurally sound, compatible with the contents of the battery, and shall lack evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions.

(2) A large quantity handler of universal waste may conduct any or all of the following activities as long as the casing of each individual battery cell is not breached and remains intact and closed (except that cells may be opened to remove electrolyte but shall be immediately closed after removal):

(a) Sorting batteries by type.

(b) Mixing battery types in one container.

(c) Discharging batteries so as to remove the electric charge.

(d) Regenerating used batteries.

(e) Disassembling batteries or battery packs into individual batteries or cells.

(f) Removing batteries from consumer products.

(g) Removing electrolyte from batteries.

(3) A large quantity handler of universal waste who removes electrolyte from batteries, or who generates other waste (e.g., battery pack materials, discarded consumer products) as a result of the activities listed in paragraph (A)(2) of this rule, shall determine whether the electrolyte or other waste exhibit a characteristic of hazardous waste identified in rules 3745-51-20 to 3745-51-24 of the Administrative Code.

(a) If the electrolyte or other waste exhibit a characteristic of hazardous waste, the electrolyte or other waste shall be managed in compliance with all applicable requirements of Chapters 3745-50 to 3745-69, 3745-205, 3745-256, 3745-266, and 3745-270 of the Administrative Code. The

handler is considered the generator of the hazardous electrolyte or other waste and is subject to Chapter 3745-52 of the Administrative Code.

(b) If the electrolyte or other waste is not hazardous, the handler may manage the waste in any way that is in compliance with applicable law.

(B) Universal waste pesticides. A large quantity handler of universal waste shall manage universal waste pesticides in a way that prevents releases of any universal waste or component of a universal waste to the environment. The universal waste pesticides shall be contained in one or more of the following manners:

(1) A container that remains closed, structurally sound, compatible with the pesticide, and that lacks evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions.

(2) A container that does not comply with paragraph (B)(1) of this rule, provided that the unacceptable container is overpacked in a container that does comply with paragraph (B)(1) of this rule.

(3) A tank that complies with rules 3745-66-90 to 3745-66-101 of the Administrative Code, except for paragraph (C) of rule 3745-66-97, rule 3745-66-100, and rule 3745-66-101 of the Administrative Code.

(4) A transport vehicle or vessel that is closed, structurally sound, compatible with the pesticide, and that lacks evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions.

(C) Universal waste mercury-containing equipment. A large quantity handler of universal waste shall manage universal waste mercury-containing equipment in a way that prevents releases of any universal waste or component of a universal waste to the environment, as follows:

(1) A large quantity handler of universal waste shall place in a container any universal waste mercury-containing equipment with non-contained elemental mercury or that shows evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions. The container shall be closed, structurally sound, compatible with the contents of the device, shall lack evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions, and shall be reasonably designed to prevent the escape of mercury into the environment by volatilization or any other means.

(2) A large quantity handler of universal waste may remove mercury-containing ampules from universal waste mercury-containing equipment provided the handler does all of the following:

(a) Removes and manages the ampules in a manner designed to prevent breakage of the ampules.

(b) Removes the ampules only over or in a containment device (e.g., tray or pan sufficient to collect and contain any mercury released from an ampule in case of breakage).

(c) Ensures that a mercury clean-up system is readily available to immediately transfer any mercury resulting from spills or leaks from broken ampules from that containment device to a container that complies with rule 3745-52-34 of the Administrative Code.

(d) Immediately transfers any mercury resulting from spills or leaks from broken ampules from the containment device to a container that complies with rule 3745-52-34 of the Administrative Code.

(e) Ensures that the area in which ampules are removed is well ventilated and monitored to ensure compliance with applicable occupational safety and health administration (OSHA) exposure levels for mercury.

(f) Ensures that employees removing ampules are thoroughly familiar with proper waste mercury handling and emergency procedures, including transfer of mercury from containment devices to appropriate containers.

(g) Stores removed ampules in closed, non-leaking containers that are in good condition.

(h) Packs removed ampules in the container with packing materials adequate to prevent breakage during storage, handling, and transportation.

(3) A large quantity handler of universal waste mercury-containing equipment that does not contain an ampule may remove the open original housing holding the mercury from universal waste mercury-containing equipment provided the handler:

(a) Immediately seals the original housing holding the mercury with an air-tight seal to prevent the release of any mercury to the environment.

(b) Follows all requirements for removing ampules and managing removed ampules under paragraph (C)(2) of this rule.

(4) Mercury and clean-up residues.

(a) A large quantity handler of universal waste who removes mercury-containing ampules from mercury-containing equipment or seals mercury from mercury-containing equipment in the original housing shall determine whether the following exhibit a characteristic of hazardous waste identified in rules 3745-51-20 to 3745-51-24 of the Administrative Code:

(i) Mercury or clean-up residues resulting from spills or leaks.

(ii) Other waste generated as a result of the removal of mercury-containing ampules or housings (e.g., the remaining mercury-containing device).

(b) If the mercury, residues, or other waste exhibit a characteristic of hazardous waste, the mercury, residues, or other waste shall be managed in compliance with all applicable requirements of Chapters 3745-50 to 3745-69, 3745-205, 3745-256, 3745-266, and 3745-270 of the Administrative Code. The handler is considered the generator of the mercury, residues, or other waste and shall manage the mercury, residues, or other waste in compliance with Chapter 3745-52 of the Administrative Code.

(c) If the mercury, residues, or other waste is not hazardous, the handler may manage the waste in any way that is in compliance with applicable law.

(D) Universal waste lamps. A large quantity handler of universal waste shall manage lamps in a way that prevents releases of any universal waste or component of a universal waste to the environment, as follows:

(1) A large quantity handler of universal waste shall contain any lamp in containers, cabinets or packages that are structurally sound, adequate to prevent breakage, and compatible with the contents of the lamps. Such containers, cabinets and packages shall remain closed and shall lack evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions.

(2) A large quantity handler of universal waste shall immediately clean up and place in a container any lamp that is broken and shall place in a container any lamp that shows evidence of breakage, leakage, or damage that could cause the release of mercury or other hazardous constituents to the environment. Containers shall be closed, structurally sound, compatible with the contents of the lamps, and shall lack evidence of leakage, spillage, or damage that could cause leakage or

releases of mercury or other hazardous constituents to the environment under reasonably foreseeable conditions.

(E) Universal waste aerosol containers. A large quantity handler of universal waste shall manage universal waste aerosol containers in a way that prevents releases of any universal waste or any component of a universal waste to the environment, as follows:

(1) A large quantity handler of universal waste shall store aerosol containers in a cabinet, hopper, container or other unit such as a table top or shelving unit that is structurally sound and compatible with the contents of the containers and that lacks evidence of leakage.

(2) A large quantity handler of universal waste who initially collects aerosol containers at a universal waste satellite accumulation area prior to moving the aerosol containers to a specified accumulation area for storage, puncturing, or shipment off-site shall move the satellite accumulation container to the specified accumulation area prior to the capacity of the satellite accumulation area being exceeded.

(3) A large quantity handler of universal waste shall immediately empty a leaking aerosol container of the container's contents in accordance with paragraph (E) (4) of this rule or shall individually overpack the leaking aerosol container in a container having enough absorbent material to absorb the leaking contents of the aerosol container.

(4) A large quantity handler of universal waste may puncture or crush an aerosol container to remove and collect the contents of the aerosol container rendering the container empty provided the handler does the following:

(a) The large quantity handler of universal waste shall use commercially available equipment, or equipment specifically custom designed or retrofitted according to accepted engineering practices based on established codes, standards, published technical reports, or similar peer reviewed documents, to puncture or crush and empty aerosol containers within an enclosed compartment.

(b) The large quantity handler of universal waste shall use puncturing or crushing equipment that has sufficient processing capacity to puncture or crush the quantity of aerosol containers received or generated within one year.

(c) The large quantity handler of universal waste shall ensure that puncturing or crushing equipment meets the following conditions:

(i) The equipment shall be located in a well ventilated area.

(ii) The equipment shall be protected from an ignition source.

(iii) The equipment shall be connected to a container or tank to collect liquids released from the aerosol container.

(d) The large quantity handler of universal waste shall maintain the puncturing or crushing equipment and replace air filters according to the manufacturer's specifications.

(e) The large quantity handler of universal waste shall determine if the collected liquids, except for liquids consisting solely of paint, and air filters meet the definition of "hazardous waste" according to Chapter 3745-51 of the Administrative Code. If the collected liquids or air filters meet the definition of hazardous waste, the handler is the generator of the hazardous waste and is subject to Chapter 3745-52 of the Administrative Code. The collected liquids, except for liquids consisting solely of paint, and air filters are not classified as universal waste for the purposes of this rule, the empty containers may be recycled.

[Comment: Liquids consisting solely of paint from aerosol containers are eligible to be classified and managed as a universal waste paint in accordance with Chapter 3745-273 of the Administrative Code.]

(f) The large quantity handler of universal waste shall train each operator of the aerosol container puncturing or crushing equipment regarding the safe and proper operation of the puncturing or crushing equipment, the maintenance of the unit, the segregation of incompatible wastes and the identification of aerosol containers for which puncturing or crushing may not be appropriate.

[Comment: Large quantity handlers of universal waste who use aerosol container puncturing or crushing units may be subject to requirements of the Clean Air Act or the Occupational Health and Safety Act.]

(5) A large quantity handler of universal waste shall manage aerosol containers that are ignitable or reactive in accordance with the following:

(a) Rule 3745-66-76 of the Administrative Code or obtain written approval from the authority having jurisdiction over the local fire code allowing alternative aerosol container storage less than fifty feet from the facility's property line. The written approval shall be maintained on-site for as long as ignitable or reactive aerosol containers are managed on-site.

(b) Rule 3745-65-17 of the Administrative Code.

(6) A large quantity handler of universal waste shall manage aerosol containers that are incompatible in accordance with rule 3745-66-77 of the Administrative Code.

(7) The large quantity handler of universal waste shall design, construct, maintain, and operate the facility to minimize the possibility of a fire, explosion, or unplanned sudden or non-sudden release of universal waste or hazardous constituents to air, soil, or surface water which could threaten human health or the environment.

(F) Universal waste antifreeze. A large quantity handler of universal waste shall manage universal waste antifreeze in a way that prevents releases of any universal waste or any component of a universal waste to the environment, as follows:

(1) A large quantity handler of universal waste shall store antifreeze in containers or tanks that are structurally sound and compatible with the antifreeze. Such containers and tanks shall lack leakage or damage, including severe corrosion, which could cause leakage under reasonably foreseeable conditions.

(2) A container or tank that does not comply with paragraph (F)(1) of this rule shall be overpacked or taken out of service by the large quantity handler of universal waste by transferring the contents of the container or tank to another container or tank.

(3) A large quantity handler of universal waste who stores antifreeze in a container shall keep the container closed except when adding or removing antifreeze.

(4) A large quantity handler of universal waste shall store antifreeze in a tank that complies with paragraphs (B) to (H) of rule 3745-66-101 of the Administrative Code.

(5) A large quantity handler of universal waste shall not commingle or contaminate antifreeze subsequent to the removal of the antifreeze from a heat exchanger or other equipment when used to winterize that equipment with listed hazardous waste or a characteristic hazardous waste as described in Chapter 3745-51 of the Administrative Code.

(6) A large quantity handler of universal waste shall develop and maintain at the facility a procedure that describes how antifreeze will be prevented from being commingled or contaminated subsequent to removal of the antifreeze from a heat exchanger or other equipment when used to winterize that equipment with

a listed hazardous waste or a characteristic hazardous waste as described in Chapter 3745-51 of the Administrative Code.

(7) A large quantity handler of universal waste who manages antifreeze shall use dedicated antifreeze collection and storage containers and tanks for the management of antifreeze.

(8) A large quantity handler of universal waste may reclaim antifreeze provided the handler does the following:

(a) The large quantity handler of universal waste shall use commercially available equipment, or equipment specifically custom designed or retrofitted according to accepted engineering practices based on established codes, standards, published technical reports or similar peer reviewed documents to reclaim the antifreeze as "reclaimed" is defined in rule 3745-51-01 of the Administrative Code.

(b) The large quantity handler of universal waste shall use reclamation equipment that has sufficient processing capacity to reclaim the quantity of antifreeze received or generated by the handler within one year.

(c) The large quantity handler of universal waste shall train each operator of the reclamation equipment regarding the proper operation and maintenance of the antifreeze reclamation equipment.

(d) A large quantity handler of universal waste shall determine if the wastes generated from the reclamation of antifreeze are "hazardous wastes" as described in Chapter 3745-51 of the Administrative Code. If a waste meets the definition of "hazardous waste," the handler is a hazardous waste generator and is subject to Chapter 3745-52 of the Administrative Code.

(9) A large quantity handler of universal waste upon detection of a release of antifreeze shall do the following, as applicable:

(a) Stop the release of antifreeze.

(b) Contain the released antifreeze.

(c) Clean up and properly manage and dispose the released antifreeze and other materials generated from the cleanup according to applicable waste management requirements.

- (d) Remove a leaking container or tank from service by transferring the contents to another container or tank.
 - (e) Overpack or replace any leaking storage container.
 - (f) Repair any leaking container or tank prior to returning the container or tank to service.
 - (10) Spilled universal waste antifreeze that is recovered in liquid form or materials used to absorb a spill of universal waste antifreeze may be managed as universal waste antifreeze.
 - (11) A large quantity handler of universal waste who manages antifreeze shall train employees who manage antifreeze regarding the universal waste requirements applicable to antifreeze, the proper management of antifreeze, the procedure to prevent contamination of antifreeze with characteristic hazardous waste or listed hazardous waste, and the proper response to a release of antifreeze.
- (G) Universal waste paint and paint-related waste. A large quantity handler of universal waste shall manage universal waste paint and paint-related wastes in a way that prevents releases of any universal waste or any component of a universal waste to the environment as follows:
- (1) The large quantity handler of universal waste shall store universal waste paint or paint-related wastes in units that feed crushing or shredding equipment (i.e., hopper), containers, or tanks that are structurally sound and compatible with the paint or paint-related wastes. Such hoppers, containers, and tanks shall lack leakage or damage, including severe corrosion, which could cause leakage under reasonably foreseeable conditions.
 - (2) The large quantity handler of universal waste shall ensure that a hopper, container, or tank that does not comply with paragraph (G)(1) of this rule is overpacked or taken out of service by transferring the contents to another hopper, container, or tank.
 - (3) The large quantity handler of universal waste shall keep hoppers and containers that hold paint and paint-related wastes closed except when adding or removing paint or paint-related wastes.
 - (4) The large quantity handler of universal waste shall store paint or paint-related waste in a tank that complies with rules 3745-66-90 to 3745-66-99 except paragraph (C) of rule 3745-66-97 of the Administrative Code.

- (5) The large quantity handler of universal waste who generates universal waste paint and paint-related wastes on-site may recycle such paint and paint-related wastes on-site by reclamation, use, or reuse as described in rule 3745-51-02 of the Administrative Code if the wastes are not burned for energy recovery or used in a manner constituting disposal according to rule 3745-51-02 of the Administrative Code.
- (6) The large quantity handler of universal waste who receives universal waste paint from another universal waste handler may recycle such paint by reclamation, use, or reuse as described in rule 3745-51-02 of the Administrative Code if the universal waste paint is not burned for energy recovery or used in a manner constituting disposal according to rule 3745-51-02 of the Administrative Code.
- (7) Wastes generated from the reclamation of universal waste paint and paint-related wastes are not universal wastes for the purposes of this rule. The handler shall evaluate the wastes to determine if such wastes are listed hazardous wastes or characteristic hazardous waste as described in Chapter 3745-51 of the Administrative Code. If a waste meets the definition of "hazardous waste," the handler is a hazardous waste generator and is subject to Chapter 3745-52 of the Administrative Code.
- (8) The large quantity handler of universal waste who recycles universal waste paint and paint-related wastes as described in paragraphs (G)(5) and (G)(6) of this rule shall ensure that employees responsible for recycling universal waste paint and paint-related wastes are trained regarding the proper operation and maintenance of the recycling process.
- (9) The large quantity handler of universal waste upon detection of a release of paint or paint-related wastes shall do the following, as applicable:
- (a) Stop the release.
 - (b) Contain the released paint or paint-related wastes.
 - (c) Clean up and properly manage the released paint or paint-related wastes and other materials generated from the clean-up.
 - (d) Remove a leaking container or tank from service by transferring the contents to another container or tank.
 - (e) Overpack or replace any leaking storage container.
 - (f) Repair any leaking container or tank prior to returning the container or tank to service.

- (10) A large quantity handler of universal waste shall manage paint and paint-related wastes that are ignitable or reactive in accordance with the following:
- (a) Rule 3745-66-76 of the Administrative Code or obtain written approval from the authority having jurisdiction over the local fire code allowing alternative storage less than fifty feet from the facility's property line. The written approval shall be maintained on-site for as long as the ignitable or reactive paint and paint-related wastes are managed on-site.
 - (b) Rule 3745-65-17 of the Administrative Code.
- (11) A large quantity handler of universal waste shall manage paint and paint-related wastes that are incompatible in accordance with rule 3745-66-77 of the Administrative Code.
- (12) The large quantity handler of universal waste shall design, construct, maintain, and operate the facility to minimize the possibility of a fire, explosion, or unplanned sudden or non-sudden release of universal waste or hazardous constituents to air, soil, or surface water which could threaten human health or the environment.
- (13) The large quantity handler of universal waste may open containers of universal waste paint and scrape, pour, pump or drain the universal waste paint from the container to collect the paint and render the container empty.
- (14) The large quantity handler of universal waste may puncture, shred, or crush containers of paint that do not exceed five gallons in volume to remove and collect the contents of the container rendering the container empty provided the handler does all of the following:
- (a) The large quantity handler of universal waste shall use commercially available equipment or equipment specifically custom designed or retrofitted according to accepted engineering practices based on established codes, standards, published technical reports, or similar peer reviewed documents to puncture, shred, or crush and empty the paint containers within an enclosed compartment or hopper.
 - (b) The large quantity handler of universal waste shall use equipment that has sufficient processing capacity to empty the quantity of paint containers received or generated within one year.
 - (c) The large quantity handler of universal waste shall collect the liquids from the paint container. Collected liquids are still classified as universal waste paint.

(d) The large quantity handler of universal waste shall maintain the puncturing, crushing and shredding equipment and replace air filters according to the manufacturer's specifications.

(e) The large quantity handler of universal waste shall train each operator of the equipment used to shred, puncture, or crush containers of universal waste paint regarding the maintenance and proper operation of the equipment.

[Comment: For dates of non-regulatory government publications, publications of recognized organizations and associations, federal rules, and federal statutory provisions referenced in this rule, see rule 3745-50-11 of the Administrative Code titled "Incorporated by reference."]

Replaces: 3745-273-33
Effective: 12/21/2017
Five Year Review (FYR) Dates: 12/21/2022

CERTIFIED ELECTRONICALLY

Certification

12/08/2017

Date

Promulgated Under: 119.03
Statutory Authority: 3734.12
Rule Amplifies: 3734.12
Prior Effective Dates: 9/2/1997, 12/7/2000, 12/7/2004, 9/5/2010