

**ENVIRONMENTAL PROTECTION AGENCY**

**40 CFR Parts 260, 261, 264, 265, 268, 270, and 273**

[RCRA-2004-0012; FRL-7948-1]

RIN 2050-AE52

**Hazardous Waste Management System; Modification of the Hazardous Waste Program; Mercury Containing Equipment**

**AGENCY:** Environmental Protection Agency (EPA).

**ACTION:** Final rule.

**SUMMARY:** Today's final rule adds mercury-containing equipment to the federal list of universal wastes regulated under the Resource Conservation and Recovery Act (RCRA) hazardous waste regulations. Handlers of universal wastes are subject to less stringent standards for storing, transporting, and collecting these wastes. EPA has concluded that regulating spent mercury-containing equipment as a universal waste will lead to better management of this equipment and will facilitate compliance with hazardous waste requirements.

**DATES:** This final rule is effective on August 5, 2005.

**ADDRESSES:** EPA has established a docket for this action under Docket ID No. RCRA-2004-0012. All documents in the docket are listed in the EDOCKET index at <http://www.epa.gov/edocket>. Although listed in the index, some information is not publicly available, *i.e.*, CBI or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted material, is not placed on the Internet and will be publicly available only in hard copy form. Publicly available materials are available either electronically in EDOCKET, or in hard copy at the HQ EPA Docket Center, RCRA Docket, EPA/DC, EPA West, Room B102, 1301 Constitution Ave., NW., Washington, DC. The Public Reading Room is open from 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding legal holidays. The telephone number for the Public Reading Room is (202) 566-1744, and the telephone number for the RCRA Docket is (202) 566-0270.

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**SUPPLEMENTARY INFORMATION:**

**a. General Information**

*1. Does This Rule Apply to Me?*

This rule affects persons who generate, transport, treat, recycle, or dispose of mercury containing equipment (MCE), unless those persons are households or conditionally exempt small quantity generators (CESQGs). If you have any questions about the applicability of this rule, consult the person listed under **FOR FURTHER INFORMATION CONTACT**.

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**I. Statutory Authority**

These regulations are promulgated under the authority of sections 2002(a), 3001, 3002, 3004, and 3006 of the Solid Waste Disposal Act of 1970, as amended by the Resource Conservation and Recovery Act of 1976 (RCRA), and as amended by the Hazardous and Solid Waste Amendments of 1984 (HSWA), 42 U.S.C. 6921(a), 6921, 6922, 6924, and 6926.

**II. List of Abbreviations and Acronyms**

Acronym	Definition
CESQG	Conditionally Exempt Small Quantity Generator.
CFR .....	Code of Federal Regulations.
DOT .....	Department of Transportation.
HSWA ..	Hazardous and Solid Waste Amendments of 1984.
ICR .....	Information Collection Request.
LDR .....	Land Disposal Restriction.
LQG .....	Large Quantity Generator.
LQHUW	Large Quantity Handler of Universal Waste.
NTTAA	National Technology Transfer and Advancement Act of 1995.
OMB .....	Office of Management and Budget.
RCRA ...	Resource Conservation and Recovery Act.
SIC .....	Standard Industry Code.
SQG .....	Small Quantity Generator.
SQHUW	Small Quantity Handler of Universal Waste.
TC .....	Toxicity Characteristic.
TCLP ....	Toxicity Characteristic Leaching Procedure.
TSDF ....	Treatment, Storage, and Disposal Facility.
UMRA ..	Unfunded Mandates Reform Act.
U.S.C. ...	United States Code.
USWAG	Utilities Solid Waste Activities Group.

**III. Background**

*a. What Is Mercury-Containing Equipment?*

Mercury-containing equipment (MCE) consists of devices, items, or articles that contain varying amounts of elemental mercury that is integral to their functions, including several types of instruments that are used throughout the electric utility industry and other industries, municipalities, and households. Some commonly recognized devices are thermostats, barometers, manometers, and mercury switches, such as light switches in automobiles. This definition does not include mercury waste that is generated as a by-product through the process of manufacturing or treatment.

*b. Previous Regulations for Mercury-Containing Equipment*

Any person who generates a solid waste, as defined in 40 CFR 261.2, must determine whether or not the solid waste is a hazardous waste. The waste may be hazardous either because it is listed as a hazardous waste in subpart D of 40 CFR part 261 or because it exhibits one or more of the characteristics of hazardous waste, as provided in subpart C of 40 CFR part 261.

Mercury-containing equipment is likely to be a hazardous waste when disposed of or reclaimed because it exhibits the toxicity characteristic (TC)

for mercury. Mercury-containing equipment that is a hazardous waste is referred to in this preamble as "spent mercury-containing equipment" or "spent MCE." Before today's rulemaking, many generators of spent mercury-containing equipment identified or listed as a hazardous waste were subject to the full RCRA subtitle C hazardous waste management requirements. Specifically, generators were subject to all applicable requirements of 40 CFR parts 260 through 268, including the on-site management, pre-transport, and manifesting requirements of part 262.

However, not all generators of spent mercury-containing equipment have had to manage it as a hazardous waste or be subject to the full set of RCRA hazardous waste requirements. Under RCRA subtitle C, there are different requirements for generators of hazardous waste depending on the amount of hazardous waste they generate in a calendar month. In addition, as discussed below, certain spent mercury-containing equipment are already subject to the universal waste rule.

Specifically, generators of more than 1,000 kilograms of hazardous waste in a month (considered large quantity generators (LQGs)) are required to comply fully with the federal hazardous waste regulations. On the other hand, generators of more than 100 kilograms but less than 1,000 kilograms of hazardous waste in a calendar month (considered small quantity generators (SQGs)) are subject to the RCRA hazardous waste management standards, but are allowed to comply with certain reduced regulatory requirements (see 40 CFR 262.34(d), (e), and (f)). In addition, under 40 CFR 261.5, conditionally-exempt small quantity generators (CESQGs), defined as facilities that generate less than 100 kilograms of hazardous waste in a calendar month, are not subject to the RCRA subtitle C hazardous waste management standards, provided they send their waste to a municipal solid waste landfill or non-municipal nonhazardous waste facility approved by the state for the management of CESQG wastes. Finally, households that generate spent mercury-containing equipment are exempt from the federal hazardous waste management requirements under the household hazardous waste exemption in 40 CFR 261.4(b)(1).

#### *c. Universal Waste Rule*

In 1995, EPA promulgated the universal waste rule (60 FR 25492, May 11, 1995) to establish a streamlined

hazardous waste management system for widely generated hazardous wastes as a way to encourage environmentally sound collection and proper management of the wastes within the system. Hazardous waste batteries, certain hazardous waste pesticides, mercury-containing thermostats, and hazardous waste lamps are already included on the federal list of universal wastes.

Handlers and transporters who generate or manage items designated as a universal waste are subject to the management standards under 40 CFR part 273, rather than the full RCRA subtitle C regulations. Handlers include universal waste generators and collection facilities. The regulations distinguish between "large quantity handlers of universal waste" (those who handle more than 5,000 kilograms of total universal waste at one time) and "small quantity handlers of universal waste" (those who handle 5,000 kilograms or less of universal waste at one time). The 5,000 kilogram accumulation criterion applies to the quantity of all universal wastes accumulated. The streamlined standards include requirements for storage, labeling and marking, preparing the waste for shipment off site, employee training, response to releases, and notification.

Transporters of universal waste are also subject to less stringent requirements than the full subtitle C hazardous waste transportation regulations. The primary difference between the universal waste transporter requirements and the subtitle C transportation requirements is that no manifest is required for transport of universal waste. The details of the universal waste management standards for both handlers and transporters will be addressed later in this preamble.

Under the universal waste rule, destination facilities are those facilities that treat, store, dispose, or recycle universal wastes. Universal waste destination facilities are subject to all currently applicable requirements for hazardous waste treatment, storage, and disposal facilities (TSDFs) and must receive a RCRA permit for such activities. Hazardous waste recycling facilities that do not store hazardous wastes prior to recycling may be exempt from permitting under the federal regulations (40 CFR 261.6(c)(2)).

Finally, some states are authorized to add wastes that are not federal universal wastes to their lists of universal wastes. Therefore, in some states, spent mercury-containing equipment may already be regulated as a universal waste.

#### *d. Proposed Rule*

On June 12, 2002 (67 FR 40508), EPA proposed to add spent mercury-containing equipment to the federal list of universal waste.<sup>1</sup> EPA believes that adding these materials to the universal waste rule will facilitate their collection and will reduce the amount of mercury reaching municipal landfills and incinerators.

Mercury-containing equipment, other than mercury thermostats, was not included in the 1995 universal waste rule because EPA felt that it did not have sufficient information to include all spent mercury-containing equipment in the rulemaking. The Agency decided to begin implementation of its new universal waste program with a limited number of waste types.

However, EPA stated in the preamble to the universal waste final rule that it would welcome a petition to add a broad category of mercury-containing equipment to the universal waste rule, and specifically asked for views defining such a category of waste, information on the amounts of mercury contained in such devices, and information on the construction of such devices (60 FR 25508).

On October 11, 1996, the Utility Solid Waste Activities Group (USWAG), the Edison Electric Institute, the American Public Power Association, and the National Rural Electric Cooperative Association submitted a rulemaking petition to add mercury-containing equipment to the universal waste program. The petition explained that spent mercury-containing equipment is well-suited for the universal waste rule because it meets the factors that EPA laid out in the original universal waste rule for wastes that warrant inclusion into the program, particularly the widespread uses of MCE and the potential for the universal waste program to divert waste from the municipal waste stream into hazardous waste management. The petition also provided EPA with some of the information the Agency needed to evaluate spent MCE for inclusion into the program, as explained in the proposal.

The Agency received a number of comments in response to its proposal to add spent mercury-containing equipment to the list of universal wastes. Most commenters supported the proposal, though some had comments or questions on some of the details. The more significant comments on this

<sup>1</sup> In the same Federal Register notice, EPA proposed to conditionally exclude cathode ray tubes (CRTs) from the definition of solid waste. The CRT proposal will be addressed in a separate rulemaking package.

proposal are addressed later in this preamble, but all are addressed in background documents for today's final rule, which are in the docket.

#### IV. Rationale for Including Spent Mercury-Containing Equipment in the Scope of the Universal Waste Rule

##### *a. Factors for Inclusion in the Universal Waste Rule*

EPA is adding spent mercury-containing equipment to the universal waste rule today because it believes this waste meets the factors that describe waste that is appropriate for management under the streamlined universal waste system. There are numerous and varied generators of spent MCE, and MCE is generated sporadically. Adding MCE to the universal waste rule simplifies handling and disposal of the equipment for generators, while ensuring that spent MCE is sent to the appropriate destination facilities, where it will be managed as a hazardous waste with all applicable subtitle C requirements.

The universal waste regulations include eight factors to consider in evaluating whether a waste is appropriate for inclusion in the universal waste rule. These factors, codified at 40 CFR 273.81, are to be used to determine whether regulating a particular hazardous waste under the streamlined standards would improve overall management of the waste and, therefore, whether the waste is a good candidate for the universal waste rule.

As the Agency noted in the preamble to the final universal waste rule (60 FR 25513), not every factor must be met for a waste to be appropriately regulated under the universal waste system. However, consideration of all the factors should result in a conclusion that regulating a particular hazardous waste under 40 CFR part 273 will improve waste management.

EPA has examined spent mercury-containing equipment using the criteria in section 273.81, and has considered the information submitted in the October 11, 1996 rulemaking petition, as well as the public comments submitted in response to the proposed rule. The Agency has determined that, on balance, these wastes are appropriate for inclusion onto the federal list of universal wastes for management under part 273. EPA believes that adding spent MCE to the universal waste rule will make collection and transportation of this waste to an appropriate facility easier and, therefore, will reduce the amount of mercury being released into the environment.

The results of the Agency's evaluation of these wastes using the universal waste factors are described below—further details on the use of mercury-containing equipment can be found in the economic analysis to this rulemaking, available in the docket:<sup>2</sup>

1. The Waste, as Generated by a Wide Variety of Generators, Should Be a Listed or Characteristic Hazardous Waste (40 CFR 273.81(a))

Some spent mercury-containing equipment contains a few grams of mercury, whereas larger articles, items, or devices contain much more mercury. Many of these pieces of equipment would fail the toxicity characteristic leaching procedure (TCLP) toxicity level for mercury of 0.2 mg per liter and are therefore classified as a D009 characteristic hazardous waste.<sup>3</sup>

2. The Waste, or Category of Waste, Should Not Be Exclusive to a Particular Industry or Group of Industries, But Generated by a Wide Variety of Establishments (40 CFR 273.81(b))

Spent mercury-containing equipment is generated by a variety of industries or groups of industries. Electric and gas utilities generate the greatest amount of this waste, but mercury-containing equipment is used to regulate pressure and temperature or to conduct electricity in switches or regulators in many other fields, for example, medicine, farming, and automobile manufacture. Generators of spent mercury-containing equipment, therefore, are from a wide range of sectors, from utilities to manufacturers, commercial establishments, universities, hospitals, and households.

3. The Waste Should Be Generated by a Large Number of Generators and Generated Frequently, But in Relatively Small Quantities (40 CFR 273.81(c))

Spent mercury-containing equipment is generated by a large number of generators and generator sites throughout different industries. Most facilities generate spent MCE sporadically because of the frequent, but unpredictable, nature of equipment failures and in relatively small quantities, because MCE often contains small amounts of mercury.

<sup>2</sup> The eighth factor, "Such other factors as may be appropriate," is not discussed here.

<sup>3</sup> The TCLP is a laboratory test designed to simulate leaching from a sanitary landfill, and, therefore, identify wastes likely to leach hazardous concentrations of particular toxic constituents into the ground water. If a sample of the test leachate contains a contaminant appearing in 40 CFR 261.24's Table 1 at a level higher than the regulatory level given in that table, the waste is hazardous for the toxicity characteristic.

4. Systems To Be Used for Collecting the Waste (Including Packaging, Marking, and Labeling Practices) Should Ensure Close Stewardship of the Waste (40 CFR 273.81(d))

The packaging and labeling standards finalized today for spent mercury-containing equipment, and already in place for used thermostats, will ensure close stewardship of the waste.

5. Risks Posed by the Waste During Accumulation and Transport Should Be Relatively Low Compared to the Risks Posed by Other Hazardous Waste, and Specific Management Standards Would Be Protective of Human Health and the Environment During Accumulation and Transport (40 CFR 273.81(e))

The Agency believes that the requirements of the universal waste program are highly effective in mitigating risks posed by spent mercury-containing equipment. Specifically, the requirements for handlers to manage and transport ampules of mercury in a way that will prevent breakage or to seal the MCE in its original housing and ship it sealed will ensure safe management and transport. In addition, the universal waste program requires proper training for employees in handling universal waste and responding to releases and shipment in accordance with Department of Transportation (DOT) regulations. These requirements will make the risks posed during accumulation and transport very low.

6. Regulation of the Waste Under 40 CFR Part 273 Will Increase the Likelihood That the Waste Will Be Diverted From Non-Hazardous Waste Management Systems (e.g., the Municipal Solid Waste Stream) to Recycling, Treatment, or Disposal in Compliance With Subtitle C of RCRA (40 CFR 273.81(f))

Managing spent mercury-containing equipment under the universal waste program is expected to increase the number of these articles, items and devices collected, but more importantly, to increase the amount of mercury being diverted from the non-hazardous waste stream into the hazardous waste stream because it will allow generators, especially those that generate this waste sporadically, to send it to a central consolidation point.

Before today, these materials could not be consolidated by an entity unless it had a RCRA permit. Under the universal waste rule, a handler of universal waste can send the universal waste to another handler, where it can be consolidated into a larger shipment

for transport to a destination facility. Therefore, spent MCE will be easier to send to recycling and proper disposal, making it less likely that it will be sent for improper disposal in municipal landfills or incinerators. In addition, because of the streamlined structure of the universal waste rule, spent MCE that might otherwise be sent to a municipal landfill under a CESQG or household hazardous waste exemption, can now be more easily collected and consolidated for hazardous waste disposal by those who are interested in managing it this way. This waste would be diverted out of the municipal solid waste stream.

In public comments responding to EPA's proposal on MCE, both New Jersey and Minnesota referred to their state programs, which already allow spent MCE to be managed under pilot programs like the universal waste rule. In both cases, the programs have been a success, facilitating the collection and safe management of mercury for proper management.

#### 7. Regulation of the Waste Under 40 CFR Part 273 Will Improve the Implementation and Compliance With the Hazardous Waste Regulatory Program (40 CFR 273.81(g))

The structure and requirements of the universal waste rule are well suited to the circumstances of handlers of spent mercury-containing equipment and their participation in the universal waste program will improve compliance with the hazardous waste regulations. Because spent MCE is generated in small quantities in geographically dispersed operations, compliance with full subtitle C requirements is difficult to achieve. Compliance with subtitle C is particularly difficult for electric or gas utility operations which are located on customer's properties. In addition, handlers of spent MCE who are infrequent generators of hazardous waste and who might otherwise be unfamiliar with the more complex subtitle C management structure, but who generate spent MCE, will be able to more easily send this waste for proper management.

Therefore, adding spent MCE to the universal waste rule will improve compliance with the hazardous waste regulations by making it more achievable. As a result of improved compliance, human health and the environment will benefit.

#### *b. Effect of Designation as a Universal Waste*

After recognizing that MCE meets the factors described in 40 CFR 273.81, EPA developed this rulemaking to create a streamlined structure for managing

spent MCE that is protective of human health and the environment and, at the same time, facilitates compliance by users of this equipment. Management of MCE as universal waste means that (1) the MCE waste must meet land disposal restrictions (LDRs) when treated and (2) the waste must be sent to Subtitle C permitted facilities. When managed improperly, mercury poses a threat to human health and the environment; these features of the universal waste program ensure that the mercury in these devices ends up at a destination facility equipped to manage it properly.

As described in section III.C. of this preamble, under the universal waste rule, requirements are streamlined only for generators and transporters of universal waste. Destination facilities must comply with the substantive requirements of the LDR provisions of the Hazardous and Solid Waste Amendments of 1984 (HSWA). These include (1) A prohibition on accumulating prohibited wastes directly on the ground; (2) a requirement to treat waste to meet treatment standards before land placement; (3) a prohibition on dilution; and (4) a prohibition on accumulation, except for purposes of accumulating quantities sufficient for proper recovery, treatment, or disposal. The Agency believes that compliance with the substantive requirements of the LDR program is necessary to minimize risks from mismanaging spent mercury-containing equipment.

The management controls that are already built into the universal waste system for labeling, accumulation, training, response to releases, and exports also will apply to waste MCEs. As discussed later in this preamble, the packaging and management standards of the universal waste rule are meant to assure that spent MCE will be managed to prevent releases.

#### *c. Expected Changes in Management of Mercury-Containing Equipment*

EPA also expects an increase in the amount of MCE waste that is recycled or disposed of in Subtitle C facilities. Small and large quantity generators are already required to manage their mercury waste as hazardous waste under RCRA subtitle C. As a result of implementation of this rule in the states, some of these generators are likely to begin managing their MCE waste as a universal waste, either to save money or to improve implementation of their existing waste management program.

The universal waste rule allows consolidation of MCE at central locations, which makes it easier for smaller users to arrange for hazardous waste management of these materials

when they are generated. For example, under the universal waste rule, a fire station, community center, or retail store could participate in MCE collection programs without having to get a RCRA permit, as they would be required to under full subtitle C regulation. EPA intends to encourage individual households and CESQGs to participate in such programs, which would divert MCE from the municipal waste stream.

EPA expects greater quantities of MCE to be collected and managed under the universal waste rule based on a recent evaluation of how the universal waste rule has influenced management of nickel-cadmium batteries, one of the original universal wastes included in the 1995 rulemaking. The evaluation shows that between 1997 and 2003, collection of nickel-cadmium batteries increased from approximately 950 tons per year in 1997 to almost 1700 tons in 2003. While this dramatic improvement in collection is due to a number of factors, anecdotal evidence described in the evaluation report shows that the establishment of consolidation facilities, which was made possible by the universal waste rule, significantly reduced the administrative and financial burden of collection and transportation of these batteries. The relevant chapter of the program evaluation report is available in the docket to this rulemaking.

In summary, EPA believes that controls to address the environmental hazards of spent MCE can best be implemented through a universal waste approach where handlers are operating within a simple, streamlined management system with some limited oversight. The universal waste program addresses the environmental concerns surrounding the management of such wastes, while at the same time putting into place a structure that will allow for and encourage increased collection of spent MCE. Comments from the public and other regulatory agencies, particularly state hazardous waste authorities, support EPA's conclusion that management of spent MCE as a universal waste will maximize the amount of this waste being managed properly and, therefore, will protect human health and the environment from exposure to the mercury in this equipment.

## V. Discussion of Final Rule

### *a. Effective Date*

Today's rule will become effective immediately upon publication in the **Federal Register**. The RCRA statute establishes six months as the usual

effective date for Subtitle C rules (see RCRA section 3010 (b)), though the Agency may provide for a shorter or immediate effective date in the case of regulations with which the regulated community does not need six months to come into compliance, as determined by the Administrator. Because today's final rule reduces regulatory burden, as well as because some states already have similar programs in place, we see no reason to delay its effective date. Thus, today's rule will be effective immediately upon publication in the **Federal Register**.

#### *b. Waste Covered by Final Rule*

Today's final rule incorporates into the universal waste scheme spent mercury-containing equipment that is hazardous waste due to mercury. The definition of mercury-containing equipment promulgated today states that mercury-containing equipment means a device or part of a device that contains elemental mercury integral to its function.

Note that the definition of "mercury-containing equipment" in today's rule includes mercury thermostats. Mercury thermostats, which formerly were a separate category of universal waste, are now incorporated into the spent MCE category for the final rule. As a result of public comments, EPA determined that mercury thermostats are a type of spent MCE as the category of universal waste is being defined in the rule; therefore, having a separate section of the regulations for them would be duplicative and potentially confusing.<sup>4</sup>

EPA has changed some of the wording in the definition of "mercury-containing equipment" from the proposed " \* \* \* contains elementary mercury necessary for its operation" to " \* \* \* contains elemental mercury integral to its function." We believe that "integral to its function" more clearly explains EPA's meaning that the mercury must be part of the function of the device for it to be covered by the universal waste rule. If the mercury is in the device accidentally, or the device has been contaminated by an external source of mercury, the device would not be eligible for management as a universal waste.

This change will clear up some confusion about the phrase "necessary for its operations," expressed in the comments to the proposed rule. One

commenter asked if EPA's requirement that mercury in MCE be "necessary for [the device's] operation" meant that only equipment for which no alternative to mercury is available were eligible for management as a universal waste. Although EPA encourages the use of alternatives to mercury whenever possible, the definition of MCE does not speak to whether there are feasible alternatives to mercury available, but rather to whether the equipment contains mercury in its regular use.

Some examples are helpful in understanding what kind of devices fall into today's definition of mercury-containing equipment. These devices vary in size and function, but, for the most part, the mercury (1) is a relatively small amount of the complete piece of equipment, (2) is encapsulated in some way in an ampule or other housing, and (3) is used for delicate measuring of temperature or pressure or for completing an electrical circuit. Some of the various types of MCE are manometers, barometers, flow meters, mercury light switches, mercury regulators, pressure relief gauges, water treatment gauges, and gas safety relays. A more comprehensive list of examples of MCE is available in the docket to the rulemaking in the Economic Analysis to this rule.

#### *c. Management Requirements for Spent Mercury-Containing Equipment*

The following requirements were developed to prevent releases of mercury while it is being managed as a universal waste. Mercury, although a naturally occurring element, is released into the environment by human industrial practices. It is easily volatilized and can be dispersed widely through the air and transported thousands of miles, accumulating in plants, animals, and humans as it travels. Once released, mercury persists in the environment. Once mercury enters water, biological processes transform it to methylmercury, a highly toxic form that builds up in fish and animals that eat fish. Exposure to high levels of mercury has been linked to serious nervous system and developmental problems in humans. Therefore, EPA is concerned about mercury releases to the environment that might occur if spent MCE is managed improperly in the municipal waste stream. The universal waste rule is designed to maximize collection of spent MCE while preventing releases from management of those wastes. It does so through its management requirements.

#### 1. Summary of Requirements

The universal waste rule classifies regulated persons managing universal wastes into four categories: (1) Small quantity handlers of universal waste (SQHUWs), (2) large quantity handlers of universal waste (LQHUWs), (3) universal waste transporters, and (4) destination facilities. The term "universal waste handler" is defined in 40 CFR 273.9 as a generator of universal waste, or the owner or operator of a facility that receives universal waste from other universal waste handlers, accumulates universal waste and sends it to another universal waste handler, to a destination facility or to a foreign destination. The definition of "universal waste handler" does not include (1) a person who treats, disposes of, or recycles universal waste (except under the provision of § 273.13(a) or (c) and § 273.33(a) or (c)); or (2) a person engaged in the off-site transportation of universal waste by air, rail, highway, or water, including a universal waste transfer facility.

Whether a universal waste handler is a SQHUW or LQHUW depends on the amount of universal waste it accumulates at any time. Large quantity handlers of universal waste are subject to certain regulatory requirements in addition to those applicable to SQHUWs. A small quantity handler of universal waste is defined under 40 CFR 273.9 as a universal waste handler who accumulates less than 5,000 kilograms of universal waste, calculated collectively, at any time. The 5,000 kilogram accumulation limit applies to the total quantity of all universal waste handled on-site, regardless of the category of universal waste.

If, at any time, a SQHUW accumulates 5,000 kilograms or more of universal waste, then it becomes a large quantity universal waste handler for that calendar year. A handler may re-evaluate its status as a LQHUW in the following calendar year.

Today's management requirements for spent mercury-containing equipment are generally the same as the existing requirements for mercury-containing thermostats. In fact, as already noted, the Agency, in response to public comments, has incorporated mercury thermostats into today's new category of universal waste—mercury-containing equipment—as they meet the definition of spent MCE under today's rule.

#### 2. Requirements for Small and Large Quantity Handlers

Under today's rule, the existing universal waste requirements currently applicable to SQHUWs and LQHUWs

<sup>4</sup> Batteries and lamps remain covered under their respective sections of the universal waste rule, 273.13(a) & (d) and 273.33(a) & (d), even though wastes can contain mercury. The specific management standards promulgated specifically for them in part 273 are more appropriate than the ones in today's rule.

also apply to handlers of spent mercury-containing equipment. For both SQHUWs and LQHUWs, these requirements include waste management standards, labeling and marking, accumulation time limits, employee training, response to releases, requirements related to off-site shipments, and export requirements. LQHUWs are subject to additional notification and tracking requirements.

As described above, in response to public comment that universal waste thermostats are actually a subset of the new category, spent MCE, the Agency has decided to fold mercury thermostats into the category for spent MCE to avoid confusion over the identical standards and to avoid duplicative labeling and reporting requirements by generators of both materials. Because mercury thermostats are like many other types of MCE, as they contain mercury in ampules that are sometimes removed for transport for mercury recovery, the management standards for SQHUWs and LQHUWs in today's rule are very similar to those promulgated in 1995 for mercury thermostats. However, we added some standards to account for the wider range of devices that will be encompassed by this broader category. Those changes are explained in more depth below.

We also made several technical changes to the regulations in order to broaden the previously existing category of mercury thermostats to cover all mercury-containing equipment. In order to make this shift in the regulatory text, we have (1) replaced references to universal waste thermostats throughout parts 260 through 273 with references to universal waste mercury-containing equipment and (2) replaced the universal waste applicability section for mercury thermostats in § 273.4 with an applicability section for mercury-containing equipment.

In the proposed rule, the waste management requirements for spent mercury thermostats and spent MCE under 40 CFR 273.13 and 40 CFR 273.33 were already consolidated; therefore, no significant changes were required to that language in the final rule as a result of the removal of the thermostat category. The final rule does change the labeling requirement, however. The labeling requirement for both SQHUWs and LQHUWs of spent mercury-containing equipment is comparable to the requirements for other types of universal waste. In addition, if a handler of universal waste handles mercury thermostats, but not other types of universal waste mercury-containing equipment, it may label or mark them, or the container in which they are

collected, as universal waste thermostats (e.g., "Universal Waste—Mercury Thermostats"), rather than having to make or buy new labels for Mercury-Containing Equipment.

For the purpose of creating waste management standards for this waste stream, we have distinguished between several different ways that mercury may be contained in an MCE and determined what the management standards should be for each category to assure protection of human health and the environment. The waste management standards in today's rule address how handlers should manage (1) whole spent MCE with ampules, and (2) whole spent MCE with open original housings, as well as how to manage (3) ampules that have been removed from the device they were in, (4) open tubes of mercury removed from a device (such as a barometer or manometer), and (5) ancillary parts of spent MCE that may have mercury in them, such as a valve.

Primarily, a handler of universal waste spent MCE must manage it in such a way that prevents releases of any component of the universal waste into the environment, especially mercury. Thus, any MCE that shows evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable circumstances must be contained to prevent the release of mercury. The container must be closed, structurally sound, compatible with the contents of the spent MCE, must not have any evidence of leakage, spillage, or damage that could result in leakage under reasonably foreseeable circumstances, and must be reasonably designed to prevent the escape of mercury into the environment by volatilization or any other means.

Many types of MCE, for example, thermometers, thermostats, and mercury switches, have an ampule in which the mercury is held. An ampule, as defined in this rule, is an airtight vial made of glass, plastic, metal, or any combination of these materials. Handlers of undamaged whole spent MCEs must comply with part 273 standards such as labeling, accumulation time, training, and response to releases, and must manage the MCE to prevent releases, as described above.

Other types of MCE, however, like those that measure pressure, such as barometers and manometers, contain mercury in a tube that is open at one end. In this rule, we refer to this type of device as MCE with "open original housing." Mercury "housing" is a container that holds the mercury while it performs its function in the piece of MCE, such as a case or enclosure that, unlike an ampule, is open at one end

and may allow for escape of mercury unless sealed before management as waste.

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

The management requirements for leaking or damaged spent MCE above are also appropriate for intact spent MCE in which the mercury is in an open housing and not in an ampule, and which have not been sealed. Because this type of MCE, even when intact, has a greater potential to release mercury into the environment than MCE in which the mercury is wholly contained in an ampule, these devices must be managed with more caution. In addition, ancillary pieces of spent MCE that contain mercury not contained in an ampule must also be contained to minimize the chance of any releases due to their management. Sometimes, in a device that contains mercury not in an ampule, the mercury can escape into other parts of the device. For instance, mercury might get into a valve that separates the mercury in a MCE from the rest of the device. For these reasons, under today's rule, when the mercury is not contained, both intact spent MCE and any MCE parts must be managed in a container that is closed, structurally sound, compatible with the contents of the spent MCE, reasonably designed to prevent the escape of mercury into the environment by volatilization or any other means, and that does not have any evidence of leakage, spillage, or damage that could result in leakage under reasonably foreseeable circumstances.

A final category of spent MCE that must be managed in these same containers is ancillary equipment that came in contact with mercury and has been removed from MCE. Mercury containing devices in which the mercury is not in an ampule can contain valves or other pieces that have come in contact with the mercury and, therefore, are best managed under the universal waste rule, so they are sent to a destination facility. Like damaged whole spent MCE or whole spent MCE with mercury in an open housing, they must be contained in a container that is closed, structurally sound, compatible

with the contents of the spent MCE, reasonably designed to prevent the escape of mercury into the environment by volatilization or any other means, and that does not have any evidence of leakage, spillage, or damage that could result in leakage under reasonably foreseeable circumstances.

Today's standards also state that ampules of mercury may be removed from spent MCE for waste management if the handler follows a set of requirements to ensure that the handler minimizes the chance of breakage of the ampules and, if breakage does occur, that there is containment to prevent mercury from escaping to the environment. In addition, employees must be trained in waste management and emergency procedures. The specific requirements are in 40 CFR 273.13(c)(2)(i) through (viii) for SQHUWs and 40 CFR 273.33(c)(2)(i) through (viii) for LQHUWs.

In response to public comments that not all spent mercury-containing equipment that we described in the proposed rulemaking contains mercury in ampules, EPA is finalizing regulations that allow a handler of universal waste to remove the part of the mercury-containing equipment that contains the mercury in its original housing, even if it is not an ampule. In this case, the handler must immediately seal the original housing for the mercury with an airtight seal to prevent the escape of any mercury into the environment and must then follow all the requirements for managing removed ampules, referred to above.

How the original housing is sealed with an airtight seal will depend on the size and shape of the housing itself, as they vary depending on what kind of device the MCE is. Therefore, today's rule does not mandate a particular way to seal this housing. However, the seal must be airtight. The housing must be sealed in a manner that does not allow mercury to be released before or during the sealing process, and the housing must be packaged in a manner that prevents releases when transported to the destination facility. Examples of methods EPA believes would be effective to prevent releases from a smaller device are placing the housing in containers that are sealed with electrician's tape or placing the housing in a sealed zipper storage bag and then in a secondary container. Most important in this management step is that no mercury escapes into the environment from the sealed housing. EPA believes that allowing the original housings of mercury to be sealed and managed in the same way as ampules are managed will bring waste into the

universal waste system that might have otherwise been disposed of inappropriately.

Handlers of universal waste that remove an ampule or remove the original housing of mercury and seal it must also determine whether mercury has leaked from the equipment. The handlers must evaluate any leaked materials, any clean-up residues resulting from spills or leaks, or any other solid waste generated from the removal of ampules or removal and sealing of mercury housing to determine if it exhibits a characteristic of hazardous waste, including, but not limited to, the toxicity characteristic for mercury. Any material exhibiting a characteristic of hazardous waste would have to be managed in accordance with all applicable requirements of 40 CFR parts 260 through 279, instead of as a universal waste.

In summary, leaking whole spent MCE, spent intact MCE with open original housing, and ancillary equipment all must be managed in containers that will not allow escape of mercury to the environment, and ampules and housings of mercury with airtight seals must be managed to minimize breakage and must be managed in containers that prevent the escape of mercury if breakage does occur.

The notification requirement in today's rule for LQHUWs of spent mercury-containing equipment is consistent with the existing notification requirement for LQHUWs of all other universal wastes (40 CFR 273.32). Under today's rule, a large-quantity handler of spent MCE is required to notify the Regional Administrator and receive an identification number before meeting or exceeding the accumulation limit. In addition, these handlers are required to keep records of universal waste shipments received or sent off-site. These records may take the form of a log, invoice, manifest, bill of lading, or other shipping document.

Handlers of spent mercury-containing equipment are also subject to the requirements applicable to all universal waste handlers in the existing universal waste rule framework. These requirements can be found in 40 CFR part 273 subparts B and C, and cover accumulation time limits, employee training, response to releases, off-site shipments, and exports.

### 3. Requirements for Transporters

Under 40 CFR 273.9, the definition of a universal waste transporter is "a person engaged in the off-site transportation of universal waste by air, rail, highway, or water." Persons

meeting the definition of universal waste transporter include those persons who transport universal waste from one universal waste handler to another, to a processor, to a destination facility, or to a foreign destination. These persons are subject to the universal waste transporter requirements of part 273, subpart D. Today's rule does not change any of the existing requirements applicable to universal waste transporters.

EPA notes that today's rule also does not affect the applicability of shipping requirements under the hazardous waste materials regulations of the Department of Transportation. Transporters continue to be subject to these requirements, if applicable (*e.g.*, 49 CFR 173.164: Metallic Mercury and Articles Containing Mercury).

### 4. Requirements for Destination Facilities

Under 40 CFR 273.9, the definition of a destination facility is "a facility that treats, disposes of, or recycles a particular category of universal waste" (except certain activities specified in the regulations at § 273.13(a) and (c) and § 273.33(a) and (c)). Today's rule does not change any of the existing requirements applicable to universal waste destination facilities (subpart E of part 273).

### 5. Effect of Today's Rule on Household Wastes and Conditionally-Exempt Small Quantity Generators

Adding spent mercury-containing devices to the federal definition of universal wastes does not impose any requirements on households and conditionally-exempt small quantity generators for managing these devices.<sup>5</sup> Household waste continues to be exempt from RCRA subtitle C regulations under 40 CFR 261.4(b)(1). However, under the universal waste rule, households and CESQGs may choose to manage their spent mercury-containing equipment in accordance with either the CESQG regulations under 40 CFR 261.5 or as a universal waste under part 273 (40 CFR 273.8(a)(2)).

It should be noted, however, that 40 CFR 273.8(b) continues to apply. Under this provision, if household or CESQG wastes are mixed with universal waste subject to the requirements of 40 CFR

<sup>5</sup> Conditionally-exempt small quantity generators (CESQGs) generate less than 100 kilograms of hazardous waste in a calendar month and are not subject to RCRA subtitle C hazardous waste management standards, provided they send their waste to a municipal solid waste facility or other facility approved by the state for the management of industrial or municipal non-hazardous wastes (40 CFR 261.5).

part 273 (*i.e.*, universal waste that is not generated by households or CESQGs), the commingled waste must be handled as universal waste in accordance with part 273. Under today's rule, handlers of universal waste who collect 5,000 kilograms or more of this commingled waste are considered large quantity handlers of universal waste and must meet the requirements of that category of universal waste handler.

Spent mercury-containing equipment that is managed as a universal waste under 40 CFR part 273 is not required to be included in a facility's determination of hazardous waste generator status (40 CFR 261.5(c)(6)). Therefore, a generator that manages such devices under the universal waste rule and does not generate any other hazardous waste is not subject to other subtitle C hazardous waste management regulations, such as the hazardous waste generator regulations in part 262.

A universal waste handler that generates more than 100 kilograms but less than 1,000 kilograms of hazardous waste in a calendar month in addition to the universal waste it generates is regulated as a small quantity generator of hazardous waste and is required to manage all hazardous waste not included within the scope of that universal waste rule in accordance with all applicable subtitle C hazardous waste management standards. Similarly, a universal waste handler that generates 1000 kilograms or more of hazardous waste in a calendar month in addition to the universal waste it generates is regulated as a large quantity generator of hazardous waste.

#### 6. Land Disposal Restriction Requirements

As discussed above, under the existing regulations (40 CFR 268.1(f)), universal waste handlers and transporters are exempt from the land disposal restriction (LDR) requirements regarding testing, tracking, and recordkeeping in 40 CFR 268.7 and the storage prohibition in 40 CFR 268.50. Today's rule does not change the regulatory status of destination facilities; they remain subject to the full LDR requirements.

### VI. Discussion of Comments Received in Response to Proposed Rulemaking and the Agency's Responses

EPA received 49 comments on the mercury-containing equipment portion of the June 12, 2002 proposed rule for cathode ray tubes and mercury-containing equipment. Thirty-six of these comments expressed agreement that EPA should finalize this rule,

though some included suggestions to change the rule.

In this section, we are addressing those comments that we believe are of interest to the general public or which resulted in significant changes to the final rule from the proposal. A full record of the comments we received and our responses to them is available in a Response to Comments document in the docket for this rulemaking.

#### *a. Regarding the Addition of Mercury-Containing Equipment to the Universal Waste Rule*

EPA received several comments on the topic of ampules of mercury. There were five basic categories of comments: (1) EPA did not include a definition of "ampule;" (2) many types of mercury-containing equipment do not contain mercury in ampules; (3) spent MCE with mercury not in ampules should still be able to be managed as universal waste; (4) mercury not in ampules should be able to be removed from larger MCE and managed as universal waste; and (5) there should be more stringent management standards for mercury from spent MCE that is not in ampules.

The original proposal did not include a requirement that only spent MCE with ampules would be eligible as a universal waste. The first paragraph of proposed §§ 273.13(c) and 273.33(c) discusses management of whole spent MCE, regardless of whether the mercury is contained in an ampule. This remains the case in the final rule. However, in response to these comments on ampules, EPA has made several changes to the final rule.

First, EPA included in the final rule a definition of "ampule." Although many ampules are glass vials, EPA is aware that they can be made of glass, plastic, or metal. EPA's primary concern with these items is that they are airtight and will not allow mercury to escape into the surrounding environment. Therefore, EPA defined an ampule as "an airtight vial made of glass, plastic, metal, or any combination of these materials."

Secondly, EPA has added language to the first paragraph of § 273.13(c) and § 273.33(c) to address concerns that intact spent MCE could cause releases to the environment even when not damaged. The proposed language assumed that spent MCE would only release mercury if damaged, but we also want to prevent potential releases that happen because of an item's design, not damage. To account for this, EPA has added language in both relevant sections stating that containers must be reasonably designed to prevent the escape of mercury into the environment

by volatilization or any other means. This standard requires that the handlers design containers for spent MCE that will prevent releases under reasonably foreseeable conditions, which is similar to other standards in the universal waste rule that rely on a handlers anticipating the fate of the universal wastes they are handling under reasonably foreseeable conditions.

In addition, in the final rule, mercury not in ampules may be removed from the larger MCE for management as a universal waste, as described under the requirements for large and small quantity handlers. Again, in response to concerns that this could lead to mercury releases, EPA stipulates that once the housing of mercury is removed, it must be immediately sealed and managed in the same manner as an ampule.

In summary, universal waste MCE includes whole spent MCE, both with and without ampules, ampules of mercury, and the original housing of mercury removed from its device and sealed with an airtight seal. EPA believes that these changes address the concerns of the commenters on the issue of ampules.

We also received several comments stating that to avoid duplicative labeling and notification requirements, EPA should put spent MCE and thermostats in the same category of universal waste. EPA agrees with these comments and decided that thermostats are, in fact, one kind of mercury-containing equipment and should not be distinguished from other kinds of MCE. Therefore, we have replaced the thermostat category in the universal waste regulations with the category for mercury-containing equipment. Although this may cause some confusion in the short-term for people already familiar with the regulations for mercury thermostats, EPA decided that the long-term benefits of having one category of universal waste for all types of spent MCE outweighed any short-term confusion.

To assuage two foreseeable concerns with this approach, we made two adjustments. First, we clarified that thermostats are included in the universal waste category of MCE in several places in the regulatory text, including the definitions and the title of the waste management standards for universal waste spent MCE. In addition, to preclude handlers of only mercury thermostats from having to change their labeling procedures, the final rule allows such handlers to continue to label a universal waste thermostat or a container containing only universal waste thermostats with the previous language required in these regulations: "Universal Waste—Mercury

Thermostat(s),” “Waste Mercury Thermostat(s),” or “Used Mercury Thermostat(s).”

In addition to these changes to the final rule, EPA is clarifying several issues in response to comments received.

Several commenters asked whether the weight of an entire device needs to be counted toward the 5,000 kilogram total universal waste threshold for a small quantity generator of universal waste. If the mercury has not been removed from the device, then the weight of the entire device is counted toward the 5,000 kilogram limit. However, EPA clarifies that if the mercury has been removed from a device and the rest of the device is managed as non-hazardous waste, then only the weight of the part being managed as spent MCE needs to be counted as universal waste. In this case, the generator is responsible for ensuring that any part of the device that may have become contaminated with mercury, especially in the case of an open housing of mercury, is being managed appropriately under RCRA.

We also received a comment asking EPA to clarify the status of MCE being sent to a reseller for further evaluation as to whether it is usable in its current condition. Like other materials, MCE being sent to a reseller for possible reuse is not a solid waste, and, therefore, not a hazardous or universal waste until the handler has decided to discard it. If it is not discarded, it is not a waste and therefore not a universal waste.

With respect to the scope of the term “mercury-containing equipment,” we received a comment regarding the items listed in the preamble to the rule. We clarify today that the items mentioned in this preamble as MCE do not constitute a comprehensive list of MCE. Any item that meets the definition of mercury containing equipment in today’s rule is eligible for management as a universal waste.

EPA also received several comments to the proposed rulemaking suggesting that EPA promulgate a conditional exclusion from the definition of solid waste for MCE that is recycled. These comments are beyond the scope of today’s rulemaking, which is a response to a petition to add MCE to the universal waste rule. The proposed rule for these materials did not discuss development of a conditional exclusion from the definition of solid waste, and such an action would raise very different issues and require a separate rulemaking.

#### *b. Regarding the Universal Waste Notification Requirement*

In the proposed rule, EPA specifically requested comment on the notification requirements in the universal waste rule. Specifically, the Agency requested comments on deleting 40 CFR 273.32(b)(5), which requires that when large quantity handlers of universal waste notify the EPA Regional Administrator of their large quantity handler status, they include a statement that (1) states that they are accumulating over 5,000 kilograms of universal waste and (2) lists the types of universal wastes they are accumulating above this quantity.

EPA believes the latter half of this requirement is unnecessary. In 40 CFR 273.32(b)(4), the regulations already require LQHUWs to include a list of all the types of universal waste managed by the handler in their notification. Also, the 5,000 kilogram limit for LQHUWs is for all universal waste accumulated by the handler, not for any one universal waste. Therefore, EPA proposed to delete the requirement to notify the Regional Administrator of which particular universal wastes exceed the 5,000 kilogram limit.

In response to its solicitation of comment on this issue, EPA received 16 comments from state regulatory agencies and the regulated community in support of this change and no comments in opposition to the change. Therefore, EPA is finalizing this change to the universal waste regulations in today’s final rule.

### **VII. State Authority**

#### *a. Applicability of Rule in Authorized States*

Under section 3006 of RCRA, EPA may authorize qualified states to administer and enforce the RCRA hazardous waste program within the state. Following authorization, EPA retains enforcement authority under sections 3008, 3013, and 7003 of RCRA, although authorized states have primary enforcement responsibility. The standards and requirements for state authorization are found at 40 CFR part 271.

Prior to enactment of the Hazardous and Solid Waste Amendments of 1984 (HSWA), a State with final RCRA authorization administered its hazardous waste program entirely in lieu of EPA administering the federal program in that state. The federal requirements no longer applied in the authorized state, and EPA could not issue permits for any facilities in that state, since only the state was authorized to issue RCRA permits.

When new, more stringent federal requirements were promulgated, the state was obligated to enact equivalent authorities within specified time frames. However, the new federal requirements did not take effect in an authorized state, until the state adopted the federal requirements as state law.

In contrast, under RCRA section 3006(g) (42 U.S.C. 6926(g)), which was added by HSWA, new requirements and prohibitions imposed under HSWA authority take effect in authorized states at the same time that they take effect in unauthorized states. EPA is directed by the statute to implement these requirements and prohibitions in authorized states, including the issuance of permits, until the state is granted authorization to do so. While states must still adopt HSWA related provisions as state law to retain final authorization, EPA implements the HSWA provisions in authorized states until the states do so.

Authorized states are required to modify their programs only when EPA enacts federal requirements that are more stringent or broader in scope than existing federal requirements. RCRA section 3009 allows the states to impose standards more stringent than those in the federal program (see also 40 CFR 271.1). Therefore, authorized states may, but are not required to, adopt federal regulations, both HSWA and non-HSWA, that are considered less stringent than previous federal regulations.

#### *b. Effect on State Authorization*

Today’s rule is less stringent than the current federal program. Because states are not required to adopt less stringent regulations, they do not have to adopt the universal waste regulations for spent mercury-containing devices, although EPA encourages them to do so. Some states may already be in the process of streamlining their regulations for these materials or adding them to their list of universal wastes. If a state’s standards for spent mercury-containing equipment are less stringent than those in today’s rule, the state must amend its regulations to make them equivalent to today’s standards and pursue authorization.

#### *c. Interstate Transport*

Because some states may choose not to seek authorization for today’s rule, there will probably be cases when spent mercury-containing equipment will be transported through states with different regulations governing them.

First, a waste which is subject to the universal waste regulations may be sent to a state, or through a state, where it is

subject to the full hazardous waste regulations. In this scenario, for the portion of the trip through the originating state, and any other states where the waste is a universal waste, neither a hazardous waste transporter with an EPA identification number per 40 CFR 263.11 nor a manifest would be required. However, for the portion of the trip through the receiving state, and any other states that do not consider the spent MCE to be a universal waste, the transporter must have a manifest, and must move the waste in compliance with 40 CFR part 263. In order for the final transporter and the receiving facility to fulfill the requirements concerning the manifest (40 CFR 263.20, 263.21, 263.22; 264.71, 264.72, 264.76 or 265.71, 265.72, and 265.76), the initiating facility should complete a manifest and forward it to the first transporter to travel in a state where the waste is not a universal waste. The receiving facility must then sign the manifest and send a copy to the initiating facility. EPA recommends that the initiating facility note in block 15 of the manifest (Special Handling Instructions and Additional Information) that the wastes are under the universal waste regulations in the initiating state, but not in the receiving facility's state.

Second, a hazardous waste generated in a state which does not regulate it as a universal waste may be sent to a state where it is regulated as a universal waste. In this scenario, the waste must be moved by a hazardous waste transporter while the waste is in the generator's state or any other states where it is not a universal waste. The initiating facility would complete a manifest and give copies to the transporter as required under 40 CFR 262.23(a). Transportation within the receiving state and any other states that regulate it as a universal waste would not require a manifest and need not be transported by a hazardous waste transporter. However, it is the initiating facility's responsibility to ensure that the manifest is forwarded to the receiving facility by any non-hazardous waste transporter and sent back to the initiating facility by the receiving facility (see 40 CFR 262.23 and 262.42). EPA recommends that the generator note in block 15 of the manifest (Special Handling Instructions and Additional Information) that the waste is covered under the universal waste regulations in the receiving facility's state, but not in the generator's state.

Third, a waste may be transported across a state in which it is subject to the full hazardous waste regulations although, other portions of the trip may

be from, through, and to states in which it is covered under the universal waste regulations. Transport through the state must be conducted by a hazardous waste transporter and must be accompanied by a manifest. In order for the transporter to fulfill its requirements concerning the manifest (subpart B of part 263), the initiating facility must complete a manifest as required under the manifest procedures and forward it to the first transporter to travel in a state where the waste is not a universal waste. The transporter must deliver the manifest to, and obtain the signature of, either the next transporter or the receiving facility.

As more states streamline their regulatory requirements for spent MCE, the complexity of interstate transport should be reduced.

#### **VIII. Statutory and Executive Order Reviews**

##### *a. Executive Order 12866: Regulatory Planning and Review*

Under Executive Order 12866 (58 FR 51735, October 4, 1993), Federal agencies must determine whether a regulatory action is "significant" and therefore subject to OMB review and the requirements of the Executive Order. The Order defines a "significant regulatory action" as one that is likely to result in a rule that may: "(1) Have an annual effect on the economy of \$100 million or more or adversely affect, in a material way, the economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety, or State, local, or tribal governments or communities; (2) create serious inconsistency or otherwise interfere with an action taken or planned by another agency; (3) materially alter the budgetary impact of entitlements, grants, user fees, or loan programs or the rights and obligations of recipients; or (4) raise novel legal or policy issues arising out of legal mandates, the President's priorities, or the principles set forth in the Executive Order."

Pursuant to the terms of Executive Order 12866, the Agency has determined that today's rule is a significant regulatory action because it contains novel policy issues. As such, this action was submitted to OMB for review. Changes made in response to OMB suggestions or recommendations are documented in the docket to today's proposal.

To estimate the cost savings, incremental costs, economic impacts, and benefits from this rule to affected regulated entities, we completed an economic analysis for this rule. Copies

of this analysis, "Economic Analysis of Including Mercury Containing Devices In the Universal Waste System" have been placed in the RCRA Docket.

EPA estimated through this analysis that 1,877 generators handling approximately 550 tons of MCE would be affected by this rule. EPA estimates a cost savings from the rule to be \$273,000 per year. Of this, about \$200,000 would be savings to generators of mercury-containing equipment, an average of \$106 per generator per year. The remaining \$73,000 is attributable to retorters and waste brokers.

In addition to cost savings, EPA's analysis showed qualitative benefits to adding spent MCE to the universal waste program: improved implementation of and compliance with the hazardous waste program, establishment of facilities to consolidate mercury waste, increased recovery and recycling of mercury from these devices, and reduced mercury emissions.

##### *b. Paperwork Reduction Act*

The information collection requirements in this rule have been submitted for approval to the Office of Management and Budget (OMB) under the Paperwork Reduction Act, 44 U.S.C. 3501 *et seq.* The information collection requirements are not enforceable until OMB approves them.

The information requirements established for this action, and identified on the Information Collection Request (ICR) supporting today's rule are largely self-implementing. This process will ensure that (1) regulated entities managing mercury-containing equipment are held accountable to the applicable requirements; and (2) state inspectors can verify compliance when needed. For example, the universal waste standards require LQHUs and SQHUs to demonstrate the length of time that spent MCE has been accumulated from the date they were received or became a waste. The standards also require LQHUs and destination sites to keep records of all shipments sent and received. Further, the standards require waste handlers and processors to notify EPA under certain circumstances (*e.g.*, when large amounts of waste are accumulated or when illegal shipments are received).

EPA will use the collected information in the event of an inspection to ensure that spent mercury-containing equipment is being managed in a protective manner. The information aids the Agency in tracking waste shipments and identifying improper management practices. In addition, information kept in facility records helps handlers, processors, and

destination facilities to ensure that all facilities are managing these wastes properly.

Section 3007(b) of RCRA and 40 CFR part 2, subpart B, which define EPA's general policy on public disclosure of information, contain provisions for confidentiality. However, no questions of a sensitive nature are included in any of the information collection requirements associated with today's action.

EPA has carefully considered the burden imposed upon the regulated community by the regulations. EPA is confident that those activities required of respondents are necessary and, to the extent possible, has attempted to minimize the burden imposed. EPA believes strongly that if the minimum requirements specified under the regulations are not met, neither the facilities nor EPA can ensure that spent MCE are being managed in a manner protective of human health and the environment.

The aggregate annual burden to respondents of this action over the three-year time period covered by the ICR is estimated at 114,770 hours, with a cost of approximately \$825,158. Average annual burden hours per respondent are estimated to be 4.5 hours for small quantity handlers; 15 hours for large quantity handlers; 10 hours for treatment, storage, and disposal facilities; and 16 hours for transporters. There are an estimated 2495 respondents. This level of burden represents a reduction of approximately 18,493 hours, since the spent MCE will no longer need to comply with the full RCRA requirements for generators and transporters.

Burden means the total time, effort, or financial resources expended by persons to generate, maintain, retain, or disclose or provide information to or for a Federal agency. This includes the time needed to review instructions; develop, acquire, install, and utilize technology and systems for the purposes of collecting, validating, and verifying information, processing and maintaining information, and disclosing and providing information; adjust the existing ways to comply with any previously applicable instructions and requirements; train personnel to be able to respond to a collection of information; search data sources; complete and review the collection of information; and transmit or otherwise disclose the information.

An agency may not conduct or sponsor, and a person is not required to respond to a collection of information, unless it displays a currently valid OMB control number. The OMB control

numbers for EPA's regulations in 40 CFR are listed in 40 CFR part 9. When this ICR is approved by OMB, the Agency will publish a technical amendment to 40 CFR part 9 in the **Federal Register** to display the OMB control number for the approved information collection requirements contained in this final rule.

*c. Regulatory Flexibility Act, as Amended by the Small Business Regulatory Enforcement Fairness Act of 1996, 5 U.S.C. 601 et seq.*

The Regulatory Flexibility Act generally requires an agency to prepare a regulatory flexibility analysis of any rule subject to notice and comment rulemaking requirements under the Administrative Procedures Act or any other statute, unless the agency certifies that the rule will not have a significant economic impact on a substantial number of small entities. Small entities include small businesses, small organizations, and small governmental jurisdictions.

For purposes of assessing the impacts of today's rule on small entities, small entity is defined as (1) a small business as defined by the Small Business Administration's (SBA) regulations at 13 CFR 121.201; (2) a small governmental jurisdiction that is a government of a city, county, town, school district, or special district with a population of less than 50,000; and (3) a small organization that is any not-for-profit enterprise that is independently owned and operated and is not dominant in its field.

After considering the economic impacts of today's final rule on small entities, I certify that this action will not have a significant economic impact on a substantial number of small entities. In determining whether a rule has a significant economic impact on a substantial number of small entities, the impact of concern is any significant adverse economic impact on small entities, since the primary purpose of the regulatory flexibility analyses is to identify and address regulatory alternatives "which minimize any significant economic impact of the rule on small entities" (5 U.S.C. 603 and 604). Thus, an agency may certify that a rule will not have a significant economic impact on a substantial number of small entities if the rule relieves regulatory burden, or otherwise has a positive economic effect on all of the small entities subject to the rule.

The small entity analysis conducted for today's rule indicates that streamlining requirements for spent mercury-containing devices would generally result in savings to affected

entities compared to the baseline requirements. Under a scenario assuming full compliance, the rule is not expected to result in a net cost to any affected entity. Thus, adverse impacts are not anticipated. Costs could increase for entities that are not complying with current requirements, but even these costs, which are not properly attributable to the current rulemaking, would not be expected to result in significant impacts on a substantial number of small entities. We have therefore concluded that today's final rule will relieve regulatory burden for small entities.

*d. Unfunded Mandates Reform Act*

Title II of the Unfunded Mandates Reform Act of 1995 (UMRA), Public Law 104-4, establishes requirements for Federal agencies to assess the effects of their regulatory actions on State, local, and tribal governments and the private sector. Under section 202 of the UMRA, EPA generally must prepare a written statement, including a cost-benefit analysis, for proposed and final rules with "Federal mandates" that may result in expenditures to State, local, and tribal governments, in the aggregate, or to the private sector, of \$100 million or more in any one year.

Before promulgating an EPA rule for which a written statement is needed, section 205 of the UMRA generally requires EPA to identify and consider a reasonable number of regulatory alternatives and adopt the least costly, most cost-effective or least burdensome alternative that achieves the objectives of the rule. The provisions of section 205 do not apply when they are inconsistent with applicable law. Moreover, section 205 allows EPA to adopt an alternative other than the least costly, most cost-effective or least burdensome alternative if the Administrator publishes with the final rule an explanation why that alternative was not adopted.

Before EPA establishes any regulatory requirements that may significantly or uniquely affect small governments, including tribal governments, it must have developed under section 203 of the UMRA a small government agency plan. The plan must provide for notifying potentially affected small governments, enabling officials of affected small governments to have meaningful and timely input in the development of EPA regulatory proposals with significant Federal intergovernmental mandates, and informing, educating, and advising small governments on compliance with the regulatory requirements.

Today's rule contains no Federal mandates (under the regulatory

provisions of Title II of the UMRA) for state, local, or tribal governments or the private sector. The UMRA generally excludes from the definition of “federal governmental mandate” (in sections 202, 203, and 205) and from the definition of “federal private sector mandate” duties that arise from participation in a voluntary federal program. Today’s final rule is voluntary in that it is less stringent than the current regulations. As a result, state governments are not required to adopt the changes and the private sector is not required to participate. Thus, today’s rule is not subject to the requirements of sections 202 and 205 of the UMRA.

*e. Executive Order 13132: Federalism*

Executive Order 13132, entitled “Federalism” (64 FR 43255, August 10, 1999), requires EPA to develop an accountable process to ensure “meaningful and timely input by state and local officials in the development of regulatory policies that have federalism implications.” “Policies that have federalism implications” is defined in the Executive Order to include regulations that have “substantial direct effects on the states, on the relationship between the national government and the states, or on the distribution of power and responsibilities among the various levels of government.”

This final rule does not have federalism implications. It will not have substantial direct effects on the states, on the relationship between the national government and the states, or on the distribution of power and responsibilities among the various levels of government, as specified in Executive Order 13132. Thus, Executive Order 13132 does not apply to this rule.

*f. Executive Order 13175: Consultation and Coordination With Indian Tribal Governments*

Executive Order 13175, entitled “Consultation and Coordination with Indian Tribal Governments” (65 FR 67249, November 9, 2000), requires EPA to develop an accountable process to ensure “meaningful and timely input by tribal officials in the development of regulatory policies that have tribal implications.” This final rule does not have tribal implications, as specified in Executive Order 13175. It will not have substantial direct effects on tribal governments, on the relationship between the Federal Government and Indian tribes, or on the distribution of power and responsibilities between the Federal Government and Indian tribes. Thus, Executive Order 13175 does not apply to this rule.

*g. Executive Order 13045: Protection of Children From Environmental Health and Safety Risks*

Executive Order 13045: “Protection of Children from Environmental Health Risks and Safety Risks” (62 FR 19885, April 23, 1997) applies to any rule that (1) is determined to be “economically significant” as defined under Executive Order 12866; and (2) concerns an environmental health or safety risk that EPA has reason to believe may have a disproportionate effect on children. If the regulatory action meets both criteria, the Agency must evaluate the environmental health or safety effects of the planned rule on children, and explain why the planned regulation is preferable to other potentially effective and reasonably feasible alternatives considered by the Agency.

This final rule is not subject to the Executive Order because it is not economically significant as defined in Executive Order 12866, and because the Agency does not have reason to believe the environmental health or safety risks addressed by this action present a disproportionate risk to children. In fact, EPA expects that the result of this final rule will be to increase compliance with the hazardous waste regulations and reduce exposures to mercury by the public, including children.

*h. Executive Order 13211: Actions That Significantly Affect Energy Supply, Distribution, or Use*

This rule is not a “significant energy action” as defined in Executive Order 13211, “Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use” (66 FR 28355 (May 22, 2001)) because it is not likely to have a significant adverse effect on the supply, distribution, or use of energy. Further, we have concluded that this rule is not likely to have any adverse energy effects.

*i. National Technology Transfer Advancement Act*

As noted in the proposed rule, section 12(d) of the (NTTAA), Public Law 104–113, section 12(d) (15 U.S.C. 272 note) directs EPA to use voluntary consensus standards in its regulatory activities, unless to do so would be inconsistent with applicable law or otherwise impractical. Voluntary consensus standards are technical standards (*e.g.*, materials specifications, test methods, sampling procedures, and business practices) that are developed or adopted by voluntary consensus standards bodies. The NTTAA directs EPA to provide Congress, through OMB, explanations when the Agency decides

not to use available and applicable voluntary consensus standards.

This action does not involve technical standards. Therefore, EPA did not consider the use of any voluntary consensus standards.

*j. Congressional Review Act*

The Congressional Review Act, 5 U.S.C. 801 *et seq.*, as added by the Small Business Regulatory Enforcement Fairness Act of 1996, generally provides that before a rule may take effect, the agency promulgating the rule must submit a rule report, which includes a copy of the rule, to each House of the Congress and to the Comptroller General of the United States. EPA will submit a report containing this rule and other required information to the U.S. Senate, the U.S. House of Representatives, and the Comptroller General of the United States prior to publication of the rule in the **Federal Register**. A major rule cannot take effect until 60 days after it is published in the **Federal Register**. This action is not a “major rule” as defined by 5 U.S.C. 804(2). This rule will be effective August 5, 2005.

**List of Subjects**

*40 CFR Part 260*

Environmental protection, Administrative practice and procedure, Confidential business information, Hazardous waste, Reporting and recordkeeping requirements.

*40 CFR Part 261*

Environmental protection, Hazardous waste, Recycling, Reporting and recordkeeping requirements.

*40 CFR Part 264*

Environmental protection, Hazardous waste, Packaging and containers, Security measures, Surety bonds.

*40 CFR Part 265*

Environmental protection, Air pollution control, Hazardous waste, Insurance, Packaging and containers, Reporting and recordkeeping requirements, Security measures, Surety bonds, Water supply.

*40 CFR Part 268*

Environmental protection, Hazardous waste, Reporting and recordkeeping requirements.

*40 CFR Part 270*

Environmental protection, Hazardous materials transportation, Reporting and recordkeeping requirements.

40 CFR Part 273

Environmental protection, Hazardous materials transportation, Hazardous waste.

Dated: July 26, 2005.

Stephen L. Johnson, Administrator.

For the reasons set out in the preamble, title 40, chapter I of the Code of Federal Regulations, parts 260, 261, 264, 265, 268, 270, and 273 are amended as follows:

PART 260—HAZARDOUS WASTE MANAGEMENT SYSTEM: GENERAL

1. The authority citation for part 260 continues to read as follows:

Authority: 42 U.S.C. 6905, 6912(a), 6921-6927, 6930, 6934, 6935, 6937, 6938, 6939, and 6974.

Subpart B—Definitions

2. Section 260.10 is amended by adding the definition of "Mercury-containing equipment" and by republishing the introductory text of and revising paragraph (3) to the definition of "Universal Waste" to read as follows:

§ 260.10 Definitions.

\* \* \* \* \*

Mercury-containing equipment means a device or part of a device (including thermostats, but excluding batteries and lamps) that contains elemental mercury integral to its function.

\* \* \* \* \*

Universal Waste means any of the following hazardous wastes that are managed under the universal waste requirements of part 273 of this chapter:

\* \* \* \* \*

(3) Mercury-containing equipment as described in § 273.4 of this chapter; and

\* \* \* \* \*

PART 261—IDENTIFICATION AND LISTING OF HAZARDOUS WASTE

3. The authority citation for part 261 continues to read as follows:

Authority: 42 U.S.C. 6905, 6912(a), 6921, 6922, 6924(y), and 6938.

Subpart A—General

4. Section 261.9 is amended by revising paragraph (c) to read as follows:

§ 261.9 Requirements for universal waste.

\* \* \* \* \*

(c) Mercury-containing equipment as described in § 273.4 of this chapter; and

\* \* \* \* \*

PART 264—STANDARDS FOR OWNERS AND OPERATORS OF HAZARDOUS WASTE TREATMENT, STORAGE AND DISPOSAL FACILITIES

5. The authority citation for part 264 continues to read as follows:

Authority: 42 U.S.C. 6905, 6912(a), 6924, and 6925.

Subpart A—General

6. Section 264.1 is amended by revising paragraph (g)(11)(iii) to read as follows:

§ 264.1 Purpose, scope, and applicability.

\* \* \* \* \*

(g) \* \* \*

(11) \* \* \*

(iii) Mercury-containing equipment as described in § 273.4 of this chapter; and

\* \* \* \* \*

PART 265—INTERIM STATUS STANDARDS FOR OWNERS AND OPERATORS OF HAZARDOUS WASTE TREATMENT, STORAGE AND DISPOSAL FACILITIES

7. The authority citation for part 265 continues to read as follows:

Authority: 42 U.S.C. 6905, 6906, 6912, 6922, 6923, 6924, 6925, 6935, 6936, and 6937.

Subpart A—General

8. Section 265.1 is amended by revising paragraph (c)(14)(iii) to read as follows:

§ 265.1 Purpose, scope and applicability.

\* \* \* \* \*

(c) \* \* \*

(14) \* \* \*

(iii) Mercury-containing equipment as described in § 273.4 of this chapter; and

\* \* \* \* \*

PART 268—LAND DISPOSAL RESTRICTIONS

9. The authority citation for part 268 continues to read as follows:

Authority: 42 U.S.C. 6905, 6912(a), 6921, and 6924.

Subpart A—General

10. Section 268.1 is amended by revising paragraph (f)(3) to read as follows:

§ 268.1 Purpose, scope and applicability.

\* \* \* \* \*

(f) \* \* \*

(3) Mercury-containing equipment as described in § 273.4 of this chapter; and

\* \* \* \* \*

PART 270—EPA ADMINISTERED PERMIT PROGRAMS: THE HAZARDOUS WASTE PERMIT PROGRAM

11. The authority citation for part 270 continues to read as follows:

Authority: 42 U.S.C. 6905, 6912, 6924, 6925, 6927, 6939, and 6974.

Subpart A—General Information

12. Section 270.1 is amended by revising paragraph (c)(2)(viii)(C) to read as follows:

§ 270.1 Purpose and scope of these regulations.

\* \* \* \* \*

(c) \* \* \*

(2) \* \* \*

(viii) \* \* \*

(C) Mercury-containing equipment as described in § 273.4 of this chapter; and

\* \* \* \* \*

PART 273—STANDARDS FOR UNIVERSAL WASTE MANAGEMENT

13. The authority for part 273 continues to read as follows:

Authority: 42 U.S.C. 6922, 6923, 6924, 6925, 6930, and 6937.

Subpart A—General

14. Section 273.1 is amended by revising paragraph (a)(3) to read as follows:

§ 273.1 Scope.

(a) \* \* \*

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

\* \* \* \* \*

15. Section 273.4 is revised to read as follows:

§ 273.4 Applicability—Mercury-containing equipment.

(a) Mercury-containing equipment covered under this part 273. The requirements of this part apply to persons managing mercury-containing equipment, as described in § 273.9, except those listed in paragraph (b) of this section.

(b) Mercury-containing equipment not covered under this part 273. The requirements of this part do not apply to persons managing the following mercury-containing equipment:

- (1) Mercury-containing equipment that is not yet a waste under part 261 of this chapter. Paragraph (c) of this section describes when mercury-containing equipment becomes a waste;
(2) Mercury-containing equipment that is not a hazardous waste. Mercury-containing equipment is a hazardous

waste if it exhibits one or more of the characteristics identified in part 261, subpart C of this chapter or is listed in part 261, subpart D of this chapter; and

(3) Equipment and devices from which the mercury-containing components have been removed.

(c) *Generation of waste mercury-containing equipment.* (1) Used mercury-containing equipment becomes a waste on the date it is discarded.

(2) Unused mercury-containing equipment becomes a waste on the date the handler decides to discard it.

■ 16. Section 273.9 is amended by adding the definitions of “Ampule,” and “Mercury-containing equipment,” and by revising the definitions of “Large quantity handler of universal waste,” “Small quantity handler of universal waste,” and republishing the introductory text and revising paragraph (3) of the definition of “Universal waste” to read as follows:

**§ 273.9 Definitions.**

\* \* \* \* \*

*Ampule* means an airtight vial made of glass, plastic, metal, or any combination of these materials.

\* \* \* \* \*

*Large Quantity Handler of Universal Waste* means a universal waste handler (as defined in this section) who accumulates 5,000 kilograms or more total of universal waste (batteries, pesticides, mercury-containing equipment, or lamps, calculated collectively) at any time. This designation as a large quantity handler of universal waste is retained through the end of the calendar year in which the 5,000 kilogram limit is met or exceeded.

*Mercury-containing equipment* means a device or part of a device (including thermostats, but excluding batteries and lamps) that contains elemental mercury integral to its function.

\* \* \* \* \*

*Small Quantity Handler of Universal Waste* means a universal waste handler (as defined in this section) who does not accumulate 5,000 kilograms or more of universal waste (batteries, pesticides, mercury-containing equipment, or lamps, calculated collectively) at any time.

\* \* \* \* \*

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

\* \* \* \* \*

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

\* \* \* \* \*

**Subpart B—Standards for Small Quantity Handlers of Universal Waste**

■ 17. Section 273.13 is amended by revising paragraph (c) to read as follows:

**§ 273.13 Waste management.**

\* \* \* \* \*

(c) *Mercury-containing equipment.* A small quantity handler of universal waste must 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 small quantity handler of universal waste must 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 must be closed, structurally sound, compatible with the contents of the device, must lack evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions, and must be reasonably designed to prevent the escape of mercury into the environment by volatilization or any other means.

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

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

(ii) 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);

(iii) 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 meets the requirements of 40 CFR 262.34;

(iv) Immediately transfers any mercury resulting from spills or leaks from broken ampules from the containment device to a container that meets the requirements of 40 CFR 262.34;

(v) Ensures that the area in which ampules are removed is well ventilated and monitored to ensure compliance with applicable OSHA exposure levels for mercury;

(vi) 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;

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

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

(3) A small 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:

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

(ii) Follows all requirements for removing ampules and managing removed ampules under paragraph (c)(2) of this section; and

(4) (i) A small quantity handler of universal waste who removes mercury-containing ampules from mercury-containing equipment or seals mercury from mercury-containing equipment in its original housing must determine whether the following exhibit a characteristic of hazardous waste identified in 40 CFR part 261, subpart C:

(A) Mercury or clean-up residues resulting from spills or leaks and/or

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

(ii) If the mercury, residues, and/or other solid waste exhibits a characteristic of hazardous waste, it must be managed in compliance with all applicable requirements of 40 CFR parts 260 through 272. The handler is considered the generator of the mercury, residues, and/or other waste and must manage it in compliance with 40 CFR part 262.

(iii) If the mercury, residues, and/or other solid waste is not hazardous, the handler may manage the waste in any way that is in compliance with applicable federal, state or local solid waste regulations.

\* \* \* \* \*

■ 18. Section 273.14 is amended by revising paragraph (d) to read as follows:

**§ 273.14 Labeling/markings.**

\* \* \* \* \*

(d) (1) Universal waste mercury-containing equipment (i.e., each device), or a container in which the equipment is contained, must be labeled or marked clearly with any of the following phrases: “Universal Waste—Mercury Containing Equipment,” “Waste

Mercury-Containing Equipment,” or “Used Mercury-Containing Equipment.”

(2) A universal waste mercury-containing thermostat or container containing only universal waste mercury-containing thermostats may be labeled or marked clearly with any of the following phrases: “Universal Waste—Mercury Thermostat(s),” “Waste Mercury Thermostat(s),” or “Used Mercury Thermostat(s).”

\* \* \* \* \*

**Subpart C—Standards for Large Quantity Handlers of Universal Waste**

■ 19. Section 273.32 is amended by revising paragraphs (b)(4) and (b)(5) to read as follows:

**§ 273.32 Notification.**

\* \* \* \* \*

(b) \* \* \*

(4) A list of all the types of universal waste managed by the handler (e.g., batteries, pesticides, mercury-containing equipment, and lamps); and

(5) A statement indicating that the handler is accumulating more than 5,000 kilograms of universal waste at one time.

■ 20. Section 273.33 is amended by revising paragraph (c) to read as follows:

**§ 273.33 Waste management.**

\* \* \* \* \*

(c) *Mercury-containing equipment.* A large quantity handler of universal waste must 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 must 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 must be closed, structurally sound, compatible with the contents of the device, must lack evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions, and must be reasonably designed to prevent the escape of mercury into the environment by volatilization or any other means.

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

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

(ii) 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);

(iii) Ensures that a mercury clean-up system is readily available to immediately transfer any mercury resulting from spills or leaks of broken ampules from that containment device to a container that meets the requirements of 40 CFR 262.34;

(iv) Immediately transfers any mercury resulting from spills or leaks from broken ampules from the containment device to a container that meets the requirements of 40 CFR 262.34;

(v) Ensures that the area in which ampules are removed is well ventilated and monitored to ensure compliance with applicable OSHA exposure levels for mercury;

(vi) 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;

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

(viii) 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:

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

(ii) Follows all requirements for removing ampules and managing removed ampules under paragraph (c)(2) of this section;

and

(4) (i) A large quantity handler of universal waste who removes mercury-containing ampules from mercury-containing equipment or seals equipment from mercury-containing equipment in its original housing must determine whether the following exhibit a characteristic of hazardous waste identified in 40 CFR part 261, subpart C:

(A) Mercury or clean-up residues resulting from spills or leaks and/or

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

(ii) If the mercury, residues, and/or other solid waste exhibits a characteristic of hazardous waste, it must be managed in compliance with all applicable requirements of 40 CFR parts 260 through 272. The handler is considered the generator of the mercury, residues, and/or other waste and must manage it in compliance with 40 CFR part 262.

(iii) If the mercury, residues, and/or other solid waste is not hazardous, the handler may manage the waste in any way that is in compliance with applicable federal, state or local solid waste regulations.

■ 21. Section 273.34 is amended by revising paragraph (d) to read as follows:

**§ 273.34 Labeling/markings.**

\* \* \* \* \*

(d) (1) Mercury-containing equipment (i.e., each device), or a container in which the equipment is contained, must be labeled or marked clearly with any of the following phrases: “Universal Waste—Mercury Containing Equipment,” “Waste Mercury-Containing Equipment,” or “Used Mercury-Containing Equipment.”

(2) A universal waste mercury-containing thermostat or container containing only universal waste mercury-containing thermostats may be labeled or marked clearly with any of the following phrases: “Universal Waste—Mercury Thermostat(s),” “Waste Mercury Thermostat(s),” or “Used Mercury Thermostat(s).”

\* \* \* \* \*

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