

WYOMING DEPARTMENT OF ENVIRONMENTAL QUALITY

SOLID & HAZARDOUS WASTE DIVISION

Mercury-Containing Lamp & Ballast Disposal And Recycling Guide

Revised 9/29/2015

I. Health Concerns & Threats To The Environment

Mercury-containing lamps are any electric lamp in which mercury is introduced by the manufacturer for the operation of the lamp. Mercury-containing lamps include the following types: fluorescent lamps, high-intensity discharge lamps (HID), neon, mercury vapor, high pressure sodium, compact fluorescent, and metal halide. There are no lamps that are completely free of mercury but some of them have reduced concentrations of mercury or they may contain a chemical that can bind the mercury to help reduce it's mobility.

The National Electrical Manufacturers Association (NEMA) set a standard for manufacturers that "green markings, including green lamp etches or green component materials used in lamps, indicate that the marked lamps consistently pass the Toxicity Characteristic Leaching Procedure (TCLP) test for all substances that were regulated at the time of lamp manufacture".¹

The TCLP is a laboratory test method used to determine whether a bulb can leach enough mercury or other toxic metals, in a landfill to be regulated as hazardous waste. [Wyoming Hazardous Waste Rules and Regulations (HWRR), Chapter 1, Section 261 (261.24)] Mercury-containing lamps that are not marked as described above (i.e., those that have an unfinished aluminum end cap and no green marking) are generally considered to be regulated as hazardous waste after their useful life. While it is possible to test individual spent lamps to determine if each is hazardous, it is typically more cost effective to treat all non-low-mercury or non-green-marked lamps as hazardous waste.¹

Mercury is a toxic metal that in very low concentrations, is toxic to humans and animals and can cause cancer. Mercury is toxic to people and animals by adsorption of the chemical through the skin and by inhalation in addition to being toxic through ingestion. Mercury does not break down in the environment but can be transported via the food chain and can remain toxic for long periods of time. Accidental breaking of mercury-containing lamps can release mercury and metals into the environment where they may contaminate the air, surface or groundwater.²

The disposal and storage requirements discussed below do not apply to households, which are exempt from the Wyoming HWRR. However, homeowners, tenant and landlords are encouraged to recycle spent mercury-containing lamps, including fluorescent tubes and compact fluorescent lamps, possibly through local household hazardous waste collection

facilities and collection day events. Unregulated mercury-containing lamps can also cause the same impacts to human health and the environment as described above.

II. Disposal Requirements

A. Households

Households may be able to take lamps to a locally operated household hazardous waste collection facility in their community for recycling. Otherwise, unless prohibited by the local landfill, households may dispose lamps in municipal landfills. Check with your local waste collection facility in advance to find out if there are any local management requirements. The Wyoming Department of Environmental Quality (Department) recommends that if the lamps have to be disposed along with municipal trash, they be placed in a sealed plastic bag before being placed into the trash. More information on household management of lamps can be found at the EPA's website:

<http://www.epa.gov/osw/hazard/wastetypes/universal/lamps/manage.htm>.

B. Conditionally Exempt Small Quantity Hazardous Waste Generator (CESQG)

If the total amount of hazardous waste lamps and other hazardous waste generated by the waste generator in a calendar month is less than 100 kg (220 lb), the generator is classified as a CESQG. The Wyoming HWRR, Chapter 1, Section 261 (261.5), require CESQGs to properly identify their hazardous waste, determine the quantity of hazardous waste generated per month, and ensure delivery of the hazardous waste to a proper disposal facility, which can include a recycler, a facility permitted to take hazardous waste, or a permitted industrial or municipal landfill (subject to landfill approval). CESQGs lose their exempt status if they store/accumulate more than 1,000 kg (2,200 lb) of hazardous waste and would then be subject to the small quantity hazardous waste generator (SQG), HWRR. To prevent releases of mercury and other trace metals into the environment when broken, the lamps should be packaged in appropriate storage and shipping containers and self-transported in a vehicle to minimize risk of breakage. **They should never be placed in dumpsters or discarded with ordinary trash, where they are almost certain to be crushed by other waste or broken.** The Department recommends that if the lamps have to be disposed along with municipal trash, they be placed in a sealed plastic bag before being placed into the trash.

C. Small Quantity (SQG) Or Large Quantity (LQG) Hazardous Waste Generator

For waste generators that generate between 100 – 1,000 kg (220 – 2,200 lbs) per month of hazardous waste (SQG) or greater than 1,000 kg (2,200 lbs) per month of hazardous waste (LQG), including mercury-containing lamps, the lamps must be managed as hazardous waste or under the Wyoming HWRR, Chapter 1, Section 273, simpler universal waste rules, a subset of the HWRR (See Section V.). If the lamps are managed as hazardous waste, the generator must comply with the SQG/LQG standards. (See Appendix A, HWRR, Chapter 1, Section 262, Hazardous Waste Generator Checklist)

D. Universal Waste Generator

Small quantity and large quantity universal waste handlers are prohibited from disposing of universal waste including mercury-containing lamps. [HWRR, Chapter 1, Section 273 (273.11)(a) and 273 (273.31)(a)]

III. Storage and Treatment Requirements

A. Households and CESQGs

Lamps should be stored in a way that avoids breakage. Containers need to be closed, structurally sound, compatible with the contents of the lamps and must lack evidence of leakage, spillage or damage that could cause leakage or releases of mercury or other hazardous constituents. Fluorescent lamps can be stored in the original boxes or in boxes from replacement bulbs. Specially manufactured containers can be purchased for storing used lamps until they are ready for recycling. Your lamp recycler may also provide you with a container that makes storage, shipping or pick-up easier. Do not tape lamps together or use rubber bands. Close and securely seal boxes/containers with tape. Three-inch PVC (polyvinyl chloride - plastic insulating tape) tape is recommended.

Boxes/containers should be stored in a dry place. Generators should work with recyclers to fully understand proper procedures for filling and securing boxes or containers of lamps.

B. Small and Large Quantity Generators

If the lamps are classified as hazardous waste and the generator is classified as SQG or LQG, they must be stored in containers meeting the federal Department of Transportation (DOT) requirements. They must also meet all of the hazardous waste pre-transport requirements. (See Appendix A) CESQG hazardous waste generators may never accumulate more than 2,200 pounds of hazardous waste at any one time. Lamps classified as universal wastes must be: contained in containers such as cardboard boxes or fiber drums, which are adequate to prevent breakage; kept in closed containers; stored to minimize lamp breakage; the universal waste generator must immediately clean up any broken or damaged lamps; and broken lamps must be stored in a closed, structurally sound container. Each container of universal waste must be labeled or marked clearly with one of the following phrases: "Universal Waste-Lamps", "Waste Lamps", or "Used Lamps".

C. Treatment

The WDEQ discourages crushing of mercury lamps/bulbs due to the difficulty in fully controlling mercury emissions but, if high volumes, off-site shipment

scheduling or other conditions give a generator incentive for lamp/bulb crushing, the activity must meet the conditions below:

- a) If a lamp/bulb crusher is used, the generator loses the flexibility to manage lamps/bulbs as a “universal wastes” since WY and federal HWRR require a hazardous waste determination be conducted. Crushed lamps/tubes require more strict management as a hazardous waste if thresholds are exceeded. (See Section III.B.) Many or most fluorescent lamps/bulbs exceed hazardous waste thresholds since even newer lamps/bulbs only reduced mercury content but did not eliminate it.
- b) Crush lamps in a well-ventilated and monitored area to ensure compliance with applicable OSHA exposure limits for mercury with measures such as use of drum crushers equipped with activated carbon absorbent, replaced as needed, to minimize mercury vapors/emissions.
- c) Ensure that employees crushing lamps are thoroughly familiar with proper waste mercury handling and emergency procedures.
- d) Manage only lamps/bulbs generated by the facility and do not crush lamps/bulbs from outside entities.
- e) Store crushed tubes in closed, non-leaking containers.

Also, it is still more advantageous to use the universal waste rule thereby minimizing the amount of hazardous waste that has to be counted per month in determining the hazardous waste generator status.

D. Transportation Requirements

Households and CESQGs must ensure delivery of their hazardous waste to an approved off-site recycling, treatment, storage or disposal facility. SQG and LQG hazardous waste generators must comply with the Pre-Transport requirements listed under the Attachment A checklist. Universal waste handlers who transport their own universal waste offsite, must comply with the following requirements: must ship waste in accord with all applicable DOT hazardous material requirements; must store the universal waste for 10 days or less; must comply with the applicable universal waste handler requirements (see Appendix B); must contain all universal waste releases and other residues; must determine whether the releases/residues are hazardous waste and if so, must comply with HW generator requirements (see Appendix A); must transport only to another universal waste handler, destination facility or a foreign destination; and if defined as hazardous material, must be properly described on the shipping papers in accord with DOT requirements.

IV. Universal Waste Requirements

Mercury-containing lamps managed as universal waste, including eventual shipment to a treatment, storage or disposal (TSD) facility or, preferably a recycler, do not count toward the determination of hazardous waste generator category. Therefore, if the other hazardous waste generated is less than the 100 kg (220 lb) per month and the lamps are

managed as universal waste, then the other hazardous waste may be managed under the less stringent requirements for CESQG waste. However, if the other hazardous waste generated is greater than 100 kg (220 lb) per month, then the other hazardous waste must still be managed according to the more stringent SQG or LQG requirements, as applicable. (See Appendix A)

Universal waste mercury-containing lamp generators, must comply with the requirements listed under Chapter 13, Section 273 of the HWRR. (See Appendix B, HWRR, Universal Waste Checklist Abbreviated)

V. Recycling Options

Households and CESQGs may be able to take the lamps to a locally operated household hazardous waste collection facility in their community. Households and CESQGs should check with local waste collection facilities first to see if this option is available. Recycling mercury lamps/bulbs by any entity is dependent on an adequate and organized storage system for spent lamps/bulbs such as striving to keep original lamp tube boxes on hand, purchasing aftermarket lamp tube boxes and/or other methods to minimize broken lamps and subsequent release of mercury.

The following web site contains a partial list of firms that offer mercury-containing lamp services: <http://www.lamprecycle.org>. The Department does not endorse specific recyclers or disposal firms. The Department, by listing this web site, does not imply that the companies are in compliance with applicable laws. The Department cautions generators to personally evaluate the services and compliance status of any company they use to manage their waste.

VI. Lamp Ballast Management

Ballasts are the primary electrical components of mercury-containing fluorescent light fixtures and are generally located within the fixture under a metal cover plate. Before the U.S.E.P.A. banned the manufacture of PCBs in 1978, PCBs were commonly used in ballasts. All mercury containing lamp ballasts manufactured since 1978 that do not contain PCBs should be marked by the manufacturer with the statement "No PCBs." For ballasts manufactured prior to 1978, or for those that do not contain a statement regarding PCB content, you should assume that they contain PCBs. PCB-containing ballasts contain approximately 1 to 1.5 ounces of PCBs. If the ballast fails, PCBs may drip out of the fixture. If it does, measures should be taken to limit or avoid personal exposures.²

The best option for non-leaking PCB ballasts is to recycle them at a facility with EPA approval for recycling PCB ballasts. For a listing of PCB ballast facilities, see <http://www.epa.gov/epaoswer/hazwaste/pcbs/pubs/stordisp.htm#Ballasts>. Non-leaking PCB ballasts that are not recycled must be managed and disposed at a PCB disposal facility. Leaking PCB ballasts must be managed as PCB waste and disposed in a facility regulated under the Federal Toxic Substances Control Act (TSCA).

For PCB disposal information, refer to the EPA table “TSCA Disposal Requirements for Fluorescent Light Ballasts” (Appendix C) and/or contact EPA Region 8, Denver, CO, at 303-312-6027.

VII. Additional Information

Additional information on mercury-containing lamp management may be found on the USEPA’s web site at <http://www.epa.gov/osw/hazard/wastetypes/universal/lamps> .

VIII. References

¹Fluorescent Lamp Disposal and Recycling in EPA Region 2, A Guide For Businesses in NF, NY, PR and VI. 212-637-4145

²Fact Sheet Waste Lamps & Ballasts. State of Oregon Department Of Environmental Quality. Land Quality Division, Hazardous Waste Program, 811 SW 6th Avenue, Portland, OR Rick Volpel, 503-229-6753²

Appendix A

**WYOMING DEPARTMENT OF ENVIRONMENTAL QUALITY
SOLID AND HAZARDOUS WASTE DIVISION
Large Quantity Hazardous Waste Generator**

HW Determination		
Result	Section	Inspection Item
	Chap. 1, Section 262.11	Did the generator determine if the solid waste is a hazardous waste?
	HWRR Chap. 1 Sec 262 (262.11(b))	Does the facility generate solid waste(s) listed under Subpart D, Part 261 (any listed hazardous waste)?
	1 262 (262.11(b))	If yes, list wastes and quantities (include EPA HW#).
	1 262 (262.11(c))	Does the facility generate solid waste(s) that exhibit hazardous characteristics (corrosivity, ignitability, reactivity, TCLP)?
	1 262 (262.11(c))	If yes, list wastes and quantities (include EPA HW#).

	1 262 (262.11(c)(1))	If waste determination is by testing, did the generator use the test methods in Subpart C, Part 261 or equivalent? (If equivalent test methods were used, attach copy of equivalent method)
	1 262 (262.11(c)(2))	If waste determination is by process knowledge, did the generator apply process knowledge of the hazard characteristic in light of the materials or the processes used?
	Chap. 1, Sec. 260 (260.110)	Does the facility generate 'solvent-contaminated wipes'? [See definition of solvent-contaminated wipes under HWRR, Chapter 1, Sec. 260 (260.110)]
	1 261 (261.4)(18)	If so and they are making the claim that they are not SW or HW, then the generator must comply with the following provisions:
	1 261 (261.4)(18)(i)	The wipes are contained in non-leaking, closed containers that are labeled "Excluded Solvent-Contaminated Wipes" and contain free liquids should free liquids occur?
	1 261 (261.4)(18)(ii)	The wipes are accumulated for up to 180 days from the start date of accumulation for each container?
	1 261 (261.4)(18)(iii)	At the point of being transported for disposal, the wipes contain no free liquids?
	1 261 (261.4)(18)(iv)]	Free liquids removed from the wipes or container holding the wipes are properly managed in accord with the HWRR?
	1 261 [261 (261.4)(18)(v)] 1)	The following documentation is being maintained onsite: 1) Name and address of the landfill or combustor receiving the wipes (A); 2) Documentation that the 180 day accumulation time limit is being met (B); and (3) Description of process being used to ensure the wipes meet the no free liquids requirement at the point of being transported for disposal.(C)
	1 261 (261.4)(18)(vi)(A)&(B)	The wipes are sent for disposal to a municipal solid waste landfill or a hazardous waste landfill regulated under the Wyoming SWRR and HWRR, or to a municipal waste or other combustion facility regulated under the CAA or to a HW combustor, boiler or industrial furnace regulated under the Wyoming HWRR?
	1 262 (262.11)	Are there any other nonhazardous solid wastes generated by the generator? List wastes and types.
	NA	Does the facility recycle solvents?
	NA	Does the facility substitute nonhazardous solvents for hazardous solvents?
	NA	Are there additional initiatives beyond solvent substitution taken by the facility that could be considered voluntary pollution prevention?
	VRP	Is the facility aware of the Voluntary Remediation Program and the need to have a P2 Plan in-place to be eligible for the VRP?
	VRP	Does the facility have a P2 plan? If so, please briefly describe the plan that was presented to the inspector.

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EPA Identification Number

Result	Section	Inspection Item
	1 262 (262.12(a))	Does the facility have an EPA ID number?

	1 262 (262.12)	What is the EPA ID number?
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Hazardous Waste Manifest		
Result	Section	Inspection Item
	1 262	Does the waste generator ship hazardous waste offsite? If NO, do not fill out the rest of section but proceed to Pre-Transport Requirements. If YES, list the primary off-site facility.
	1 262	Does the waste generator use a hazardous waste manifest to ship the HW?
	1 262 (262.20(a))	Does the manifest include the generator's name?
	1 262 (262.20(a))	Does the manifest include the manifest document number?
	1 262 (262.20(a))	Does the manifest include the generator name, mailing address, and telephone number?
	1 262 (262.20(a))	Does the manifest include the generator EPA ID number?
	1 262 (262.20(a))	Does the manifest include the transporter's name and EPA ID #?
	1 262 (262.20(a))	Does the manifest include the facility name, address and EPA ID#?
	1 262 (262.20(a))	Does the manifest include an alternate facility name, address and/or EPA ID# for any receipt of full load rejections?
	1 262 (262.20(a))	Does the manifest include the following waste information required by DOT: shipping name, quantity (weight or volume), and containers (type and number)?
	1 262 (262.20(a))	Does the manifest include emergency information (special handling instruction, telephone number)?
	1 262 (262.20(a))	Are the most current and up-to-date manifest forms being used?
	1 262 (262.23(a)(3))	Does the generator maintain copies of the manifests?
	1 262 (262.23(a)(2))	Did the generator sign and date all manifests?
	1 262 (262.40)	Did the generator obtain a hand-written signature of acceptance from the initial transporter?
	1 262 (262.40)	Does the generator retain one copy of the manifest signed by the generator and initial transporter?
	1 262 (262.40)	Do returned copies of the manifest include the facility owner/operator signature and date of acceptance?
	1 262 (262.40)	Does the generator retain copies for at least 3 years?

	1 262 (262.22)	Does the generator receive a copy of the manifest from the TSD?
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Pre-Transport Requirements		
Result	Section	Inspection Item
	1 262 (262.30)	Does the generator package waste in accordance with DOT requirements? (See 49 CFR parts 173, 178, and 179)
	1 262 (262.31)	Does the generator follow DOT labeling requirements in accordance with 49 CFR 172?
	1 262 (262.32(d))	Does the generator mark each package in accordance with the 49 CFR 172 hazardous materials requirements?
	1 262 (262.32(b))	Before transporting HW or offering HW for transportation offsite, is each container of 110 gallons or less marked with the required HW label: "HAZARDOUS WASTE-Federal Law Prohibits Improper Disposal. If found, contact the nearest police or public safety authority or the US Environmental Protection Agency. Generator's name and Address _____, Manifest Document Number _____."?
	1 262 (262.33)	Does the generator have placards to offer to transporter or has the generator properly placarded each hazardous waste transportation vehicle with the appropriate placards in accord with the 49 CFR Part 172, Subpart F requirements?
	1 262 (262.34(a)(3))	Is the HW being stored for longer than 90 days?
	1 262 (262.34(a)(1)); 1 265 (265.174)	Does the generator inspect all containers for leakage and corrosion at least weekly?
	1 262 (262.34(a)(3))	Is each HW container being stored for less than 90 days, labeled/marked with the wording, "Hazardous Waste"?
	1 262 (262.34(a)(1)); 1 265 (265.176)	Does the generator locate any containers holding ignitable or reactive waste at least 50 feet from the facility property line?
	1 262 (262.34(a)(2))	Is each container clearly dated?
	1 262 (262.34(a)(1)); 1 265 (265.171)	If the HW container is leaking, does the generator transfer the contents to a container in good condition or manage the waste in another acceptable way?
	1 262 (262.34(a)(1)); 1 265 (265.172)	Is the HW container compatible with the HW being stored?
	1 262 (262.34(a)(1)); 1 265 (265.173)(a)	Is there evidence the HW container(s) is closed during storage, except when it is necessary to add or remove waste?
	1 262 (262.34(a)(1)); 1 265 (265.177)	Are incompatible wastes being placed in the same container, are incompatible wastes in other containers being stored next to each other, or is incompatible waste being placed in an unwashed container that formerly held an incompatible waste?
	1 262 (262.34(c)(i)(iii))	Is the hazardous waste container being stored in the satellite accumulation area, properly labeled with the wording, "Hazardous Waste" or other applicable wording?
	1 262 (262.34(c))	Is the maximum amount of hazardous waste being stored in the satellite accumulation area, one 55 gallon drum or one quart of acute HW, and is the drum/container in the hazardous waste satellite accumulation area, located at or near the waste generating process or in control of the waste generating process operator?

	1 262 (262.34(c)(1)(i))	Is the HW container in good condition, is the container compatible with the HW being stored, and is the container closed during storage unless it is necessary to add or remove waste?
	1 262 (262.34(c)(2))	Once the 55-gallon limit is met, has the drum/container in the hazardous waste satellite accumulation area been moved to the main storage area within 3 days and dated?
	1 262 (262.34(a)(1)(i))	Does the HW container in the satellite accumulation area comply with items 265.171(leaking container), 265.172(container compatibility), and 265.173(a)(closed container)?
	1 262 (262.34(a)(1)(ii))	Is HW being stored in tanks? If so, does the generator comply with the HWRR, Section 265.201, Tank Systems requirements? Use specific checklist to evaluate.
	1 262 (262.34(a)(1)(iii)); 1 265 (265.440)	Does the HW generator store waste on drip pads? If so, does the generator comply with the drip pad requirements? Use specific checklist to evaluate (See Drip Pad definition in HWRR, Chapter 1, Section 260 (260.110) Only applicable to wood preserving facilities that use drip pads.)
	1 262 (262.34(a)(1)(iv)); 1 265 (265.1100)	Does the HW generator store HW in containment buildings? If so, does the generator comply with the HW containment building requirements? Use specific checklist to evaluate.

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Preparedness & Prevention

Result	Section	Inspection Item
	1 262 (262.34(a)(4)); 1 265 (265.31)	Is the facility maintained and operated to prevent fires, explosions, and sudden and non-sudden releases of HW to air, soil or surface water that could impact human health and the environment?
	1 262 (262.34(a)(4)); 1 265 (265.32)(c)	Does the facility have the following required equipment unless none of the facility hazards would require the equipment: (a) internal communications or alarm system; (b) telephone or hand held two-way radio capable of summoning emergency assistance; (c) portable fire extinguishers, spill control and decon equipment; (d) water at adequate volume and pressure or foam equipment, auto sprinklers, or water spray systems?
	1 262 (262.34(a)(4)); 1 265 (265.33)	Has this equipment been tested and maintained to assure proper operation?
	1 262 (262.34(a)(4)); 1 265 (265.34)	Whenever HW is being poured, mixed, spread or handled, is there evidence of immediate access to an internal alarm or communication device unless none of the hazards posed by the facility require any of the emergency equipment? If there is ever just one employee on the premises, does this also apply unless none of the hazards posed by the facility require any of the emergency equipment?
	1 262 (262.34(a)(4)); 1 265 (265.35)	Is there sufficient aisle space to allow unobstructed movement of personnel and equipment?
	1 262 (262.34(a)(4)); 1 265 (265.37)	Has the owner/operator made arrangements to familiarize police, fire departments and emergency response personnel with facility layout, HW properties, working areas, entrance roads inside facility and possible evacuation routes as appropriate, for the type of waste handled, and the potential need for the services of these organizations, to familiarize them with the characteristics of the facility?
	1 262 (262.34(a)(4)); 1 265 (265.37)(a)(2)	In the case that more than one police or fire department might respond, is there a designated authority? If YES, name the primary authority.
	1 262 (262.34(a)(4)); 1 265 (265.37)(a)(3)	Does the owner/operator have phone numbers of and agreements with State emergency response teams, emergency response contractors, and equipment suppliers as appropriate, for the types of waste(s) handled, and the potential need for the services of these organizations?
	1 262 (262.34(a)(4)); 1 265 (265.37)(a)(4)	Has the owner/operator arranged to familiarize local hospitals with the properties of hazardous waste handled and types of injuries that could result from fires, explosions, or releases at the facility, as appropriate for the type of waste(s) handled and the potential need for the services of these organizations?
	1 262 (262.34(a)(4)); 1 265 (265.37)(b)	Where State or local authorities decline to enter into the arrangements described under Section 5(h)(i), is this entered in the operating record?

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Personnel Training Requirements

Result	Section	Inspection Item
	1 262 (262.34(a)(4)); 1 265 (265.16(a)(1))	Do facility personnel successfully complete classroom or on-the-job training addressing compliance with the large quantity hazardous waste generator requirements?
	1 262 (262.34(a)(4)); 1 265 (265.16(a)(2))	Is the HW program directed by a person trained in HW procedures and instruction that teaches facility personnel the management procedures relevant to the positions in which they are employed?
	1 262 (262.34(a)(4)); 1 265 (265.16(a)(3))	Does the training program ensure facility personnel are able to effectively respond to emergencies by familiarizing them with emergency procedures, equipment, systems and the following where applicable: procedures for using, inspecting, repairing and replacing emergency and monitoring equipment; key parameters for auto waste feed cut-off systems; communication or alarm systems; fires & explosions response; groundwater contamination incidents; and shutdown of operations?
	1 262 (262.34(a)(4)); 1 265 (265.16(b))	Do personnel successfully complete the required training specified under Items 16-18 within 6 months after the date of employment or position assignment, whichever is later and does their work in these areas not commence until they have completed the training requirements?
	1 262 (262.34(a)(4)); 1 265 (265.16(c))	Do the hazardous waste personnel take part in an annual review of the training described under 265.16(a)(1)-(3)?
	1 262 (262.34(a)(4)); 1 265 (265.16(d)(1)&(2))	Are the following documents/records being kept at the facility: Job title and written job description of each position?
	1 262 (262.34(a)(4)); 1 265 (265.16(d)(3))	Are the following training documents/records being kept at the facility: Description of type and amount of training?
	1 262 (262.34(a)(4)); 1 265 (265.16(d)(4))	Are there records being kept documenting that the required initial and refresher HW training has been given to and completed by facility personnel?
	1 262 (262.34(a)(4)); 1 265 (265.16(e))	Is there evidence that training records for current personnel are being kept until facility closure and for former employees, for 3 years?

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Recordkeeping & Records

Result	Section	Inspection Item
	1 262 (262.40(a))	Does the generator keep the following reports for at least three years: Manifests or signed copies from designated facilities?
	1 262 (262.40(b))	Does the generator keep the following reports for at least three years from the report due date: Biennial Reports and Exception Reports?
	1 262 (262.40(c))	Does the generator keep copies of test results, waste determinations or other determinations for at least 3 years from the date the waste was last sent to onsite or off-site treatment, storage or disposal?
	1 262 (262.41)	Has the generator submitted the biennial report by March 1 of every even numbered year if HW is shipped offsite to a treatment, storage or disposal facility within the US?
	1 262 (262.42)	Did the waste generator who generates greater than 1,000 kg/month HW, contact the transporter or TSD within 35 days of the initial transporter acceptance date, if they did not receive a copy of the waste shipment manifest with signature from the designated facility?
	1 262 (262.42(a)(2))	Did the waste generator of greater than 1,000 kg/month, submit the required Exception Report within 45 days of the date the waste was accepted by the initial transporter for each HW shipment where they did not receive the manifest with the signature of the owner/operator of the designated facility? If so, does the report contain the following: 1) Legible copy of the specific manifest for which the generator has not confirmation of delivery; 2) Cover letter signed by the generator signed by an authorized representative explaining efforts to relocate the HW and the results?

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Special Conditions

Result	Section	Inspection Item
	1 262 (262.50)	Has the primary exporter received from or transported to a foreign source any hazardous waste?
	1 262 (262.53)	If yes, has notice been filed with the Regional Administrator and does the notice contain all of the required items listed under 262.53?
	1 262 (262.54)	Does the primary exporter comply with the manifest requirements and the specific provisions of 262.54? (See HWRR)
	1 262 (262.55)	Does the generator comply with the special requirements contained under 262.55? See HWRR.
	1 262 (262.56)	Does the primary exporter comply with the requirements under 262.56(a)? See HWRR
	1 262 (262.57)	Does the primary exporter comply with the recordkeeping requirements listed under 262.57?
	1 262 (262.60)	Does the hazardous waste importer comply with the requirements listed under 262.60, Subpart F? See HWRR.

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Land Disposal Restrictions

Result	Section	Inspection Item
	1 268	<u>LDR General Requirements</u>
	1 268 (268.7)(a)(1)	Has the generator determined whether the hazardous waste needs to be treated before it can be land disposed? Was this determination made by either testing the waste or using knowledge of the wastes? Note: The generator can also allow the TSD to make this determination. [71 FR 16862] See Notice Requirement-TSD Waste Treatment Determination item for specific Notice requirements if TSD makes the determination.
	1 268 (268.7)(a)(2)	If the waste or contaminated soil does not meet the treatment standard, did the waste generator send the required one-time written notice with the initial shipment of waste, to each TSD receiving the waste, and place the required copy in the file? Note: Only one notice is required for the first initial waste shipment unless the waste constituents change.
	1 268 (268.7)(a)(2)	Did the one-time written notice contain the following required items: a)EPA HW numbers and manifest number of first shipment? b)The constituents of concern for listed wastes and underlying hazardous constituents in characteristic HW unless all constituents will be treated, then there is no need to put all of them on the notice? c)Applicable wastewater/nonwastewater category? d)Waste analysis data (when applicable, i.e. if knowledge is not used)? e)For hazardous debris, when treating with the alternative treatment technologies, the contaminants subject to treatment and an indication the contaminants are being treated to comply with 268.45? f)For contaminated soil, the constituents subject to treatment and the following statement, "This contaminated soil (does/does not) contain listed HW and (does/does not) exhibit a HW characteristic and (is subject to/complies with the soil treatment standards as provided by 268.49(c)or the universal treatment standards)"?
	71 FR 16862	If the generator allows the TSD to make the treatment determination, does the LDR notice contain only the following items: a) waste code? b) manifest number of the first waste shipment? c) the following statement, "This hazardous waste may or may not be subject to the LDR treatment standards. The treatment facility must make the determination?"
	1 268 (268.7)(a)(8)	Does the generator keep a copy of all required notices, certifications, waste analysis data and other required documentation under Section 268, for 3 years from the date the subject waste was sent offsite to the TSD?
	1 268 (268.7)(a)(2)(i)	For contaminated soil, was the required certification statement included on the notice and signed by an authorized representative: "I certify under penalty of law that I personally have examined this contaminated soil and it(does/does not)contain listed HW and(does/does not)

		exhibit a characteristic of HW and requires treatment to meet the soil treatment standard as provided by 268.49(c) of the Wyoming HWRR”?
	1 268	<u>HW or HW Soil-Treatment Standard Met</u>
	1 268 (268.7)(a)(3)	Did the HW or HW contaminated soil meet the treatment standard at the original point of waste generation? If so, did the waste generator send with the initial shipment of waste to each TSD, the required one-time written notice to each TSD receiving the waste and place the required copy in the file?
	1 268 (268.7)(a)(3)(i)	Did the one-time notice for contaminated soil that meets the treatment standard, contain the following required items: a) EPA HW numbers and manifest number of first shipment? b)The constituents of concern for listed wastes and underlying hazardous constituents in characteristic HW unless all constituents will be treated, then there is no need to put all of them on the notice? c)Applicable wastewater/nonwastewater category? d)Waste analysis data (when applicable, i.e. if knowledge is not used)? e)Does the one-time written notice contain the following certification: “I certify under penalty of law that I personally have examined and am familiar with the waste through analysis and testing or thorough knowledge of the waste to support this certification that the waste complies with the treatment standards specified in Section 268, Subpart D of the Wyoming Hazardous Waste Management Rules and Regulations. I believe that the information I submitted is true, accurate, and complete. I am aware that there are significant penalties for submitting a false certification, including the possibility of a fine and imprisonment”?
	1 268 (268.7)(a)(3)(ii)	If the facility generates HW contaminated soil that meets the treatment standard, did the generator send the required one-time written notice to each facility receiving the waste and place a copy in the file? The notice must contain the information listed under column 268.7(a)(3) of the Generator Paperwork Requirements Table under 268.7(a)(4).
	1 268 (268.7)(a)(3)(iii)	If the waste meeting the treatment standard changes, did the generator send a new notice and certification to the receiving facility and place a copy in their files? Note: Hazardous debris that is excluded from the definition of HW, are not subject to these requirements.
	1 268	<u>Waste Does Not Meet Treatment Standard</u>
	1 268 (268.7)(a)(4)	In the case where the generator’s hazardous waste or contaminated soil does not meet the treatment standards but it is allowed to be land disposed as a result of a case-by-case extension, disposal in a no-migration unit or is the result of a national capacity or case-by-case capacity variance, did the waste generator send the required notice?
	1 268 (268.7)(a)(4)	Does the one-time notice and certification contain the following: a)EPA HW numbers and manifest number of first shipment? b)The following statement: “This waste is not prohibited from land disposal”? c)Waste analysis data, when applicable? d)Date the waste is subject to the prohibition? e)For hazardous debris, when treating with the alternative treatment technologies, the contaminants subject to treatment and an indication the contaminants are being treated to comply with Section 4(f)?
	1 268	<u>Treatment In Onsite Tanks, Containers, Containment Buildings</u>
	1 268 (268.7)(a)(5)	If the waste generator is managing and treating prohibited waste or contaminated soil in tanks, containers, or containment buildings under Chapter 8, Section 3(e), does the generator develop and follow a waste analysis plan describing the procedures to comply with the treatment standards? Is a copy of the plan onsite?
	1 268 (268.7)(a)(5)(i)	Is the plan based on a detailed chemical and physical analysis of a representative sample of the prohibited waste being treated and includes all information necessary to treat the waste, including the selected testing frequency?
	1 268 (268.7)(a)(5)(ii)	Is a copy of the plan being kept on file and is available for review?
	1 268 (268.7)(a)(5)(iii)	If the waste generator is managing and treating prohibited waste or contaminated soil in tanks, containers, or containment buildings under 262.34, does the generator comply with the notification requirements contained under checklist item 268.7(a)(3)(i)&(ii)?
	1 268	<u>Waste, Contaminated Soil Restricted</u>

	1 268 (268.7)(a)(6)	If the generator has determined that the waste or contaminated soil is restricted based solely on knowledge of the waste or by testing the waste or a waste extract, does the generator have on file, all supporting data to make the determination or the waste analysis data used to make the determination?
	1 268	<u>Prohibited Waste Exclusion</u>
	1 268 (268.7)(a)(7)	If the generator is managing a prohibited waste that is excluded from the HW or waste material definition or is exempted under the HWRR subsequent to the point of waste generation(including CWA or UIC exempt wastes), does the generator have on file, a copy of the one-time notice that describes the waste generation, subsequent exclusion or exemption from the definition of HW or waste material or CWA exemption, and the disposition of the waste? Does the generator first make claim that the characteristic hazardous waste are no longer hazardous?
	1 268	<u>Lab Packs</u>
	1 268 (268.7)(a)(9)(i)	Does the generator manage lab packs that contain HW? If so, does the generator wish to use the alternative treatment standard in 268.42(c)? If so, does the generator submit a notice containing the following information: a)EPA HW numbers and manifest number of first shipment, and, b)The following certification: "I certify under penalty of law that I personally have examined and am familiar with the waste and that the lab pack contains only wastes that have been excluded under Part 268, Appendix IV of the Wyoming Hazardous Waste Rules & Regulations and that this lab pack will be sent to a combustion facility in compliance with the alternative treatment standards for lab packs at 268.42(c) of the Wyoming Hazardous Waste Rules & Regulations. I am aware that there are significant penalties for submitting a false certification, including the possibility of a fine and imprisonment"?
	1 268 (268.7)(a)(9)(ii)	If the lab pack or receiving facility changes, does the generator send and keep in the file, a new notice and certification containing all required information listed under 268.7(a)(9)(i)?
	1 268 (268.7)(a)(9)(iv)	For lab packs, does the generator comply with the recordkeeping requirements of 13 1(g)(i)(F) and the excluded prohibited waste requirements listed under 13 1(g)(i)(G)?

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Contingency Plan & Emergency Procedures

Result	Section	Inspection Item
	1 262 (262.34(a)(4)); 1 265 (265.51)	Is a contingency plan maintained at the facility? If so, were the provisions of the plan carried out every time there is a fire, explosion or HW release or constituents that could threaten human health or the environment?
	1 262 (262.34(a)(4)); 1 265 (265.52)(a)	Does the contingency plan describe the actions facility personnel must take in response to fires, explosions, or any sudden or non-sudden release of HW or HW constituents to air, soil or surface water required under the contingency and emergency procedures requirements?
	1 262 (262.34(a)(4)); 1 265 (265.52)(b)	Is the contingency plan a revised SPCC Plan? If so, has it been amended to include HW provisions that are sufficient to comply with the requirements?
	1 262 (262.34(a)(4)); 1 265 (265.52)(c)	Does the Contingency Plan include the following required item: Arrangements with local emergency response organizations?
	1 262 (262.34(a)(4)); 1 265 (265.52)(d)	Does the Contingency Plan include the following required item: The emergency response coordinator's name(s), phone number(s), and address(es)? If more than one is listed, is one listed as primary and the others listed in the order of importance as alternates?
	1 262 (262.34(a)(4)); 1 265 (265.52)(e)	Does the Contingency Plan include the following required item: A list of all emergency equipment at the facility and include descriptions of the equipment?
	1 262 (262.34(a)(4)); 1 265 (265.52)(f)	Does the Contingency Plan include the following required item: An evacuation plan?
	1 262 (262.34(a)(4)); 1 265 (265.51)(b)	Have the provisions of the contingency plan been carried out immediately whenever there has been a fire, explosion or hazardous waste/constituent release that could threaten human health and environment?

	1 262 (262.34(a)(4)); 1 265 (265.53)(b)	Have copies of the contingency plan been submitted to all local police departments, hospitals, and State and local emergency response teams?
	1 262 (262.34(a)(4)); 1 265 (265.54)	Has it been necessary to amend the current contingency plan? If so, was it amended for any of the following reasons: (i) revised regulations; (ii) plan fails in emergency; (iii) facility changes in way materially that increases the potential for emergency; (iv) list of emergency coordinators changes; or list of emergency equipment changes.
	1 262 (262.34(a)(4)); 1 265 (265.55)	Is there an emergency coordinator available onsite or on call at all times?
	1 262 (262.34(a)(4)); 1 265 (265.56)	Has the emergency coordinator taken the following procedures during an imminent or actual emergency situation: (A) Activate internal facility alarms or communication systems, where applicable, to notify all facility personnel, and (B) Notified appropriate State or local agencies if their help is needed?
	1 262 (262.34(a)(4)); 1 265 (265.56)(b)	In the case of a release, has the emergency coordinator immediately identified the character, exact source, amount, and real extent of any released materials?
	1 262 (262.34(a)(4)); 1 265 (265.56)(c)	Did the emergency coordinator make the required hazard assessment resulting from the release including a consideration of the direct and indirect effects of the release?
	1 262 (262.34(a)(4)); 1 265 (265.56)(d)(2)	If the release can impact human health & environment, did the emergency coordinator report the following: (A) If evacuation, immediately notify local authorities; (B) Has the on-scene coordinator or National Response Center been notified. Also, has WDEQ been notified with a report submitted consisting of the following required items: (I) Name/phone number of reporter; (II) Facility name/address; (III) Time and type of incident; (IV) Name/quantity of material involved if known; (V) Extend of injuries, if any; and (VI) the possible hazards to human health & environment outside the facility?
	1 262 (262.34(a)(4)); 1 265 (265.56)(e)	Did the emergency coordinator take all reasonable measures necessary to ensure that fires, explosions and releases do not occur, recur or spread to other HW at the facility? The measures must include stopping processes and operations, collection and containing released waste, and removing or isolating containers.
	1 262 (262.34(a)(4)); 1 265 (265.56)(f)	If operations are stopped in response to fire, explosion or release, did the emergency coordinator monitor for leaks, pressure buildup, gas generation, or ruptures in valves, pipes or other equipment where this is appropriate?
	1 262 (262.34(a)(4)); 1 265 (265.56)(g)	Did the emergency coordinator provide for treating, storing, or disposing of recovered waste, contaminated soil or surface water, or any other material resulting from the release, fire, or explosion?
	1 262 (262.34(a)(4)); 1 265 (265.56)(h)(1)&(2)	Does the emergency coordinator ensure that incompatible wastes are treated, stored or disposed until cleanup is completed and all emergency equipment is cleaned and fit for future use before operations resume?
	1 262 (262.34(a)(4)); 1 265 (265.56)(i)	Did the owner/operator notify the Director, and appropriate state and local authorities that the facility is in compliance with 265.56(h) before operations are resumed?
	1 262 (262.34(a)(4)); 1 265 (265.56)(j)	Does the owner/operator note in the operating record the time, date and details of any incident requiring contingency plan implementation? Has the owner/operator submitted the required written report to the Director containing the following items: (A) Name, address and phone number of the owner/operator; B) Facility name, address and phone number; C) Date, time and incident type; D) Quantity and name of materials involved; E) Extent of injuries, if any; F) Human health & environment assessment of actual or potential hazards if applicable; G) Estimated quantity and disposition of recovered material that resulted from the incident?
	1 262 (262.34(a)(4)); 1 265 (265.31)	Is the facility being operated to minimize the possibility of fire, explosion or any sudden or non-sudden hazardous waste release that could threaten human health or environment?

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Appendix B

**WYOMING DEPARTMENT OF ENVIRONMENTAL QUALITY
SOLID AND HAZARDOUS WASTE DIVISION
Universal Waste Checklist Abbreviated**

Basic Universal Waste Generator Requirements		
Result	Section	Inspection Item
	1 273 (273)	<u>Does the waste generator manage any of the following types of universal waste:</u> <u>Waste batteries? Waste pesticides? Waste mercury-containing</u> <u>equipment? Mercury containing lamps?</u>
	1 273 (273.15)(a)(SQ)/(273.35)(a)(LQ)	Does the waste handler accumulate waste for longer than one year from the date the waste is generated or received from another handler? If so, was the accumulation solely for accumulation of such quantities of universal waste as necessary to facilitate the proper recovery, treatment, or disposal?
	1 273 (273.9)	Is the universal waste generator a SQ or LQ handler of universal waste? LQ handler = accumulates 5,000 kg (11,000 lbs.) or more total of universal waste (batteries, pesticides, mercury-containing equipment, or lamps) at any one time or. NOTE: If LQ handler, please use the Universal Waste Checklist.
	1 273 (273.13)(d)(1)/(273.33)(d)(1)	Are the universal waste storage containers/packages: structurally sound, adequate to prevent breakage, compatible with the contents of the wastes, remain closed, and do the containers lack evidence of spillage, leakage or damage that could cause leakage under reasonably foreseeable conditions?

	1 273 (273.14)/(273.34)	Does the universal waste handler properly label the universal waste or container with the following wording: Universal Waste- Battery(ies), Waste Battery(ies), Used Battery(ies), Universal Waste Pesticide(s), Waste Pesticide(s), Universal Waste Mercury-Containing Equipment, Waste Mercury-Containing Equipment, Used Mercury-Containing Equipment, Universal Waste- Mercury Thermostat(s), Waste Mercury Thermostat(s), Used Mercury Thermostat, Universal Waste--Lamps, Waste Lamps, or Used Lamps.
	1 273 (273.15)(c)(1)/(273.35)(c)(1)	Does the universal waste handler properly demonstrate the length of time the waste has been accumulated from the date it becomes a waste or is received by one of the following methods: marking/labeling waste container with earliest date, marking/labeling each universal waste item with earliest date, maintaining inventory system onsite with earliest date, placing waste in accumulation area and identifying earliest date became waste, or any other method that clearly demonstrates the length of time?
	1 273 (273.17)(a)&(b)/(273.37)(a)&(b)	Has the universal waste handler immediately contained all releases of wastes and residues? Did the handler determine if the waste was hazardous and if so, was the waste handled in accord with the HWRR?
	1 273 (273.13)(c)(3)(iii)/(273.33)(c)(3)(iii)	If any of the cleanup residues from managing mercury ampules is classified as solid waste, are the wastes being managed in accord with the SWRR?
	1 273 (273.16)/(273.36)	Has the universal waste handler informed all employees managing universal waste concerning the proper handling and emergency procedures?
	1 273 (273.18)(b)/(273.38)(b)	Does the universal waste handler self-transport universal waste offsite? If so, please verify compliance with the Section 4 Transporter Requirements contained in the Universal Waste Checklist.
	1 273 (273.18)(c)/(273.38)(c)	If the universal waste meets the definition of hazardous material, does the generator comply with the DOT requirements for packaging, labeling, marking, placarding and shipment papers?
	1 273 (273.9)	Does the facility meet the definition of a Universal Waste Destination Facility? If so, use the Universal Waste Checklist to verify compliance. A universal waste destination facility is a facility that treats, disposes of, or recycles a particular category of universal waste.
	1 273 (273.18)(a)/(273.38)(a)	Did the universal waste handler ship the universal wastes to another universal waste handler or destination facility and if so, does the handler comply with the applicable requirements? Use the Universal Waste Checklist to confirm.

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Appendix C

TSCA Disposal Requirements for Fluorescent Light Ballasts

PCB Capacitor	PCB Potting Material	Labeling, Transportation and Manifesting for Disposal	Disposal Reference in §761	Disposal Options
"No PCBs" label		Not regulated under TSCA	NA	Not regulated under TSCA
None	< 50 ppm	Not regulated under TSCA	NA	Not regulated under TSCA
Intact and non-leaking or none	≥ 50 ppm	Is a PCB bulk product waste. No labeling is	.50(b)(2)(ii) .62(a)-(c)	TSCA incinerator, TSCA/RCRA Landfill, Alternate

		required. Manifesting is required for disposal in accordance with §761.62(a); is not required under §761.62(b); may be required under §761.62(c).		Destruction Method, Decontamination (§761.65(d) storage approval may be required), Coordinated approval, State approved landfill (leach test required), Risk-based approval
Intact and non-leaking	< 50 ppm	No labeling or manifesting required	.50(b)(2)(i) .60(b)(2)(ii)	As municipal solid waste 40 CFR 761 subpart D options
Leaking	< 50 ppm or ≥ 50 ppm	Disposal as PCB bulk product waste. No labeling is required. Manifesting is required for disposal in accordance with §761.62(a); may be required under §761.62(c).	.62(a) or (c)	TSCA Incinerator TSCA/RCRA landfill Alternate Destruction Method Decontamination (§761.65(d) storage approval may be required) Coordinated approval Risk-based approval