



Minnesota
Pollution
Control
Agency

Small Business
Assistance
Program

Environmental Audit Checklist – Fluorescent and HID Lamps

Environmental Audits/General/#1.38/November 2000

Date of Evaluation	
Company	
Completed by/Title	

Answer each question unless specifically directed otherwise.

Minnesota Pollution Control Agency (MPCA) environmental audit checklists are designed to assist businesses by providing a low cost way of reviewing compliance with Minnesota's environmental laws and rules. Because the laws and rules are numerous and often complicated, this checklist cannot be a complete guide to your legal obligations. You may have obligations that are not covered on this checklist. If you have questions regarding this checklist, your obligations, or conditions you discover when you evaluate your business operations, call the Small Business Assistance Program (SBAP) at (651) 282-6143 or 1 (800) 657-3938.

For additional information on pollution prevention and waste minimization contact the Minnesota Technical Assistance Program (MnTAP) at (612) 624-1300 or 1 (800) 247-0015.

Fluorescent lamps and high-intensity discharge (HID) lamps contain mercury. These lamps are banned from solid waste disposal in Minnesota. HID lamps include mercury vapor, metal halide, and high-pressure sodium lamps. When the lamps are discarded in solid waste, mercury is released to the environment and enters the food chain.

1) Does your business use fluorescent or HID lamps?

- YES
- You need to complete this checklist.
 - Call the Small Business Assistance Program (SBAP) to request Hazardous Waste Fact Sheet #4.20, *Managing Used Fluorescent Lamps, High-Intensity Discharge Lamps and PCB Ballasts*, or find it on the Internet at <http://www.pca.state.mn.us/waste/pubs/4-20.pdf>.
- NO You do not need to complete this checklist. However, we recommend that you use high efficiency lamps. They save money and energy.

Lamp Handling and Storage

2) Do you place waste fluorescent or HID lamps in the trash?

- YES
- Stop. It is illegal to place waste fluorescent or HID lamps in the trash.
 - Refer to Hazardous Waste Fact Sheet #4.20, *Managing Used Fluorescent Lamps, High-Intensity Discharge Lamps and PCB Ballasts* for detailed information on the proper storage and handling of waste lamps.
- NO You are meeting this requirement.



3) Do you break or crush used lamps?

YES

- The Minnesota Pollution Control Agency (MPCA) strongly recommends that you stop any breaking or crushing of used lamps.
- The MPCA strongly discourages the use of portable or barrel-top crushers at this time.
- There is a potential for mercury releases that could cause serious worker health and safety hazards.
- Some crushing processes are considered a form of treatment; a hazardous waste treatment permit could be required. This permitting process is extremely burdensome and should be avoided.

NO Continue to the next question.

Note: Call the Occupational Safety and Health Administration (OSHA) Consultation office, at (651) 297-2393 or (800) 657-3776, for answers to questions about worker health and safety hazards.

4) Do you store used lamps?

YES

- You must store all used lamps in CLOSED containers.
- Pack them carefully in a manner that will prevent breakage during storage and transportation. You can re-use the boxes used to deliver the new lamps.
- Do not tape lamps together. This makes it more difficult for the recycler to handle them.
- You must mark the storage area. You can use the words "Hazardous Waste - Used Lamps" or "Used Lamps for Recycling".
- For any broken lamps, you must mark the CLOSED container "Broken Fluorescent Lamps" and either send them to a recycling facility or manage them according to hazardous waste rules. If you manage them as a hazardous waste, you need to complete the appropriate Hazardous Waste Audit Checklist depending on your generator size.

Call SBAP or see http://www.pca.state.mn.us/programs/audit_p.html#hazwaste.

NO Continue to the next question.

Note: When you manage spent fluorescent lamps properly you help keep mercury, a toxic metal, out of the environment.

5) Do you ship used lamps to a consolidation site?

YES

- Call the consolidation site to find out who will be transporting your lamps and to which recycling facility they will take them.
- Call the recycling facility to make sure the transporter has a contract with that facility.
- Call the MPCA Metro District/Major Facilities, at (651) 297-8618 to make sure that recycling facility has a Compliance Agreement form filed with the MPCA or metro county.

NO Continue to the next question.

6) Do you store waste lamps for other businesses?

YES

- If you store fewer than 1,000 lamps for other businesses, you must complete a Notification of Lamp Activity form that will ask questions about your lamp activity (name and location of storage facility, number of lamps stored, length of storage time, etc). SBAP can provide this form.
- If you store 1,000 or more lamps from other businesses, you must:
 - * obtain a written agreement with a lamp recycling facility certifying that the facility will accept lamps from you, and the rate at which the facility will accept lamps from you; and
 - * enter into a storage compliance agreement with the MPCA or metro county.

NO Continue to the next question.



Ballast Storage

7) Are the ballasts on your fluorescent lamps marked indicating they do not contain PCBs?

YES Ballasts that do not contain PCBs may be managed as an industrial solid waste or recycled.

NO If they are not marked, assume they contain PCBs and recycle them. Follow the guidelines in Hazardous Waste Fact Sheet #4.20, *Managing Used Fluorescent Lamps, High-Intensity Discharge Lamps and PCB Ballasts*

8) If you have non-leaking ballasts that are not marked indicating they contain no PCBs, do you complete the following steps?

- Store these ballasts in a container that will hold the waste at all times.
 - * For on-site storage, place a small number of ballasts in small closed containers such as coffee cans or ice cream pails with tight fitting covers.
 - * For shipping, place the ballasts in Department of Transportation (DOT)-approved containers.
- Mark the storage and shipping containers with the words "PCB Ballasts for Recycling" or "Hazardous Waste PCB Ballasts".
- Inspect the storage area regularly to ensure ballasts/containers are not leaking.
- Repackage any leaking ballasts/containers and manage them according to the guidance that follows in question 9.
- Ship this waste off site within 180 days of accumulating 1100 pounds (500 kilograms).

YES You meet these requirements.

NO You must meet these requirements.

9) If you have leaking ballasts that are not marked indicating they contain no PCBs, do you complete the following steps?

- Wear protective clothing as follows:
 - * Wear goggles, gloves, apron (and boots if needed) made from neoprene, butyl or nitrile, and a chemical cartridge respirator with an organic vapor cartridge.
- Clean all nonabsorbent surfaces as follows:
 - * Remove spilled PCB oil with a rag, paper towel, or by scraping with a putty knife.
 - * Then, wipe twice with a rag containing mineral spirits, kerosene, turpentine, or rubbing alcohol. (These are flammable or combustible liquids.)
 - * Then, wipe once with a full-strength solution of a trisodium phosphate-based cleaner such as Soilex™ or Spic'n Span™.
- Wrap all PCB-contaminated materials (the leaking ballasts, rags, gloves, absorbent materials like carpet) in newspaper and place in double plastic bags.
- Store in DOT-approved containers.
- Label as PCB-contaminated hazardous waste, using a 6-inch yellow PCB label, and ship via hazardous waste transporter to a hazardous waste facility within one year.
- Notify the National Response Center at (800) 424-8802 within 24 hours, if one pound or more of PCBs (the amount in 12-16 ballasts) is released.

YES You meet these requirements.

NO You must meet these requirements.

Note:

OSHA standards include requirements addressing:

- *personal protective equipment.*
(Respirator requirements can be complex.)
- *flammable and combustible liquids.*

Call the OSHA Consultation office, at (651) 297-2393 or (800) 657-3776, for further information about these requirements.



10) Do you transport lamps or non-leaking ballasts to a recycling facility or a consolidation site located within Minnesota?

YES

- You are not required to ship with a licensed hazardous waste hauler.
- You may transport the waste in your business vehicle. If you do, follow Department of Transportation (DOT) hazardous materials requirements.
- A manifest is not required. Use a waste-tracking invoice containing the following information.
 - Date of shipment
 - Location from which the waste was shipped
 - Destination location
 - Amount of waste shipped (number of lamps, number or pounds of ballasts)

NO Continue this checklist.

Hint: If you ship waste lamps with a hauler, consider coordinating storage and transportation of lamps with businesses in the area to reduce the pickup charge. Besides saving money, less driving means less pollution.

11) Do you ship lamps or non-leaking ballasts out of Minnesota?

YES

- If you ship to a hazardous waste disposal facility you must use a hazardous waste manifest and a licensed hazardous waste transporter.
- If you ship to a recycling or storage facility, and the lamps/ballasts do not pass through a state that requires a manifest, you may use a waste tracking invoice. Follow the guidance in question 10.

NO Continue this checklist.

Lamp/Ballast Record Keeping Requirements

12) Do you retain these records on site for at least three years?

- Number of lamps removed from service during each calendar year
- Waste tracking invoices or manifests for ballasts and lamps
- Storage location of the lamps, if the lamps are stored off site

(For protection from future liabilities, we recommend that you never discard these records.)

YES You meet these requirements.

NO You must meet these requirements.

Hint: Have your shop lighting evaluated by your local utility provider. With advances in technology and by using new bulbs and electronic ballasts, your investment will pay off in smaller electric bills and a brighter workplace.