



SAFETY / ENVIRONMENTAL TOOLBOX TRAINING – PROPER MANAGEMENT OF USED BALLASTS

SUPERVISOR INSTRUCTIONS:

- Use toolbox trainings to encourage safety / environmental discussions during monthly meetings with employees
- Submit the employee sign-in sheet to your designated administrative assistant /training coordinator as a record of training

Most fluorescent light fixtures contain ballasts. Ballasts are devices that regulate the flow of electricity to the lamps. Some ballasts contain regulated material: circuit boards (e-waste), PCBs (polychlorinated biphenyls- a toxic chemical), and batteries. For these reasons some ballasts are considered regulated waste and must be carefully evaluated prior to being discarded. Ballasts that do not contain circuit boards, batteries or PCBs are not considered regulated waste and should be delivered to the scrap metal roll off at the Recycling Plant.



Environmental and Safety compliance inspections of Campus Services' spaces are routinely conducted by Emory's Environmental Health and Safety Office. Proper disposal practices of ballasts are audited as part of these inspections to ensure that Emory is in compliance with environmental regulations and that Emory is audit ready in the event we are inspected by the United States Environmental Protection Agency (EPA) or the Georgia Environmental Protection Division (GA EPD).

Types of Ballasts

PCB Ballasts

Ballasts manufactured before 1979 may contain PCBs. PCBs were widely used in electrical equipment such as switches, ballasts, capacitors, and transformers. Since 1979 the EPA has banned ballasts manufactured with PCBs due to the toxicity, and environmental impact. Now PCB disposal is regulated by EPA.

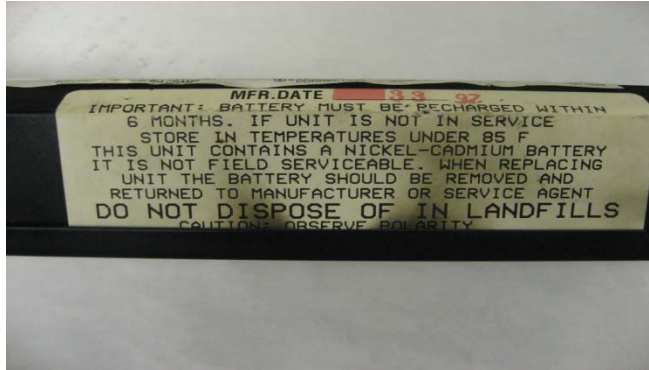
- Assume that a ballast contains PCBs unless it the words "No PCBs", "Electronic ballast", or reference to a battery are on the label
- If a ballast is missing a label, assume it is a PCB Ballast
- PCB ballasts must be marked with the date it is removed from service. (Alternatively, a container used to store ballasts may be labeled with this date)
- PCB ballasts must be disposed of within 1 year of removal from service
- Used PCB ballasts are regulated when transported, so do not transport them in motor vehicles
- Contact EHSO for collection and disposal of PCB Ballasts: 404-727-5922 or chemwaste@emory.edu



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Battery Ballasts

Ballasts containing batteries are regulated by the EPA as “Universal Waste”. Battery ballasts usually will be clearly labeled that they contain batteries.



- Used battery ballasts must be labeled “Used Batteries”. (Alternatively, a container used to store the ballasts may be labeled “Used Batteries”)
- Battery ballasts must be marked with the date it is removed from service. (Alternatively, a container used to store the ballasts may be labeled with this date)
- Used battery ballasts may be regulated when transported, so do not transport them in motor vehicles
- Contact EHSO for collection and disposal of battery ballasts: 404-727-5922 or chemwaste@emory.edu

Electronic Ballasts

These ballasts have become increasingly popular due to their high efficiency and encouragement from the U.S Department of Energy. They usually have “Electronic Ballast” clearly written on them and weigh less than other types of ballasts. Electronic ballasts contain heavy metals in the circuit boards and therefore cannot be thrown into the trash. Any article containing a circuit board is considered electronic waste (e-waste) and must be sent for recycling by Campus Services.

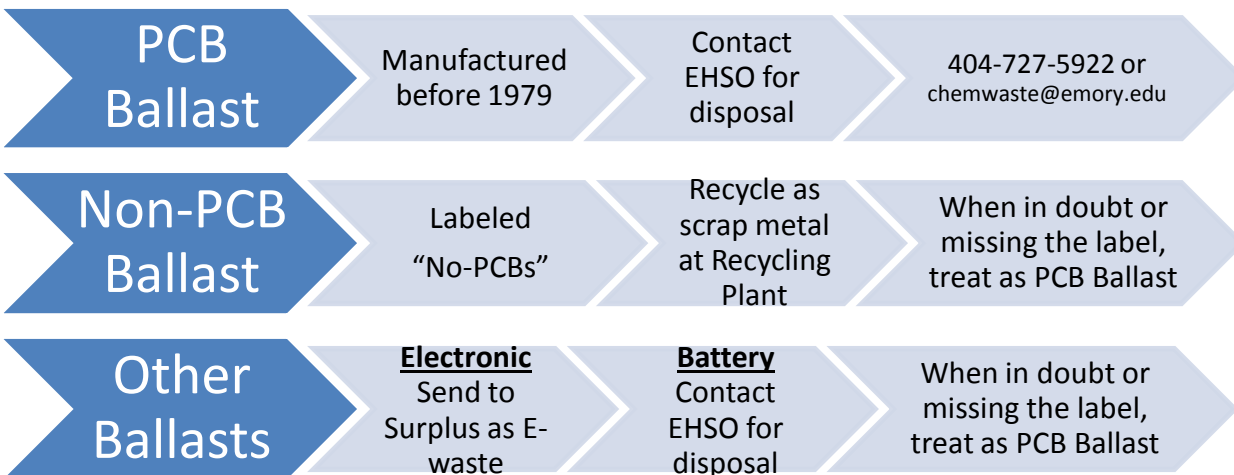


- Collect electronic ballasts in a box labeled “e-waste for recycling”
- Submit a work order to Staging/Surplus Properties to have electronic ballasts picked up for recycling

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Summary

- Inspect ballasts carefully to determine if they contains PCBs, batteries, or circuit boards (electronic)
- If a ballast is missing a label, assume it contains PCBs
- Do not hoard ballasts; dispose of them as you accumulate them
- Any leaking ballast must be immediately contained. Contact EHSO (404-727-5922) for clean up
- Ballasts should be stored in an area secure from outside weather conditions
- Battery ballasts must be labeled “Used Batteries”. (Alternatively, a container used to store the ballasts may be labeled “Used Batteries”)
- PCB and Battery ballasts must be marked with the date they are removed from service (Alternatively, a container used to store the ballasts may be labeled with this date)
- PCB and Battery Ballasts must be disposed of within 1 year of being removed from service
- Used PCB and Battery ballasts may be regulated when transported, so do not transport them in motor vehicles
- Do not place ballasts in the lamps cage as pictured below.

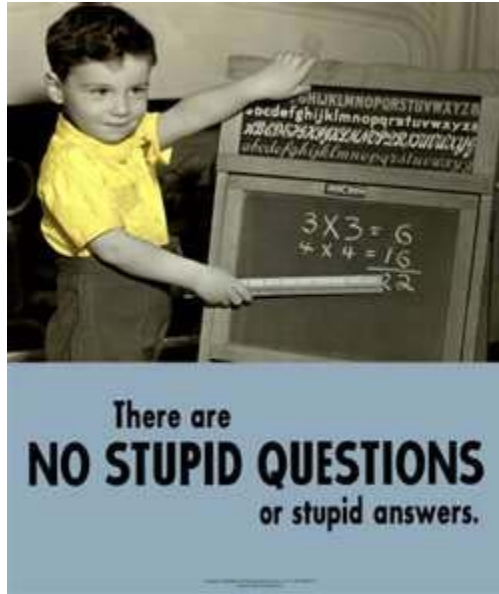


↻ **NOTE: Used PCB and Battery Ballasts should not be transported by Campus Services to the Lamp Cage – contact EHSO to request collection**

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If in doubt...

Contact EHSO at 404-727-5922 or chemwaste@emory.edu if you have questions or concerns



Questions for Discussion

- 1) Whom do you contact for disposal of PCB or battery ballasts?
 - Contact EHSO at 404-727-5922 or chemwaste@emory.edu
- 2) How are used battery ballasts to be labeled?
 - Labeled with the exact words “used battery/batteries” and the date it was removed from service
- 3) Jordan was working in his area and saw ballasts to be removed; one of the ballasts did not have a label on it so he threw it onto his work truck and drove it to the scrap metal recycling roll off. What did Jordan do wrong?
 - Ballasts missing a label should be treated as PCB ballasts
 - PCB containing ballast are regulated in transportation and must only be transported by properly trained EHSO employees
 - Suspect PCB containing ballasts must never go to scrap metal recycling
- 4) Whom should you contact to have electronic ballasts (e-waste) disposed?
 - Staging/Surplus Properties; Submit a work order to have them pick up electronic ballasts for recycling