



“Safety Comes First”

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In this issue:

<p><i>Holiday Decorations: Play It Safe</i></p>	<p>2-3</p>	<h2><i>Laboratory Management, Access and Security – A PI’s Responsibilities</i></h2>
<p><i>Thinking ahead – Planning Each Lift</i></p>	<p>3,8</p>	<p>Laboratory Management Roles</p> <p>Overall supervision and management of the laboratory is the responsibility of the PI or their designee. <i>Access to the laboratory must be obtained from this individual.</i> While the <i>Case Biosafety Manual</i> can never be an all-inclusive document that will meet the conditions and needs of each of the 700+ laboratories on the campus, it is always the first source you should consult when you have questions about safety procedures in the lab.</p> <p>Application of the University’s policies is the responsibility of each laboratory’s ECO. The CHO, in most cases, will serve as the ECO and will be responsible for the overall management and support of the laboratory’s Bloodborne Pathogen Compliance Program. In all cases, the Primary Investigator is the final authority in the laboratory. Some of the specific duties of this individual include but are not limited to the following:</p> <ol style="list-style-type: none"> 1. Exposure determination (identification of affected employees) 2. Creation and modification of the site specific ECP 3. Annual site specific retraining 4. Assurance that employees receive the appropriate OSHA and University required safety training and annual retraining from DOES 5. Assurance that the principles of the ECP are followed in the laboratory 6. Collection of information and notification to both University Health Services and DOES if an exposure incident occurs <p style="text-align: center;">(continued on page 5)</p>
<p><i>Radioactive Waste Segre- gation</i></p>	<p>4-8</p>	
<p><i>Laboratory Management, Access and Security – A PI’s Re- sponsibilities</i></p>	<p>5</p>	
<p><i>e-Waste – Electronic Equipment Disposal</i></p>	<p>9</p>	

Holiday Decorations: Play It Safe

“[T]he decorations we use can potentially lead to serious safety hazards if we are not careful. We need to be especially aware of increased fire hazards during the holiday

The holidays are getting closer every day. As we begin to prepare for the holidays, safety may not be the foremost thought on our mind. However, the decorations we use can potentially lead to serious safety hazards if we are not careful. We need to be especially aware of increased fire hazards during the holiday season.

Here are a few safety measures to keep in mind as you decorate:

- ◆ Decorations must be flame-proof or made of non-flammable material.
- ◆ If decorating a live tree, be sure to...
 - ⇒ use a fresh evergreen that has been treated
 - ⇒ with a flame retardant.
 - ⇒ equip it with a tree stand that can hold water at the base of the tree; keep it full.
 - ⇒ remove the tree prior to closing for break.

CAUTION: NO ELECTRICAL EQUIPMENT OR DEVICES ARE PERMITTED ON OR UNDER TREES; indirect lighting may be used. Nor are candles or open flames allowed on, under, or within 10 feet of the tree. Several fires at CWRU have started this way in the past.

- ◆ If using a metallic tree or decoration, do not place electrical lights or objects on it.
- ◆ Decoration materials must not be exposed to lightbulbs, heaters, or other heat or flames.
- ◆ Gift wrappings should be removed right away.
- ◆ Door decorations must not overlap the top, bottom, or sides of doors.
- ◆ Do not leave lights unattended.
- ◆ Do not place any decorations where they would hinder access to safety equipment (fire alarms, extinguishers) or exits.
- ◆ REMEMBER that if a fire does occur:
 - ⇒ Warn/remove people in danger.
 - ⇒ Activate a pull alarm (usually near exits).
 - ⇒ Call Protective Services at x3333 and give a complete description of the fire. DO NOT CALL 911.

(continued on next page)

("Holiday Decorations: Play It Safe" continued from page 2)

- If the fire is manageable, and ONLY if you have been trained, use your fire extinguisher. Only attempt to put out the fire after the alarm has been sounded and the evacuation of the building has begun.

CAUTION: If you are NOT trained to use the fire extinguisher, sound the fire alarm and get out of the building.

Enjoy the holidays and please, BE SAFE.

Contact DOES at x2907 if you have any questions or concerns about holiday decoration displays.

Thinking ahead—Plan Each Lift

Whether you're at work or at home, you know you're going to have to lift items from time to time. It isn't just heavy loads that cause injuries. Pay careful attention to how you lift, every time you lift. Using safe lifting techniques can help you prevent a serious injury.

What's a safe weight to lift?

There is no set weight that is safe for everyone to lift in all situations. But, according to a revised lifting equation developed by the National Institute for Occupational Safety and Health, a recommended weight limit will never exceed 51 pounds. Several factors can reduce this weight in order for the lift to remain safe. In other words, if you need to extend your reach, lift overhead, twist, move loads repeatedly, or are unable to get a good grip on a load, you increase your risk for injury; and the load should be lighter, or you should get help to lift it. Use hoists, dollies, carts, and other mechanical lifting aids when possible. If you must lift manually, follow safe lifting techniques.

Use safe lifting techniques

Remember, and follow (in order), these basic safe lifting techniques:

1. Size up the load before you lift. If you don't know the load's weight, test it by moving one of the corners. Split up large loads into smaller units. If the load is heavy, an awkward shape, or if you can't get a good grip; use a mechanical lifting aid, or get help from a coworker. When in doubt, don't lift alone!
2. Plan ahead. Make sure you have a clear path to carry the load, and a place to set it down, before you begin the lift.
3. Place your feet close to the object and center yourself in front of the load.
4. Bend your knees to let your stronger leg muscles lift the load.

"[T]ake some time in these beginning weeks to go over simple procedures for dealing with topics such as small spills, waste reduction, and fire safety."



Radioactive Waste Segregation

“Scintillation fluid and any item containing scintillation fluid must be disposed of separately from dry waste.”

It is vital for the safe disposal of radioactive waste that it be properly segregated and labeled. Below is a listing of each type of radioactive waste and how it must be disposed of.

1. Dry solids. Separate dry waste by isotope and waste characteristics.

- Any contaminated needles, hypodermic syringes, pipette tips and Pasteur pipettes must be disposed of in a red SHARPS container, keeping these separate from sharps that are not contaminated. Any other sharps can be placed in a securely sealed cardboard box.
- Any biohazardous materials must be rendered non-biohazardous before pick up.
- Scintillation vials and betaplates must be separated from each other and not be placed in the dry waste (see below).
- Place dry radioactive waste (other than sharps) in the large yellow radiation bags.

2. Scintillation vials. Scintillation fluid and any item containing scintillation fluid must be disposed of separately from dry waste. Only biodegradable scintillation fluid is to be used. Put all vials in the bags specifically provided for that purpose - the bags we give out for dry waste are too large and thin for disposing of vials. Vial bags are available on request.

- Vials should be double bagged to prevent leakage. Radiation Safety provides 1 cubic foot yellow bags specifically for this purpose. They are thick to prevent ripping and leaks. These bags should not be topped off; a number of smaller bags is preferred over one overfilled bag. They should not contain anything but vials - no gloves, pipette tips, etc.
- Are there any flammable chemicals being added to the scintillation cocktail? If so those vials will need to be collected separately.
- Scintillation fluid does not need to be separated from the vial itself before disposal; the entire vial (cocktail included) can simply be placed in a yellow vial bag. Do not put vials into the dry waste. The only exception to this is Cl36. For Cl36 vials, please pour the cocktail into a liquid waste container. The emptied vials should be disposed of in the dry waste.



Laboratory Management, Access and Security – A PI's Responsibilities

(continued from page 1)

Laboratory Access

The PI or his/her designee authorizes access to the laboratory. Persons requesting to use the laboratory or equipment must be advised of potential hazards in the laboratory and all biosafety guidelines presented in this manual.

Access to the laboratory is restricted when work with infectious agents is in progress, after hours, or when laboratory personnel are not available. Persons at increased risk of acquiring infection or for whom infection may be unusually hazardous, should not be allowed to work in the laboratory. This category includes the following:

- Children
- Individuals who are immunosuppressed, immunodeficient, or undergoing immunosuppressive therapy

Laboratory Security

Certain biohazardous microorganisms and toxins may be of interest to persons or groups involved in terrorism or other illegal activities. Therefore infectious agents that could pose a serious threat to humans, agriculture, or the livestock industry should be kept under secure conditions within the laboratory. The highest level of security is reserved for materials referred to as Select Agents. Work with these agents require implementation of a Biosecurity Plan. The Case Western Reserve University Select Agent Facilities maintain separate biosafety manuals and security plans.

If a request is received from another institution or corporate entity for a dangerous organism for academic purposes, the PI is responsible for ensuring that the receiving entity is a valid research organization and that the transfer has administrative approval from both institutions. When a request is received, the PI must notify the University's Biological Safety Officer for approval to send or receive any agent.

IMPORTANT: It is the objective of all Case Western Reserve University laboratories, and their management to practice safety in science and to exercise all reasonable and prudent precautions generally accepted as research industry standards. Guidelines recommended by the CDC and NIH for biosafety at levels 1 - 4 will be strictly observed and enforced by the PI and assigned laboratory facility management. At the conclusion of initial personnel safety training by DOES, each laboratory employee will be trained by the CHO and the ECO responsible for that laboratory.

Article Source: CWRU Laboratory Biosafety Manual



“Access to the laboratory is restricted when work with infectious agents is in progress, after hours, or when laboratory personnel are not available.”

Radioactive Waste Segregation

(article continued from page 4)

3. Liquid waste. Liquid waste should also be separated by isotope and chemical class (regulated, non-regulated) to facilitate disposal. No solids should be present.

- Every container of liquid waste must be accompanied by a separate completed Disposal Listing for Liquid Radioactive Materials form. Be sure to list all of the chemical constituents, the percentage of each chemical and the pH of the waste so that we may determine specific disposal procedures after it decays. "Aqueous waste" is NOT a sufficient description. Liquid waste must also be noted on the Radioactive Waste Disposal Form.
- Aqueous radioactive liquids ready for disposal should have a pH between 5 and 9.
- Liquid waste containers should not be larger than 5 gallons. It is too difficult to carry and pour if the container is larger than 5 gallons; larger sizes will be accepted only for decay in storage and for non-sewer disposable regulated chemicals and will not be returned to the researcher until the waste is disposed of. Be careful that the plastic container used is not soluble in organic materials. Those with high chemical resistance include unmodified polypropylene, polytetrafluoroethylene (Teflon) and polytri-fluorochloroethylene. The Radiation Safety Office does not provide liquid waste containers. It is the responsibility of the lab to purchase the containers needed. Glass containers are discouraged from being used. It is preferable to use Nalgene or equivalent returnable bottles.
- Do not fill liquid waste containers to the brim. Doing so is a spill hazard. Please keep the liquid waste level at least 1 inch below the neck of the bottle. Over-filled containers will not be picked up.
- All radioactive liquid waste must be double-contained to serve as a precaution against leaking. The outer container must be leak-proof and able to hold all of the liquid should a breach of the inner container occur. A Lucite shielded container or even a five-gallon bucket is suitable for this job. Placing the bottle in a radiation bag is NOT acceptable double containment. *(continued on next page)*

"All radioactive liquid waste must be double-contained to serve as a precaution against leaking."

Radioactive Waste Segregation

- Use recyclable containers whenever possible rather than single-use containers such as tissue culture flasks, which must be disposed of after the liquid waste is poured out. This creates large amounts of unnecessary radioactive waste. Instead, use reusable containers (sold by Fisher Scientific and other companies) to hold waste. Each lab should have two such containers; when one is ready for disposal, the other can be used. We will return the first bottle as quickly as possible.

4. Animals or animal waste. Radioactive animal waste can include carcasses, bedding and excreta, animal blood, animal sharps, as well as animal waste containing etiologic agents.

- Research personnel are to place all carcasses in the -20°C freezer located in the ARC room RB5-A. The Radiation Safety Office will not pick up animal waste. It should be double bagged in a yellow radiation bag. Each bag should be tagged with an item number written on it corresponding to the number on the freezer log.
- The freezer log is posted on the top of the -20°C freezer. Make sure that you include the isotope and activity.
- Animal blood is to be disposed of into the laboratory Radiation labeled sink after sterilization by treating with a 10% bleach solution. The criteria for radioisotope drain disposal are the same as for a laboratory sewer disposal. If these daily activity disposal limits are exceeded, the blood is to be neutralized and held for pickup by the RSOF in a single container. Tubes or vials that contained blood are to be rinsed with a 10% bleach solution and disposed of as dry radioactive waste.
- Investigators generating radioactive waste containing infectious material will be required to store this waste in yellow bags that are then placed inside special purple bags until this waste is properly decontaminated to avoid the possibility of accidental submittal of infectious and radioactive waste for disposal. All potential generators of radioactive waste containing infectious material will be warned that radioactive and infectious waste cannot be submitted for disposal. When necessary, specific training will be supplied by the Department of Occupational and Environmental Safety (DOES) on how to handle this type of waste.

(continued on page 8)



“Tubes or vials that contained blood are to be rinsed with a 10% bleach solution and disposed of as dry radioactive waste.”

Radioactive Waste Segregation

(continued from page 7)

Case laboratories may deliver a copy of the waste request or fax it to 368-2236. The Radiation Safety Office generally picks up waste on Fridays (form submission cut off Thursday). All containers prepared for disposal must be properly sealed and labeled; also make sure the accompanying forms and tags are completely filled out before you arrange for a waste pick up. We encourage all labs to arrange for frequent pick-ups in order to reduce the potential hazard that exists when large amounts of waste are present in the lab. This also reduces the amount that must be picked up at one time. As you can see, there are many segregation and disposal issues to consider when dealing with radioactive waste. Make sure everyone in your lab is aware of the procedures involved and knows how to properly prepare waste for disposal. Call the Radiation Safety Office (x2906) if you have any questions.

“Make sure everyone in your lab is aware of the procedures involved and knows how to properly prepare waste for disposal.”

Thinking ahead—Plan Each Lift

(continued from page 3)

5. Get a good grip.
6. Lift straight up, keeping the load close to your body. Let your legs do the work. If you are lifting with a partner, use a signal so you both lift at the same time.
7. Do not twist or turn your body once you have made the lift. If you start to lose your grip, set down the load.
8. Setting the load down is just as important as lifting it. Lower the load into place by bending your knees. If you are working with a partner, you should both set down the load at the same time.

These simple lifting techniques could save your back!

Article Source: *J.J.Keller & Associates, Inc.*

e-Waste – Electronic Equipment Disposal

Electronic waste (e-waste) is discarded electronic devices such as computers, fax machines, televisions, lab equipment, or other such devices that contain circuitry (Figure 1). This type of material contains lead and other substances that, if not handled properly, could be released into the environment and cause harm.

If you wish to dispose of any electronic waste please complete the online e-Waste disposal request form (located here: <https://www.case.edu/finadmin/does/LabSafety/ewasteform.pdf>) which can be submitted via email by clicking the "SUBMIT" button at the bottom of the form. It is suggested that you save a copy of this document for yourself until the material is removed.

If you prefer to fax the form, it should be sent to Customer Service Facilities Operations at 216-368-0930. If you have questions about e-waste please contact the DOES office or Customer Service:

Customer Service for Facilities Operations

Fax: 216-368-0930

Email: Ewasterecycling@case.edu

Phone: 216-368-2580

For tracking purposes, write the building and room where the devices came from on the outside of the devices in permanent marker.

If the equipment being disposed of originated in a laboratory a safety clearance must first be obtained from the DOES office. Please see the "Laboratory Equipment disposal and relocation" on our DOES website (<https://www.case.edu/finadmin/does/LabSafety/equipment.html>)

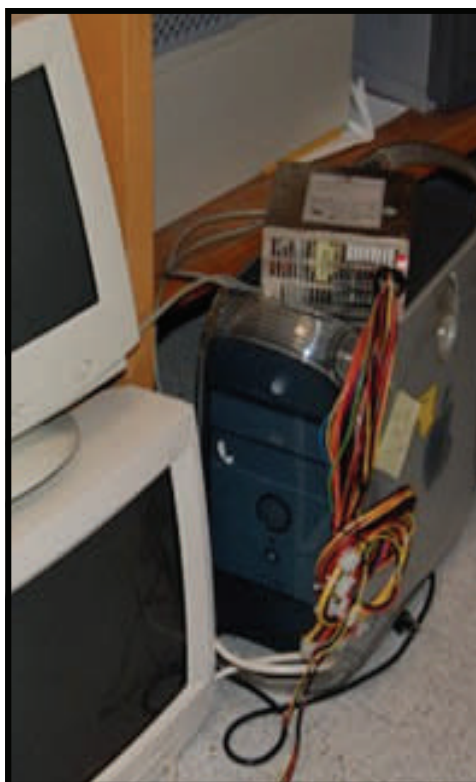


Figure 1: Assorted e-waste

“e-Waste contains lead and other substances that, if not handled properly, could be released into the environment and cause harm.”

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<http://does.case.edu>. Simply click on the "Newsletter" link in the left-hand column!

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