

University of Tennessee Knoxville-Environmental Health and Safety

Laboratory Move Guidelines

These guidelines are provided to assist you in the safe and efficient transfer of your hazardous chemicals, cylinders and lab equipment.

General Safety Guidelines:

The following are some general safety tips for moving laboratories:

- Return compressed gas cylinders and lecture bottles that are no longer needed to the vendor (in our case, it is Airgas). Arrange with the vendor to pick up retained gas cylinders and deliver them to new locations. Be sure the caps are on the cylinders.
- Clean and decontaminate the spaces that are being vacated including removal of all bench paper and all contents of cabinets and equipment left behind. Make sure that shared equipment and locations are included in the cleanout.
- Notify EHS of any materials or procedures that could leave hazardous chemical residues (e.g., perchloric acid).
- Notify EHS, Office of Biosafety, or Radiation Safety of any areas or equipment that cannot be fully decontaminated, depending on the contamination (e.g., materials potentially containing asbestos; fume hoods; refrigerators used in the storage of highly toxic chemicals, etc....).
- Notify Facilities Services to bleed any energy from electrical equipment (e.g., capacitors) bound for trash or surplus to the warehouse.
- Do not store material to be moved or discarded in hallways or otherwise block fire exits.
- Discard equipment that is damaged (e.g., electrical equipment with frayed wiring) rather than moving it to the new lab.

Chemical Moving Safety:

- Wear personal protection appropriate for the materials being handled (safety glasses, lab coat, gloves, closed-toed shoes, etc.).
- Label all chemical containers with the proper chemical name. Abbreviations, chemical formulas or structures are not acceptable. Close all containers securely.
- Sort out unwanted chemicals prior to the move. If you have chemicals that are unopened and have not expired, but you don't want to move them, they can be added to the Chemical Exchange Program. Contact EHS at 974-5084 for more information.
- Check containers and lids for damage and cracks. Replace any faulty caps or containers. Damaged containers cannot be transported. Do not move unknowns or leaky containers. Unknowns or leaky containers should be disposed of as hazardous waste.
- Thoroughly check all of your storage areas to make sure you do not leave chemicals behind. Abandoned and unknown chemical containers can be difficult and dangerous to dispose of properly.
- Check containers for expiration dates and signs of corrosion crystallization. Peroxide-forming materials should be disposed of and not moved to the new laboratory if the container has been opened and is more than six months old, or if it has not been opened and is more than one year old. Always dispose of by the expiration date listed by the supplier.
- Lab moves are a good time to clean out and dispose of old chemicals. You can bring your old chemicals to EHS at one of the waste rooms. EHS has a waste room at Walters, which is open from 1:00-2:00 every Wednesday and a waste room at SERF (Science and Engineering Research building) which is open from 2:00-

3:00 every Wednesday. If you have a large amount of chemicals, contact EHS to coordinate a lab chemical cleanout.

- Chemicals must be removed from freezers, refrigerators, cabinets, and other equipment prior to moving. Temperature sensitive items may be transported in coolers, or stored in other areas until they can be moved to the new location.

Packing and Transport:

- Know the hazards of the chemicals before packing and moving them and wear proper personal protective equipment when handling chemicals.
- Have spill containment equipment handy in case of spills.
- Separate chemicals into compatible groups and provide separate, labeled boxes for each group. This is extremely important to prevent serious mishaps should boxes be dropped or damaged in transport.
- Use sturdy, partitioned boxes or other suitable chemical containers. Wrap bottles or use packing material (such as vermiculite) to keep glass from touching glass. Leave enough room to completely close the box. Do not allow protruding bottle necks or stems.
- EHS recommends that you attach a packing sheet to each box so the people moving your chemicals know what they are handling.
- Don't lift containers or bottles by the cap.
- Don't try to save trips by stacking boxes too high on carts.
- Use a cart designed to carry loads and use secondary containment, such as trays, in case of spills or leaks.
- Use the freight elevator when carrying containers, not the stairs or passenger elevators.
- Off-site transportation of hazardous chemicals should only be done by DOT licensed hazardous material carriers to another location via a public thoroughfare. In cases where you need to transport chemicals on public roadways, contact EHS for assistance.
- Toxic materials, carcinogens, highly reactive chemicals controlled substances, and other restricted chemicals should be moved by trained laboratory staff only.
- When the chemicals arrive at the new locations, lab personnel will need to check contents for breakage/damage. Chemicals will need to be removed from boxes and placed in their designated locations within the laboratory.

Your move to this new lab space is an opportunity to start fresh.

- Store your chemicals using a good compatibility plan.
- Only order chemicals you need.
- Keep a chemical inventory of what you have in stock.

Below are contacts to assist with help and guidance:

Contacts:

EHS: 974-5084

Radiation Safety: 974-5580

Office of Biosafety: 974-1938

Facilities Services: 946-7777