



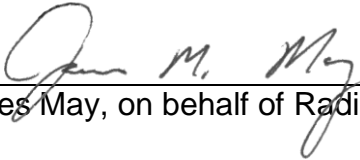
# Laboratory Close Out Guidelines

As a Principal Investigator at Vanderbilt, you are responsible for the safe operation of your laboratory or suite of laboratories. This includes leaving any and all of these facilities in a safe condition when you vacate the premises. This guideline outlines your responsibilities in the Laboratory Close Out Process.

The Close Out process should be divided into three stages (the time frame referenced below can be compacted, if you are acting on short notice):

- **90 DAYS BEFORE YOU MOVE**
- **30 DAYS BEFORE YOU VACATE A LAB**
- **AT MOVING TIME**

### Approvals:

|   |                 |
|---|-----------------|
| Dennis Hall, Associate Provost for Research University Central  | Date            |
| <br>James May, on behalf of Radiation Safety Committee | 6/13/01<br>Date |
| Ken Brigham, on behalf of Institutional Bio-Safety Committee  | Date            |
| Wallace LeSturgeon, on behalf of Environmental Affairs Committee  | Date            |
| Tom Oeltmann, on behalf of Chemical Safety Committee  | Date            |


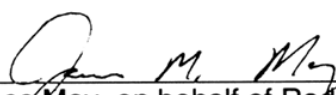
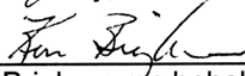
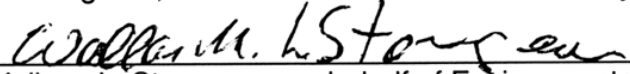

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|--|-----------|
|   | 4-11-01   |
| _____<br>Lee Limbird, Associate Vice Chancellor for Research                         | Date      |
|   | 6/13/01   |
| _____<br>James May, on behalf of Radiation Safety Committee                          | Date      |
|   | 8/14/01   |
| _____<br>Ken Brigham, on behalf of Institutional Bio-Safety Committee                | Date      |
|  | 4/22/2001 |
| _____<br>Wallace LeSturgeon, on behalf of Environmental Affairs Committee            | Date      |
|   | 7/30/01   |
| _____<br>Tom Oeltmann, on behalf of Chemical Safety Committee                        | Date      |

# Laboratory Close Out Guidelines

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## **Three Months Before You Move** (*or as early as possible in the process*)

1. Review and complete a *Laboratory Close Out Notification*. Mail or fax to Vanderbilt Environmental Health And Safety (VEHS) Lab Close Out Coordinator (see address and identification of Coordinator at the end of the following check lists) with a copy to your Department Administrator.
2. Upon receipt of your close out notice, the VEHS Lab Close Out Coordinator will accompany you and your department's administrative representative or other responsible party in a tour of your Laboratory.
3. After the tour of your lab(s), the VEHS Lab Close Out Coordinator will help you address safety issues identified. As a team we will jointly develop a close out plan customized to your lab(s). We will agree upon target dates for critical process steps.
4. Review the following close out checklist. It covers general points to help you safely and efficiently vacate your lab(s). Where needed, more consultation will be provided by VEHS.

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## Laboratory Close Out Checklist

1. Assess the biological materials (recombinant DNA materials, microorganisms, cells and cell lines, tissues, organs, body fluids, and biologically-derived or –contaminated media) and determine which materials will be transferred to your new laboratory or to another Vanderbilt investigator. Dispose of the remaining materials as you would have during the course of experimentation. For example, solid materials (including petri dishes and microfuge tubes) should be autoclaved and disposed as regular trash or they should be collected (in VUMC) by Environmental Services for autoclaving. Liquid materials may be decontaminated by preparing a solution of 1 part household bleach to 9 parts liquid waste. Mix the contents gently and let sit for at least 30 minutes. This decontaminated solution may now be disposed in the sink. Liquid waste may alternatively be autoclaved in vented containers on the liquid cycle of the autoclave. Once cool, the liquid may be flushed down the sink. Laboratories without the use of an autoclave or those outside of VUMC should consult with the VEHS Lab Close Out Coordinator to determine the appropriate method of disposal.
2. VEHS has developed a Chemical Redistribution/Recycling Program for unopened or usable chemicals. In the Program, Chemicals collected through the waste collection program or donated by laboratories that are still usable are made available to all Vanderbilt researchers and faculty, free of charge. Information on the Chemical Redistribution Program can be found at the VEHS website at: [www.safety.vanderbilt.edu](http://www.safety.vanderbilt.edu).
3. Label unmarked or unclearly labeled containers as soon as they are located. Identification and disposal of unknown substances is one of the most costly close out activities, with average disposal fees of approximately \$500 per vial or container. If true unknown chemicals or radioactive materials remain, segregate them for identification during waste collection.
4. All chemicals that are not transferred to the Chemical Redistribution Program or to your new Vanderbilt laboratory must be disposed of through VEHS. No chemicals should be disposed of by pouring them into sinks or other drains or by evaporating them in hoods. It should be noted that chemicals include lubricating and other oils, containerized gases, and pharmaceuticals. Contact the VEHS Lab Close Out Coordinator for assistance in disposing of your chemicals.
5. Due to Department of Transportation (DOT) shipping requirements that may apply, it is imperative that the VEHS Lab Close Out Coordinator be notified if any chemicals, biological materials, or radioactive materials are going to be transported off Vanderbilt property. This notification should be made as soon as possible so that special arrangements can be made, if necessary. (Note that VEHS can be contacted with any transportation questions for transfer of these materials off Vanderbilt property or for transfer within Vanderbilt property.)

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6. Separate any rad/biological, chemical/biological, rad/chemical mixed waste from other wastes. Be sure that the mixed wastes are addressed in inventories for inclusion in waste disposal planning.
7. Usable radioactive materials you will not use for continuing research may be transferred to other Principal Investigators approved for radioisotope use, as outlined in the Vanderbilt University and Vanderbilt University Medical Center Radiation Safety Policies and Procedures Manuals. (<https://www.vumc.org/safety/rad>) Contact the VEHS Lab Close Out Coordinator with any questions about this process.
8. All radioactive materials that are not transferred should be disposed of through VEHS. Contact the VEHS Lab Close Out Coordinator with any disposal questions.
9. Hazardous materials, including radioactive, biological, or chemical materials, must not be moved in compromised containers. This is one of the major causes of spills.
10. Check beneath hoods, in shared labs and equipment and in freezers, refrigerators or cold rooms for biological agents, chemicals or radioisotopes that might easily get left behind. Look for old supplies from past lab staff and students. Many labs have inherited chemicals that must also be identified and disposed of before moving to the new location.
11. Gas cylinders and lecture bottles that are no longer used should be returned to the supplier. You may be paying a demurrage charge for cylinder rental while the cylinder is in your possession.
12. Tubing and regulators connected to corrosive or hazardous compressed gas cylinders should be detached using safe procedures such as purging and venting to a hood or ventilated area. Contact the VEHS Lab Close Out Coordinator for assistance or direction on this process.
13. Notify the VEHS Lab Close Out Coordinator of any cylinders of corrosives that have been in your lab more than six months after initial use.
14. All biological safety cabinets require VEHS Biological Safety Section evaluation to determine required decontamination, even if they are not moved. The equipment must be certified again after the move to ensure filter integrity. Make arrangements for this work in advance to allow contractors to meet your schedule.
15. Have damaged equipment (i.e., frayed wires, missing guard) scheduled for repair during the move, accomplishing the repair during lab downtime.

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16. Other broken equipment, such as refrigerators, may be discarded. However, equipment that could possibly be contaminated with radioactive, chemical or biohazardous material must be decontaminated and checked first.
17. If a Liquid Scintillation Counter is to be discarded or shipped, contact the manufacturer well in advance to arrange to have any internal standard sources removed.
18. Look at the area you will be moving to. Determine where will you place your large equipment and cabinets? Are electrical outlets where you need them? Are there special facility needs (e.g., 220 volt electrical outlets) that should be addressed prior to occupancy? You should never attempt to address these issues on your own. Contact the VEHS Lab Close Out Coordinator for information on the proper procedure to address these issues.
19. Contact the VEHS Lab Close Out Coordinator for planning assistance on packing and moving radiation sources that might require shielding for safe transport.
20. If you are moving to another Vanderbilt laboratory contact the VEHS Lab Close Out Coordinator to determine if any special permits are needed and for information regarding revised approvals for the use of biological and radioactive materials and hazardous chemicals.
21. Schedule your lab for a radiation close out survey by contacting the VEHS Lab Close Out Coordinator.

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## Thirty Days Before You Move

1. Review your lab(s) again to be sure all unknown materials have been identified and no new ones have been created while preparing to vacate the lab(s). It is productive to repeat this step of the close out process, because identifying and disposing of “unknowns” is a major cost item in laboratory close outs.
2. Seek assistance from the VEHS Lab Close Out Coordinator in planning the safe transfer to your new lab and removal of any high hazard materials (violently reactive chemicals, toxic gases, etc. as identified during the chemical disposal process).
3. Follow-up on the status of time critical close out plan steps such as: radioactive and chemical waste collection, special equipment moving arrangements, posting of your new laboratory for biological or radioactive materials, etc.
4. Visit your new lab space to ensure that previous occupants (if any) have not abandoned any equipment or materials.
5. Verify that all modifications in your new space will be completed before your move.
6. No equipment used for radioactive material should be moved with external removable contamination present. You and your radiation workers can perform wipe and meter surveys to assure this for smaller items. The Radiation Safety Section of VEHS will provide this service for major pieces of equipment including freezers and refrigerators. Contact the VEHS Lab Close Out Coordinator to arrange this service.
7. Verify the hood(s) in your new lab are operating properly – sash is functional, flow rate is adequate, drains are open, etc. Contact the VEHS Lab Close Out Coordinator for assistance with checking and verifying the flow rate in the hood(s).

# Laboratory Close Out Guidelines

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## At Moving Time

1. Package and move lab items only during normal business hours (8:00 am – 4:30 PM) so staff will be available to help if there is a spill or accident.
2. Provide secondary containment for biohazardous materials, chemicals and radioactive materials during transport (even when just moving a few doors down the hall).
3. Never transport hazardous materials alone.
4. Never transport hazardous materials on public roads.
5. Wear appropriate personal protective equipment for the materials being handled (safety glasses or goggles, lab coat, gloves, closed-toe shoes, etc.).
6. Have boxes, plastic bags and containers for broken glass, etc., ready and available before you begin.
7. Post any required warning signs (radioactive materials, biohazard, etc.) in your new lab location.
8. Review the location of safety showers, eyewashes, fire extinguishers, and all available means of exit from laboratories and the building.
9. Revisit your old lab space. Have any materials been left? Are any hazardous materials left in your old lab?
10. Notify the VEHS Lab Close Out Coordinator that the lab(s) are ready for Close Out Survey(s) using the *Laboratory Close Out Certification* attached.
11. Lock your lab, when you are through moving out and return your key to your department administrator.
12. Move compressed gas cylinders properly secured on a cylinder cart or other conveyance device designed for this purpose.

If you are unsure about anything, **please ask questions!** Your department administrator may be able to help you smooth out logistics problems at any point in the process. If you have any health and safety related concerns pertaining to vacating your old lab or occupying a new one, call or write:

**Kevin Warren, Lab Close Out Coordinator**  
**VEH&S**  
**U-0211 MCN (2665)**  
**kevin.warren@vanderbilt.edu**

**Phone: 322-0925**  
**Fax: 343-4951**