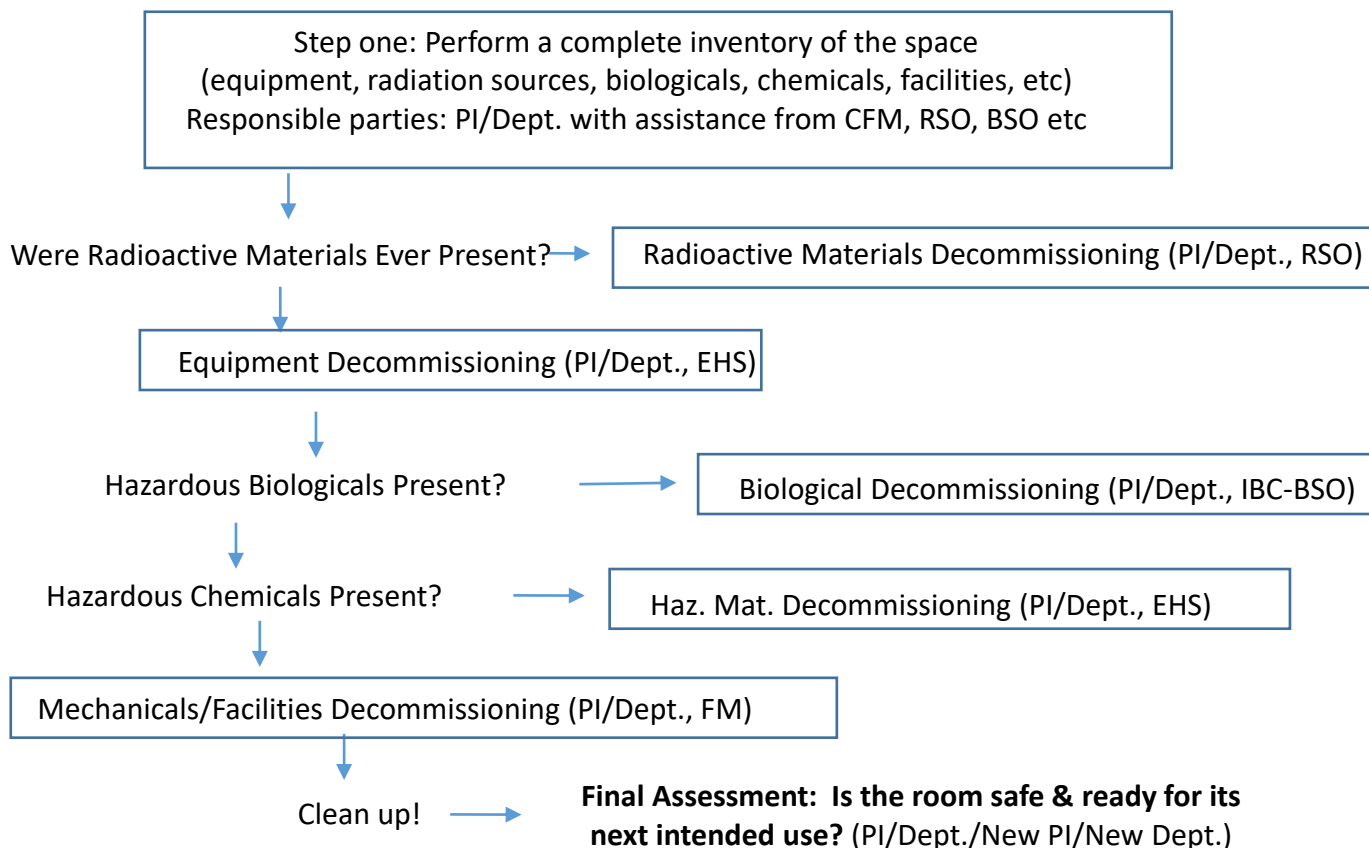


Flowchart for Decommissioning a Laboratory

Before a laboratory space may be reassigned to a different PI (or used for another purpose), the laboratory must be decommissioned. After decommissioning, the space should be in a suitable condition for its next use. In the flowchart below, one or all of the processes may be required to achieve this state.

'Decommissioned' means *the space has been assessed to be ready for its next use and all hazards/hazardous materials have been accounted for* (ie. addressed, disposed of, or reassigned to another responsible party)



Important Notes:

- 1) Only **full time employees** of the university may be current Hazardous Materials Supervisors or Managers. **If a PI is retiring, the lab must be decommissioned** (does not mean *closed*; see definition above) and while the retiring PI may continue to do research, responsibility for all Hazardous Materials must be transferred to a full time employee.
- 2) Ultimately, the **Department and/or Unit is responsible** for ensuring that a lab is decommissioned properly.
 - If the current PI is retiring or simply changing spaces, then this process should be performed under their supervision (prior to retirement).
 - If the current PI is not available, then the Dept./Unit must assign a department representative (a Hazardous Materials Supervisor with the appropriate chemical knowledge) to ensure the decommissioning is performed properly

Discussion Notes on Decommissioning a Laboratory

Why are we doing this?

This process...

- provides a way to ensure that spaces where hazardous materials have been used are cleaned up and made available for other uses.
- ensures that labs are cleaned up and reassessed before transferring to another PI (possibly between Units).
- ensures that vacated labs do not become unknown, hazardous areas for which no one claims responsibility, but for which the University is definitely responsible/liable.
- **helps to further build a culture of safety at UMKC !**

The carrot:

- Likely provides Depts./Units/University some modicum of protection from liability if all decommissioning procedures are followed properly.

The stick:

- Labs will NOT be reassigned to another PI in the Online Hazardous Waste Management system until the decommissioning is completed properly.

Radioactive Materials Decommissioning

The PI/Dept. in conjunction with the campus Radiation Safety Officer (RSO) is responsible for commissioning and decommissioning all UMKC labs for use of Radioactive Materials. Specific federal laws and guidelines govern their use and disposal. The UMKC Radiation Safety Manual should be consulted for further details.

Radioactivity decommissioning must go through the EHS Radiation Safety Officer with the Nuclear Regulatory Commission giving final approval.

Biological Hazards Decommissioning

The PI/Dept. in conjunction with the campus Institutional Biosafety Committee (IBC) is responsible for commissioning and decommissioning all UMKC labs for use of Biological Materials. Specific federal laws and guidelines that govern their use and disposal. The UMKC Biosafety Manual should be consulted for further details

Biological decommissioning must be done through the IBC with the EHS Biological Safety Officer or the IBC Chair giving final approval.

Laboratory Equipment Decommissioning

The PI/Dept. is responsible for assessing the state of any equipment in the lab and then transferring ownership and/or disposing of that equipment (either by demolition, trashing, or surplussing).

The state of the equipment should be assessed for physical safety hazards (eg: frayed electrical cords) which must be addressed if the equipment will be transferred to a new owner.

The equipment should also be assessed for non-obvious hazardous materials content and proper guidelines for disposal must be followed. An *incomplete list* of non-obvious hazards is given below to illustrate the issue:

- research equipment, safety equipment, and storage equipment (hoods, cabinets, glassware, fridges/freezers, ovens, eyewashes, etc) may have radioactive, biological, or hazardous chemical residues on their surfaces and interiors.
- equipment containing CFCs and other regulated gasses (fridges/freezers/water chillers, anything with a compressor, etc.)
- equipment containing mercury (thermometers, barometers, fluorescent lights, etc.)
- equipment containing pressurized materials or materials under vacuum (gas cylinders, etc.)
- equipment containing radioactive sources or that produce radiation (UV/IR light sources, lasers, microwave sources, x-ray and electron beam instruments, liquid scintillation counters, etc.)
- equipment containing large electrical transformers may have PCB oils
- equipment that contains embedded toxic materials (laser dyes, etc)

Laboratory Equipment decommissioning must be discussed with EHS prior to actual dispersal of the equipment.

Hazardous Materials/Chemical Decommissioning

The PI/Dept. in conjunction with UMKC EHS are responsible for commissioning and decommissioning all UMKC labs for use of Hazardous Chemical Materials. Specific federal laws and guidelines that govern their use and disposal. The UMKC Chemical Management Plan should be consulted for further details: [\(link\)?](#)

At minimum,

- Re-inventory all chemicals in the lab.
- All tagged hazardous materials in the laboratory must be evaluated.
 - Inspect container integrity.
 - Ensure that chemical containers are clearly labeled as to their contents.
 - Check peroxide forming chemicals for expiration dates. Ensure the containers are free of signs of crystallization.
 - Dispose of all expired chemicals (eg: peroxide formers after 1yr)
 - Ensure that the outsides of chemical containers are clean and free of any hazardous materials.
- Items that are to be transferred to another location must be packaged and shipped following proper shipping regulations. See UMKC CMP for more details.
- Items can be transferred to the possession of other Haz. Mat. Supervisors, but the transfer of items must be reported to EHS and the items re-tagged with the new location/Supervisor information.
- All hazardous wastes disposed of (eg: sharps containers, glass waste, chemical waste etc). Disposal must be done using methods approved in the UMKC CMP. Coordinate with EHS to facilitate disposal.
- Compressed gas cylinders returned to supplier (or transferred to the new PI).
- Check lab for Mercury contamination.
- Ensure that chemical storage areas are clean and all surfaces wiped down.
- Ensure that all drawers, cabinets, shelving areas are clean and all surfaces wiped down.
- All markings that identified the presence of hazardous materials (eg: warning signs, Authorized Users Lists, etc) are removed from the lab space and any equipment going to Surplus.

Hazardous Materials/Chemicals decommissioning must be done through EHS with the EHS Director (or Designee) giving final approval.

Decommissioning Lab Space - Signature Page

Instructions: Determine what hazards apply (check all that apply) and then perform the decommissioning (as per the flowchart provided) and obtain the necessary signatures from EHS, Radiation Safety Officer and Biological Safety Officer as appropriate to certify that the lab space has been properly decommissioned.

The lab space to be decommissioned is in Bldg _____ Rm # _____

Department: _____ PI/Dept. representative _____

Indicate all that apply (see flowchart):

- Instrumentation/devices that may contain hazardous materials are *currently* present in the lab

The PI/Dept. representative has communicated with EHS about the proper disposition of all instrumentation/devices in this lab that might contain hazardous materials:

EHS Director (or Designee)

Date

- Hazardous materials have *ever* been present in the lab (since prior decommissioning)

This lab has undergone the required Hazardous Materials decommissioning:

EHS Director (or Designee)

Date

- Radioactive Materials have *ever* been present in the lab (since prior decommissioning)

This lab has undergone the required Radioactive Materials decommissioning:

EHS Director (or Designee)

Date

- Biological Hazards have *ever* been present in the lab (since prior decommissioning)

This lab has undergone the required Biological Hazards decommissioning:

EHS Director (or Designee)

Date