

Discontinuing/Shutting Down Laboratory Activities



This checklist is intended to facilitate an orderly shutdown of a research lab, should it be needed. Please contact your Department Safety Manager, Departmental Chemical Hygiene Officer (both found in the [Princeton University Chemical Hygiene Plan](#)), or EHS directly at ehs@princeton.edu or 609-258-5294 with questions about how to secure hazards or safely suspend research operations in your laboratory.

Laboratory Shutdown Checklist

Preparing:

ITEM	Complete	N/A	Notes
Identify all non-critical activities that can be discontinued, curtailed, suspended or delayed.			
Identify personnel able to safely perform essential activities (e.g., maintaining cryogenic liquid levels in storage freezers, equipment, etc.)			
Complete and submit the Research Essential Operations Template			

Communications:

ITEM	Complete	N/A	Notes
Ensure lab members are entered and up to date in EHS SHIELD – Safety, Health, Inspection and Equipment Logistics Database (https://shield.princeton.edu).			
Create a contact list including personal contact information for all lab personnel, Principal Investigator, lab and/or department administrators, and other appropriate personnel.			
Ensure the contact list is saved where it can be remotely accessed by everyone in the lab (e.g., Slack). Include email addresses and home and cell phone numbers.			

Test your phone tree or email group to facilitate emergency communication amongst lab researchers and staff.			
Ensure that emergency contacts listed on Emergency Information Posters are up to date and posted on outside of lab doors.			

Receiving:

ITEM	Complete	N/A	Notes
Do not order any new research materials except those items needed to support minimal critical functions.			
Cancel orders for non-essential research materials if they have not yet shipped (e.g., standing orders).			
Contact loading dock/mail services personnel to notify them of any expected incoming shipments.			
Ensure any packages potentially containing dry ice are managed properly and that department staff are aware of their pending arrival.			

Research Material Shipping:

ITEM	Complete	N/A	Notes
Discontinue any/all requests for research material shipments.			
Notify EHS of any pending research material shipping requests to determine whether or not the material can be shipped.			
Verify receiving collaborators are able to take possession of any shipments already in transit.			

Research Materials:

ITEM	Complete	N/A	Notes
Freeze down any biological stock material for long term storage.			
As possible, consolidate storage of valuable perishable items within storage units that have backup systems.			
Fill dewars and cryogen containers for sample storage and critical equipment.			

Identify key personnel who will be responsible for maintaining cryogenic liquid levels in these devices.			
Consult with Laboratory Animal Resources (LAR) about current animal care recommendations/needs.			
Properly secure all hazardous materials in long-term storage.			
Ensure all flammable liquids are stored in flammable storage cabinets.			
Ensure that all items are labeled appropriately. All working stocks of materials must be labeled with the full name of the contents and stored in closed containers.			
Where possible, remove all chemicals and glassware from benchtops and fume hoods and store in cabinets or appropriate shelving.			
Request waste pickups for peroxide forming compounds or other chemicals (i.e. piranha etch) that may become unstable over time.			
Collect contents of any acid/base baths and request waste pickup.			
Remove infectious materials from biosafety cabinets, and autoclave, disinfect, or safely store them as appropriate.			
Secure inventory of controlled substances and verify logs /documentation.			
Secure physical hazards such as sharps.			
Ensure all radioactive materials are locked/secured inside a refrigerator, freezer, or lockbox. If you require transfer of radioactive material or waste, please consult with EHS: ehs@princeton.edu			

Physical Hazards:

ITEM	Complete	N/A	Notes
Ensure all gas valves are closed. If available, shut off gas to area.			
Turn off appliances, computers, hot plates, ovens, and other equipment. Unplug equipment if possible.			

Check that all gas cylinders are secured and stored in an upright position with the main cylinder valve closed. Remove regulators and install protective valve caps.			
Elevate equipment, materials and supplies, including removal of electrical wires and chemicals from the floor to protect against flood damage.			
Inspect all equipment requiring uninterrupted power for electricity supplied through an Uninterrupted Power Supply (UPS) and by emergency power (emergency generator).			

Equipment:

ITEM	Complete	N/A	Notes
Check that refrigerator, freezer, and incubator doors are secured.			
Biosafety cabinets: surface decontaminate the inside work area, close the sash and power down. Do NOT leave the UV light on.			
Fume hoods: Clear the hood of all active experiments and close the sash.			
Check compressed gas cylinder levels for systems that will require gas supply (such as gloveboxes) and identify key personnel who will be responsible for replacing cylinders if needed.			
Check on any vacuum pumps that are used to maintain equipment during shutdown (ie. oil level).			
Review proper shut down procedures and measures to prevent damage from power surge of research equipment.			
Shut down and unplug sensitive electric equipment.			
Tissue culture incubators: Ensure that the power supply to the incubator is switched off and discard culture dishes/flasks, disinfect with 70 % ethanol solution, and empty any water trays associated with the equipment.			

If the incubator is equipped with an automatic disinfection program, run it overnight, following the manufacturer's instructions.			
Bacteriological incubators: Ensure that the power supply to the incubator is switched off, remove any culture dishes and wipe down the incubator with 70% ethanol solution.			

Decontamination

ITEM	Complete	N/A	Notes
Decontaminate areas of the lab as you would do routinely at the end of the day.			
Decontaminate and clean any reusable materials that may be contaminated with biological material.			

Waste Management:

ITEM	Complete	N/A	Notes
Collect and properly label all hazardous chemical waste in satellite accumulation areas (SAAs). Segregate incompatible chemicals by means of a physical barrier (e.g., plastic secondary bins or trays). Refer to the EHS website to help identify how all laboratory waste streams should be collected, packaged, and managed in the lab			
Submit a Waste Collection Request for chemical hazardous waste to be collected			
Biological waste: Disinfect and empty aspirator collection flasks.			
Collect all solid biological waste in appropriate containers and place out for collection as per your building's procedure.			
Collect radioactive material into the appropriate waste containers and request a radioactive waste pickup from EHS.			

Security

ITEM	Complete	N/A	Notes
Ensure all lab entrances are secured. Ensure key personnel who will support critical functions have appropriate access.			
Where appropriate, ensure windows are closed.			
Secure lab notebooks and other data.			
Secure any laptops that are to remain in the lab.			
If Controlled Substances are needed during lab shutdown operations or other animal emergencies ensure that those performing the essential tasks know how to access.			

General Area

ITEM	Complete	N/A	Notes
Remove all perishable and open food items for the lab break areas, kitchenettes and personal spaces.			