

Laboratory Research Continuity Checklist*

Preparing:

ITEM/TASK	Complete	N/A	Notes
Identify all non-critical activities that can be ramped down, curtailed, suspended or delayed.			
Identify personnel able to safely perform essential activities.			
Ensure that individuals performing critical tasks* have been adequately trained and understand whom to contact with technical or safety questions.			
Cross- train research staff to respond to the laboratory in the event of an emergency involving critical equipment or operations.			
Avoid working alone, whenever possible, particularly when handling hazardous materials. Work out a schedule so the Principal Investigator/responsible researcher knows who is working in the laboratory. Consider working during only normal business hours if possible as resources to respond may be decreased during this time.			

***Critical Task** -includes any task required to maintain experimental components that are unable to be delayed/placed in long-term storage or is currently in progress

Communications and IT:

ITEM/TASK	Complete	N/A	Notes
Create contact list including all lab personnel, Principal Investigator/responsible researcher, lab administrative director, research operations manager, and building manager.			
Ensure the contact list is saved where it can be remotely accessed by everyone in the lab. Include home and cell phone numbers.			
Test your phone tree or email group to facilitate emergency communication among researchers and staff.			
Verify and update, as necessary, Emergency Contact information posted outside of your laboratory entrance and on any critical equipment. While there is no guarantee, in the event of critical equipment failure, emergency contact information may enable the University to contact a researcher.			
Identify computing resources required to continue working remotely. Reach out to your local IT support team and determine any special steps required to make these resources securely			

available to your remote location. Implement use of VPN as needed.			
Back up and secure critical data.			

Shipping/Receiving:

ITEM/TASK	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.			
Contact loading dock/mail services personnel to notify them of any expected incoming shipments.			
If it is critical to order RAM, please notify radiation safety radsafety@usc.edu, so they can receive and process packages.			

Research and Materials:

ITEM/TASK	Complete	N/A	Notes
Terminate unattended research operations, especially those involving hazardous materials. Be aware that emergency response capabilities may be concurrently impacted.			
Freeze down any biological stock material for long term storage or establish a plan for maintenance.			
Consolidate storage of valuable perishable items within storage units that have backup systems.			
Securely store all temperature-sensitive items into appropriate refrigerators/freezers.			
Test remote monitoring devices (where installed), and ensure personnel are identified to respond to notification events.			
Fill Dewars and cryogen containers for sample storage and critical equipment.			
Establish a plan to support critical equipment such as freezers, CO2 incubators and liquid nitrogen cell storage Dewars.			
Consult with the DAR about current directives for animal care and access to animals in case of emergency needs.			
Securely store all chemicals and radioactive materials in cabinets or safe areas; provide secondary containment for chemicals as necessary prior to leaving the laboratory; perform a thorough check of the common areas (e.g., cold rooms, shared equipment spaces); and ensure hazardous waste containers are closed.			

Ensure that all items are labeled appropriately. All containers of materials must be labeled with the full name(s) of their contents and hazards.			
Remove all chemicals and glassware from benchtops and fume hoods and store in cabinets or appropriate shelving.			
Labs shall evaluate their reactive chemicals stage and submit waste pick-up requests prior to Lab shut-down. Hazardous Materials Division will continue to process incoming waste requests via EHSA. Clearly identify all chemicals that require hazmat pick-up and ensure a chemical waste label is added to each container.			
Collect contents of any acid/base baths and request waste pickup.			
Decontaminate the inside surfaces of biosafety cabinets, close the sash and power down. Do not leave the UV light on.			
Close and lock all controlled substance storage cabinets; reconcile inventory and other relevant logs, this includes all Controlled Substance (CS) dilutions. If CS are needed in the vivarium, keep the lock box in secured/locked room in the vivarium so that travel between the two building with CS is minimized.			
All CS waste disposal will be halted until laboratory resumes normal operations.			
Dispose of all sharps and regulated medical into appropriate containers and stage waste/containers for proper disposal; empty and disinfect aspirator collection flasks. Hazardous Materials Division will continue routine biohazardous waste pick-ups			
Ensure all radioactive materials are appropriately stored inside of a locked lab or stored in a locked container. If you need to transfer RAM to another location, please consult with Radiation Safety first: radsafety@usc.edu			
Assign essential personnel to come into the laboratory to ensure the proper maintenance of all research materials (cells, tissues, etc..).			
Remove food or other perishable consumables from the labs			

Physical Hazards:

ITEM/TASK	Complete	N/A	Notes
Ensure all gas valves are closed for buildings that still use natural gas. If available, shut off gas to area.			

Turn off appliances, computers, hot plates, ovens, and other equipment. Unplug equipment if possible.			
Check that all compressed gas cylinders are secured and stored in an upright position with straps, chains or base stands. Remove regulators and use caps. Verify this in spaces where gas cylinders are utilized in common areas.			
Elevate equipment, materials and supplies, including electrical wires and chemicals, off of the floor to protect against flooding from broken pipes.			
Inspect all equipment requiring uninterrupted power for electricity supplied through an Uninterrupted Power Supply (UPS) and by emergency power (emergency generator).			

Equipment:

ITEM/TASK	Complete	N/A	Notes
Check that refrigerator, freezer, and incubator doors are tightly closed and operating normally.			
Fume hoods: Clear the hood of all hazards and shut the sash. Turn it off if it will not be in use.			
Review proper shut down procedures and measures to prevent surging.			
Shut down and unplug sensitive electric equipment.			
Confirm that critical equipment is connected to emergency power or UPS.			

Decontamination:

ITEM/TASK	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/TASK	Complete	N/A	Notes
Continue to collect hazardous waste into properly labeled waste containers. Choose appropriate waste containers for the waste stream, incompatible waste shall be segregated.			
Submit a waste pick-up request for all hazardous waste generated, especially for hazardous waste that is approaching the 9-month accumulation period.			

All regulated biohazardous waste shall be disposed of in appropriate containers provided by Hazardous Materials Division. Weekly pick-ups will continue as scheduled			
Collect radioactive material into the appropriate waste containers and stage in a safe area. Submit a RAM waste pick-up for urgent service only.			

Security

ITEM/TASK	Complete	N/A	Notes
Lock all entrances to the lab. Ensure key personnel who will support critical functions have appropriate access.			
Ensure windows are closed.			
Secure lab notebooks and other data.			
Take laptops home.			

Please contact Lab Safety (labsafety@usc.edu) with questions about how to secure hazards or safely suspend research operations in your laboratory.

** Based on the example from Columbia University and targeted to laboratories and bench science. Please adapt the checklist to your research needs/conditions specifically.*