

University of South Alabama

Laboratory and Studio Ramp-Down and Closure Guidance

During a pandemic event it may be necessary to partially or completely close laboratories on the USA campus. The purpose of this document is to provide guidance for research laboratories during a pandemic but the checklist is generally appropriate for natural disasters and most non-clinical laboratories.

The checklist provided below can be used at any time but it is critical to follow when the University is operating in a Level 3 Emergency Plan Response Level and a WHO Phase 5 and 6.

In order to continue research and other laboratory activities during a “Shelter in Place” situation, when determined by the Governor or closure by University leadership, the activities must be **Essential** or **Moderately Essential** and approved in writing by:

1. Dean of the College and,
2. Senior Associate Dean of the College of Medicine for College of Medicine, or
3. Vice President for Research and Economic Development.

Laboratory or Studio work deemed **Non-Essential** during a pandemic should go through the Closure Process.

The office of the Vice President for Medical Affairs for College of Medicine or the Vice President for Research and Economic Development for all other Colleges/Schools, will review requests for Essential and Moderately Essential Laboratories to remain open and will maintain a log of which laboratories are open or partially open.

Any laboratory or studio not deemed Essential or Partially Essential must remain closed until the “shelter in place” or other closure notice is revoked.

There are three basic levels of Laboratory Operations:

Essential: The laboratory is operational and carrying out work that is relevant to the Pandemic or because the long term cost or loss of vital instrumentation renders it not feasible to shut down entire laboratory operations. An example is turning off an NMR or glass blowing studio. There is the possibility that it may not be possible to bring the facility or instrument back into operations without serious complications. Other criteria might include:

- Activity that if discontinued, would generate significant data and sample loss,
- Activity that if discontinued, would pose a safety hazard,
- Activity that maintains critical equipment in facilities and laboratories,
- Pandemic event response related activity that has a timeline for deployment that could address the current crisis,
- Activity that has US government-mandated security and access requirements, cannot be performed remotely, and whose activity is deemed critical by the US government,
- Clinical trial activity that if discontinued would negatively impact a patient's care,

- Maintenance of the Vivarium to assure animal health.

Moderately Essential: Some laboratories may need to remain partially operational to support University activities, or on a limited basis, continue sponsored research activity. Examples include:

- Activity necessary for delivery of remote instruction,
- Activity that maintains critical biological samples and/or non-vertebrate animal populations,
- Activities requested by a US Government sponsor to continue during the Pandemic,
- Important research but unable to maintain social distancing so should be restricted,
- Laboratories that are not essential to operate but must maintain equipment that use liquid nitrogen, hydrogen, gas cylinders or other renewable resource.

Non-Essential: Non-essential laboratories are critical for the research, scholarly and creative activities of the University. However, during a pandemic health event it may be detrimental to the health and safety of our faculty and students to remain open. In that instance, the checklist, as appropriate, should be implemented by the Lead Faculty and/or Researcher. Examples include:

- Fine arts, music and drama studios,
- Non-defense critical engineering laboratories unless instrumentation, maintenance would deem it Moderately Essential,
- Computer laboratories unless security would be seriously compromised,
- Physical sciences laboratories unless deemed Moderately Essential in order to maintain instrumentation,
- Life/biological/marine laboratories unless deemed Moderately Essential to maintain e.g. critical cell lines.

General Guidelines for Maintaining Laboratory Safety

At all times faculty, staff, students and post-doctoral fellows must maintain social distancing defined as no closer contact than 6ft and no more than 10 people in a laboratory at one time.

Other Guidelines include:

- If possible, schedule shift work so that no more than a minimum number of individuals are present at any time,
- Be especially vigilant about following all safety and security requirements,
- Follow all decontamination guidelines, e.g. hand washing,
- Only essential lab personnel should be present in the laboratory,
- Individuals should schedule break times that do not coincide with others in the Lab.
- Any non-laboratory-based work should be carried out remotely, e.g., data analysis, manuscript revisions,
- No computer work should be done on personal computers in the lab.
- Ensure proper supervision,
- Put in place a check-in/check-out process as recommended by The “General Guidelines for Maintaining Laboratory Safety”.

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Checklists for Laboratory and Studio Ramp-Down/Closure And Re-Entry Guidance

RAMP-DOWN AND CLOSURE CHECKLIST: SIX CATEGORIES

- General Safety and Security
- Animal Facilities
- Life and Biological Sciences
- Chemical and Physical Sciences
- Equipment

General Safety and Security

- _____ Distribute lab contact list.
- _____ Remove all perishable food from break areas, lockers and refrigerators.
- _____ Back up critical research data.
- _____ Ensure lab members have remote access to work off site.
- _____ Secure lab notebooks and other data.
- _____ Take laptops home, if allowable and feasible, or secure in locked locations.
- _____ Secure physical hazards, such as sharps.
- _____ Remove items from window ledges.
- _____ Shut off gas to area, if possible, and notify building safety coordinators and Central Utilities department.
- _____ Decontaminate areas of the lab as you would do routinely at the end of the day.
- _____ Lock all outer lab doors.
- _____ Update emergency contacts on outer doors.
- _____ 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.
- _____ Do not place any packages potentially containing dry ice in a walk-in cold

room or freezer.

_____ Implement use of VPN or remote access.

- Ensure researchers have remote access to data and essential computer programs.
- Back up computers and electronic notebooks.

Animal Facilities

Checklist for PI's who have animals housed in the vivarium:

- _____ When reasonable, cull your colony to only that which is essential.
 - If you have not done this, identify essential animals and clearly mark cages with *save*. Mark cages that can be culled with “X”.
 - If you do not cull or mark cages, DCM will attempt to choose which cages are essential and may cull your colony without your input.

- _____ Ensure your contact information is clearly posted in the animal room.
- _____ Reinforce which essential functions your staff provides for your colony.
- _____ Ensure staff understands when there is the need for medicated food or water, consider:
 - Weaning,
 - Post-procedure care or tumor burden monitoring.

- _____ Please leave detailed instructions for those items which could affect animal welfare (i.e. medicated food or water), and email these instructions to Michele Schuler mschuler@southalabama.edu and Leigh Ann Wiggins lawiggins@southalabama.edu.

- _____ Make sure that the resources to provide these essential functions are available to DCM staff should your staff become unable to provide them.

Specific Guidance for DCM staff:

- _____ As per Guidance from CDC and the University of South Alabama it is imperative that no staff report to work if you are febrile or have flu-like illness or cough.

- _____ Contact Michele or Leigh Ann Wiggins if any of the following applies and they will determine if it is safe for you to report to work:
 - A close contact is ill with symptoms not consistent with COVID-19 illness,

- You have had ANY contact (even limited) with a person who has a positive COVID-19 test or who has flu-like illness,
- You have entered a hospital or urgent care facility for ANY reason.

_____ Once at work, maintain at least a 6-foot distance from all personnel.

_____ If more than one person is working, one staff member should do AM obs and change-outs of clean rooms and then move to clean cage-wash. The other should do AM obs and change-outs of dirty rooms and move to dirty cage wash.

Life and Biological Sciences

- _____ Ensure all items are labeled appropriately.
- _____ When feasible, freeze any biological stock material for long-term storage.
- _____ Consolidate storage of valuable perishable items within storage units that have backup systems. Fill dewars and cryogen containers for sample storage and critical equipment.
- _____ Remove infectious materials from biosafety cabinets and autoclave, disinfect, or safely store them as appropriate.
- _____ Decontaminate and clean any reusable material that may be contaminated with biological materials.
- _____ Disinfect and empty biological waste in aspirator collection flasks.
- _____ Collect all solid biological waste in appropriate containers.
- _____ Dispose of waste properly.
- _____ Ensure cryogenic liquids are properly vented.
- _____ Designate essential employees to take care of animals in breeding colonies, chronic treatment regimens, etc.
- _____ Fume hoods;
 - Clear the hood of all hazards and shut the sash.
- _____ Turn off UV light.
- _____ Contact Michele Schuler at mschuler@southalabama.edu about current animal care requirements.

Chemical and Physical Sciences

- _____ Consolidate storage of valuable perishable items within storage units that have backup systems. Fill dewars and cryogen containers for sample storage and critical equipment.
- _____ Properly secure all hazardous materials in long-term storage. Use secondary containers for any chemicals stored on the floor.
- _____ Ensure all flammables are stored in flammable storage cabinets with secondary containment. Ensure all items are labeled appropriately.
- _____ Remove all chemicals and glassware from benchtops and fume hoods and store in cabinets or appropriate shelving.
- _____ Submit a collection request for all chemical waste items.
- _____ Ensure all hazardous chemical waste containers are securely closed, properly labeled and stored by compatibility.
- _____ Use secondary containers for wastes not stored in storage cabinets.
- _____ Collect contents of any acid/base baths and request waste pickup.
- _____ Confirm inventory of controlled substances and document in log book.
- _____ Secure controlled substances.
- _____ Check that all gas cylinders are secured and stored in an upright position.
- _____ Replace gas cylinder regulators with caps.
- _____ Ensure cryogenic liquids are properly vented.
- _____ Radiological Materials:
 - Ensure all items are labeled appropriately.
 - Secure/lock radioactive materials inside a refrigerator, freezer, lockbox or cabinet in accordance with normal laboratory procedure.
 - Store all radioactive waste in an approved radioactive waste container and secured it properly in accordance with normal laboratory procedure.

Electrical equipment

- _____ Review proper shut down procedures to prevent surges.
- _____ Cover and secure or seal vulnerable equipment with plastic after power has been disconnected.
- _____ Check that essential equipment is on emergency power.
- _____ Incubators:
 - Consider the availability of CO₂, and plan to consolidate and shut down unneeded incubators to conserve supplies.
- _____ Fridges/Freezers/-80s
- _____ Check that essential equipment is on red power supply for emergency power. NMR/SQUID/other superconducting devices; MRI/other magnets requiring cryogenics:
 - Contact cryogen suppliers to make any special delivery arrangements/changes necessary.
- _____ Lasers:
 - Turn off all lasers and remove the key from the power source.
- _____ Shut down microscopes, hot plates, sterilizers, water baths, and all other equipment that is not being used, and unplug from energy source, if possible.
- _____ Assess other equipment for issues regarding turning off power, providing needed maintenance/supplies, or determining additional specific needs:
 - Gas Chromatography/MassSpec equipment
 - PET scanners ○ Electron microscopes, confocal microscopes
 - Irradiators
 - Cleanrooms
 - Glove Boxes

GENERAL RE-ENTRY GUIDANCE

If you discover a hazardous condition that poses a threat to you or to others, such as a hazardous material release, isolate the hazard (e.g., close the door to the lab), notify occupants in the area, activate the appropriate incident response action, exit the building if required, and call Safety and Environmental Compliance at 251-460-7070.

Check equipment that may have been affected by a power disruption as soon as possible. Keep refrigerator and freezer doors closed until temperature levels return to normal. Check for leaks that may have occurred when the temperature was compromised.

If any damage has occurred as a result of the closure, submit an insurance claim to ESSR Risk Management within 24 hours of discovering the loss. Insurance claims will only be considered if they are filed within 60 days of the closure event.

Do not use laboratory equipment, such as a chemical fume hood or biological safety cabinet if the alarm is sounding or the equipment is not working properly. Contact Safety and Environmental Compliance at 251-460-7070.

Conduct a hazardous material inventory to ensure no loss of material (chemicals, radioactive material stocks, toxins, controlled substances, etc.).

Report hazardous material incidents or any missing materials, to Bill Guess, Director, Safety and Environmental Compliance, at 251-460-7070 or wguess@southalabama.edu and other institutional officials, as necessary. Follow laboratory incident response plans.

Notify Central Utilities before turning the gas back on in any building or area.