

Guidance for Continuity of Operations in Research Labs

University officials continue to closely monitor COVID-19 and are actively engaged in daily planning in an effort to inform and reduce the risk to faculty, staff, students and visitors from the virus. In conjunction with the university level planning, individual research labs should begin planning for continuity of operations in anticipation of possible disruptions to normal activities. Due to the unique research carried out by different labs, it is important that each lab plan for potential disruptions based on the nature of the work conducted. Lab-specific plans should coincide with department level continuity plans (i.e. identification of critical operations, essential personnel, etc.). Below are some general guidelines to assist labs in developing continuity plans. For questions or concerns, contact your department / college level leadership or [Occupational and Environmental Safety \(OES\)](#).

Administrative

- Leadership and succession: Determine who is authorized to make decisions within the group and for what. Delegate responsibilities as needed and determine primary and secondary responsible persons. Ensure all members understand their responsibilities and are provided with the knowledge and resources to make decisions. Provide cross-training to lab members for critical operations.
- Contact information: ensure all contact information for group members is up to date and provided to all.
- Essential personnel: If certain lab operations cannot be halted, designate personnel to attend to these operations during any potential disruption (i.e. cell cultures, animal studies, etc.). Ensure that department leadership is aware of these operations. Ensure essential personnel are aware of hazards and emergency procedures.
- Communications plan: Establish protocols to communicate with members and essential personnel via email, text, phone, etc. Have regular updates for lab personnel and provide for free exchange of concerns and important information.
- Establish plans for long and short term disruptions in lab operations. Establish start up plans for resumptions of activities.
- Security plan: Ensure lab security by locking doors and storage cabinets. Have designated / essential personnel perform a security

check of the lab when entering and leaving. Labs may want to implement a 2-person rule for any essential operations during modified operations. Report any security concerns to the Clemson Police Department.

- Emergency planning: Update emergency procedures for power outages, etc. Designate essential personnel to respond to such emergencies and ensure lab integrity.
- Hibernation plan: Establish protocols to hibernate the lab entirely (in event of long term disruption) to include shut down of all instruments, storage of chemicals, halt of experiments, waste storage or removal, etc.

Logistics

- Regular scheduled deliveries and pickups: Place a hold on any regularly scheduled deliveries or pickups (unless needed) including compressed gasses, liquid nitrogen, waste pickups, etc.
- Supply shortages: Anticipate supply shortages of common items such as gloves, masks, etc. Some chemicals may be difficult to acquire such as those used for disinfection or manufacture of medical items.
- Postpone any scheduled maintenance to lab equipment.
- Data backup: Ensure all data is backed up to several sources and access is provided to personnel as needed to work remotely.

Operations

- Equipment shutdown: Power down all non-essential equipment. Essential equipment (such as sample freezers, NMR, etc.) should be on backup power systems and placed into standby mode (if applicable). Ensure personnel are designated to check items as necessary. If possible, install remote monitoring devices for essential equipment.
- Chemical storage: Properly cap / seal all chemicals and place into proper storage locations. All gas cylinders should be shut at the source. No chemicals should be left on the bench or in hoods. Flammables should be stored in flammables cabinets. Contact the [Chemical and Lab Safety Manager](#) with any questions or concerns.
- All experiments should be completed and equipment / labware cleaned and properly stored. Cease all unattended, non-essential experiments.

- Biological samples / animals: Designate essential personnel to monitor and manage cell cultures, biological samples, animals, etc. as needed. Have all biological waste removed or properly stored and declared for pickup. If biological waste has the potential to putrefy, ensure it is stored in a cold room / freezer until pickup. Contact the [Biological Safety Officer](#) with any questions or concerns.
- Radioactive materials: Ensure all radioactive materials are properly stored / secured according to university protocols. Contact the [Radiation Safety Officer](#) with any questions or concerns.
- Hazardous waste: Have all waste picked up or sealed / closed and placed in appropriate storage (i.e. flammable waste in flammable cabinet, etc.). Hazardous waste in storage can be declared for pickup. It is advised to declare hazardous waste for pickup before large volumes accumulate. Contact the [Hazardous Materials Manager](#) with any questions or concerns.

Any university-wide event that will necessitate modified laboratory operations will be communicated to researchers by university officials. As this may provide only minimal time to prepare the lab, prior planning for operational disruption is critical. During modified operations, no laboratory equipment, chemicals, apparatuses, etc. may be transported off campus for use. The resumption of normal campus operations will also be communicated by university officials via email, text, etc.