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**Guidelines for Reopening Laboratories and Resuming Research Operations**

Resuming lab operations at UofSC will require planning and a coordinated effort. The emphasis will be on personnel health and safety. Research laboratories will reopen in accordance with guidance from University officials. The following checklist and guidelines should be evaluated when resuming research laboratory operations after the UofSC closure. These same guidelines should be evaluated by laboratories approved to conduct critical on-campus research activities.

**Public Health Considerations and Logistics to Safely Reopen Laboratories**

* The first phase of return should include only those lab personnel who are necessary to perform essential tasks, including the task of preparing the workspace and verifying that it is ready for others to return, and those who cannot effectively perform their roles from home and are critical to on-campus laboratory operations.
* All laboratory personnel are to maintain social distancing at least 6 feet apart. Workspaces must be arranged to support adequate distance between employees. Consider not working directly across from others when using benchtop work areas. Plan navigation paths around the lab to maintain social distancing, especially when routinely moving around to use shared fume hoods, benches, and other equipment. The return of lab personnel should be staggered to reduce the number of individuals working in the laboratory at the same time.
* Common areas where individuals are likely to congregate should be restricted to single use whenever possible. Meetings should be conducted via conference call or video conferencing whenever possible. Consider posting a laboratory work schedule that alternates days for personnel and limits face-to-face interactions when possible.
* Principal Investigators should work closely with their lab staff to determine how to maximize productivity while minimizing health risks. It is important to recognize the unique needs and circumstances that have been created by the closing of schools, daycares, and summer campus. Plans should accommodate individuals who are at higher risk for exposure to COVID-19 or that have caretaking responsibilities for family members.
* Develop a communications plan and establish a “buddy system” when using hazardous materials during a reduced workforce. Avoid being alone in the laboratory when handling hazardous materials.
* Wear face covering that cover your nose and mouth to reduce the spread of COVID-19. N-95 respirators should not be worn in labs for COVID-19 protection unless approved for COVID-19 research. Wearing face coverings may limit the function of another type of PPE. For example, a face covering may cause fogging of safety glasses or face shields. If this is the case, alternative safety glasses and face shield with anti-fog protection may need to be obtained to prevent the fogging of eye protection from obstructing vision and creating an increased risk.
* Routinely clean and disinfect frequently touched surfaces, especially those that are touched without gloved hands, such as keyboards, doorknobs, telephones, etc. Alcohol wipes may be needed for sensitive equipment. Wash hands when entering the laboratory and before exiting the laboratory. Ensure you have obtained appropriate safety supplies for personnel in your lab such as hand sanitizer, disinfectants, or face coverings.
* Avoid sharing PPEs if possible. Consider designating tasks that require special PPEs to select individuals. If shared PPEs can be sanitized, do so before and after one person’s use. In some cases, an inner PPE like a nitrile glove can be used to avoid cross contamination when using shared gloves such as autoclave or cryogen gloves.
* Establish daily requirements for reporting to work in accordance with UofSC guidelines. This may include taking your temperature or completing a questionnaire. Leave campus if you experience symptoms and notify your supervisor. Stay home if you become ill and follow UofSC and departmental policies for returning to work.

**Days 1 & 2 – Safely returning to the laboratory operations after an extended shut-down requires time and attention. Perform the following activities with a second person in case an immediate problem arises that must be addressed.**

* Perform a thorough walk-through of all assigned research space including shared rooms to check for water supply/leaks, chemical spills and that that nothing is missing or damaged.
* Pour water on dry traps and floor drains to avoid sewer gas smells that may be mistaken for a gas leak.
* Ensure you have adequate hand soap, paper towels, hand sanitizer, face coverings, and disinfectant for decontaminating work surfaces and equipment.
* Sanitize all frequently touched surfaces such as doorknobs, computer keyboard, telephones, and others. Clean any surfaces or areas that may be unsanitary, contaminated, or in poor condition.
* Dispose all hazardous waste (chemical, radioactive, biological) that were left remaining in the laboratory before the closure by requesting [pick-up online](https://sc.edu/about/offices_and_divisions/ehs/occupational_and_environmental_safety/environmental_management/hazardous_waste_management/hazardous_waste_pick-up_request/index.php).
* Inventory personal protective equipment (gloves, safety glasses, lab coats, etc.) and re-order as needed. Plan ahead when placing orders since stocks for some types of PPE may be in short supply or have shipping delays. Take note of applicable supply chain issues and limited availability (e.g. common reagents, consumables).
* Check equipment (e.g. freezers) that may have been affected by a power disruption to ensure they are still working, and samples have not been compromised. Keep doors closed until temperature levels are normal.
* Review equipment manuals for safe startup instructions. Review equipment state and safely release or mitigate any stored-up energy sources. Power on equipment, computers, and instrumentation one at a time and verify that they work.
* Confirm chemical fume hoods and biosafety cabinets are operating properly. Fume hood airflow can be visually inspected using the Kimwipe test. Report hood problems to the Facilities Department and EH&S.
* Flush water lines especially those supplying laboratory equipment.
* Verify gases centrally supplied through building pipes are available (i.e., compressed air, nitrogen, natural gas).
* Check fire extinguishers and make sure the pressure is in the green zone.
* Flush all eyewash stations until the water runs clear.
* Investigate alarms (fume hoods or other equipment) and report any problems.
* Inspect all chemicals and storage areas to verify that containers are properly stored (e.g., compatibility), identify any expired chemicals (e.g., peroxide formers), and verify no hazardous materials are missing.
* Check the first aid kits and chemical spill kits are available and fully stocked. Restock supplies if needed.
* Create a schedule for use of shared equipment to ensure social distancing and communicate this schedule to all lab members. This may include schedules for using fume hoods, biosafety cabinets, and autoclaves.
* Review any shared facility restrictions (e.g. autoclaves, microscopy centers, service labs, core facilities) and plan accordingly. Note delays or restricted schedules. Set up procedures and supplies for equipment cleaning.
* Review your laboratory safety plans and make any updates needed to contact lists, SOPs, or risk assessments.
* Perform a laboratory safety self-inspection using [this checklist](https://sc.edu/about/offices_and_divisions/ehs/research_and_laboratory_safety/chemical_and_lab_safety/lab_safety_inspections/index.php) to ensure that there are no other outstanding safety or compliance concerns that need to be addressed to promote a successful restart of lab operations.

**Assistance with issues identified:**

Environmental Health and Safety (803) 777-5269, 351-9874 - Fume hood checks, fire extinguishers, safety concerns

Department of Facilities (803) 777-9675 – Fume hood and eyewash repairs, utilities, building-related concerns