Environmental Health and Safety
793 Marietta Street, NW
Atlanta, Georgia 30318-0465
PHONE 404-894-4635
FAX 404-894-5042

EMERGENCY LABORATORY SHUTDOWN GUIDANCE

1. PURPOSE

This document serves to provide instructions for emergency situations requiring the temporary shut-down of Georgia Tech (GT) laboratories.

2. SCOPE

This document applies to all Georgia Tech, Georgia Tech Research Institute (GTRI), and affiliated research entities such as ATDC, T3 Laboratories, etc.

3. PROCEDURE

All laboratories should have a laboratory-specific plan in place for emergency situations. All items below are required at a minimum but are not exhaustive:

- Close sash on chemical fume hoods and Biosafety Cabinets
- Store, label, and secure hazardous materials (biological, radioactive, chemical) in the appropriate location(s) including associated wastes. Ensure all radioactive sources are appropriately shielded.
- Ensure caps on all bottles of chemicals are secure and segregated appropriately, including hazardous waste.
- Turn off all non-essential electrical devices. Ensure all refrigerators and freezers are left on and that doors are secure. Check disconnects of large lasers, high-voltage equipment, etc. Ensure that essential equipment is plugged into power receptacles supplied by the emergency generator (usually orange or red).
- Turn off all gas cylinders at the tank valve. Note: If a low flow of an inert gas is being used to "blanket" a reactive compound or mixture, then the lab worker may want to leave the flow of gas on. This should be part of a pre-approved, written, posted standard operating procedure for this material or process. Any gas delivery system or process that is monitored via our Dangerous Gas Monitoring System should be terminated appropriately.
- Ensure all reactions and experimental procedures are appropriately terminated. Including vacuum work, distillations, glove boxes used for air or moisture sensitive reactions, and any other reaction in progress.
- Any reaction that cannot be suspended should be conducted in a fume hood (when possible) and labeled according to the GT procedure outlined here.

- Ensure all containers of cryogenic liquids are vented to prevent the buildup of internal pressure. Check all cryogenic vacuum traps (Nitrogen, Carbon dioxide, and solvent), as the evaporation of trapped materials may cause dangerous conditions.
- It is important to remember that some equipment does not shut down automatically – such as large cryogenic magnets, x-ray diffractometers, and other pieces of equipment. Each laboratory should determine how these types of equipment will be handled based on the nature and duration of the emergency.
- If experimental animals are in use, please coordinate with PRL staff to determine a lab-specific plan.
    - Point of contact: Nic Parnell, Ph.D.

      Nicholas.parnell@biology.gatech.edu
- Ensure the lab contact card is accurate and up to date, that lab lights are turned off, and that exterior doors are locked upon exiting the lab.

4. DOCUMENTATION/NOTIFICATION

Campus-wide emergency: Follow all institute guidance.

Laboratory/Building-specific emergency: Follow the GT Redbook.

Notify department and EHS that the laboratory has been shut-down: lab-chemsafety@gatech.edu

5. ADDITIONAL RESOURCES

www.ehs.gatech.edu

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LABORATORY RAMP-DOWN CHECKLIST

PREPARING

Item	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.			

COMMUNICATIONS

Item	Complete	N/A	Notes
Create a Contact List (home and cell numbers) for the Principle Investigator, all lab personnel, lab and/or department administrator, Building Manager, GT EHS emergency phone number (404-216-5237), and GT Police phone number (404-894-2500). Ensure this can be remotely accessed by all members of the Contact List.			
Ensure the Emergency Contact card (Pink Card) on the exterior of the lab is up to date and accurate.			

SHIPPING / RECEIVING

Item	Complete	N/A	Notes
Do not order any new research materials except those items needed to support minimal critical functions. Coordinate with lab personnel and/or Building Manager to receive and secure any incoming materials.			
Cancel orders for non-essential research materials if they have not yet shipped.			
Do not place any packages potentially containing dry ice in a walk-in cold room or freezer.			

PHYSICAL HAZARDS

Item	Complete	N/A	Notes
Ensure all gas valves are closed.			
Evacuate/purge all gas lines – particularly those containing dangerous gases (flammable, corrosive, toxic, etc.)			
Secure all gas cylinders and ensure all are stored in upright position. Remove regulators and use caps.			

Elevate equipment, materials, and supplies (including electrical wires and chemicals) off the floor in case of flooding.			
Inspect all equipment requiring uninterrupted power for electricity supplied through an Uninterrupted Power Supply (UPS) and by emergency power (emergency generator).			

RESEARCH MATERIALS

Item	Complete	N/A	Notes
Ensure all biological materials are stored and secured.			
Consolidate storage of valuable perishable items within storage units/freezers that have backup power supplies/systems in place.			
Fill dewars and cryogen containers for sample storage and critical equipment.			
Properly secure and store all hazardous materials.			
Ensure all flammable liquids are stored in flammable storage cabinets.			
Ensure all items are labeled appropriately. Working stocks of materials must be labelled with full name of contents and all hazards.			
Remove all chemicals and glassware from benchtops and fume hoods and store in cabinets or appropriate shelving.			
Confirm inventory of controlled substances and consider additional measures to restrict access.			
Secure physical hazards such as sharps.			
Ensure all radioactive materials (RAM) are locked/secured inside a refrigerator, freezer, or lockbox. If you need to transfer RAM, please contact the RSO (Steve Grimm) @ (404) 234-4360.			

WASTE MANAGEMENT / REMOVAL

Item	Complete	N/A	Notes
Request waste pick-ups via EHSA for peroxide forming compounds or other chemicals (i.e. piranha etch) that may become unstable over time.			
Collect contents of any acid/base baths into appropriate containers and request waste pick-up via EHSA.			
Collect and properly label all hazardous chemical waste in accumulation areas.			
Segregate incompatible chemicals by means of physical barrier (i.e. secondary containment). Request waste pick-up via EHSA if appropriate.			
Biological Waste: Disinfect and empty aspirator collection flasks.			

Collect all solid biological waste in appropriate containers. Request biological waste pick-up via EHSA if appropriate.			
Radioactive Waste: Collect RAM in appropriate containers. Request RAM waste pick-up via EHSA if appropriate.			

EQUIPMENT

Item	Complete	N/A	Notes
Check refrigerators, freezers, and incubator doors are tightly closed.			
Biosafety Cabinets: surface decontaminate the inside work area, close the sash and power down. Turn off UV lights. Ensure all biological materials have been removed and stored appropriately.			
Fume Hoods: Clear the hood of all hazards and close the sash.			
Shut down and unplug sensitive electric equipment.			
Verify that all oil baths have been turned off.			
Turn off appliances, computers, hot plates, ovens, and other equipment. Unplug equipment if possible.			

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.			
Perform weekly radiation contamination survey and document (if required).			

GENERAL

Item	Complete	N/A	Notes
Remove all perishable and open food items from lab break areas, lockers and personal spaces.			

SECURITY

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

If controlled substances are needed in critical activities or animal emergencies, ensure that those personnel have access.			