

Restarting Research Activities Safety Checklist

UW Safety Office and Office of Research and Economic Development
July 14, 2020

This general laboratory checklist intends to aid you and your research team as you plan to restart laboratory operations after a major disaster. This checklist will help to minimize potential disruptions and to ensure safety for all working in a research facility. For specific guidance in radiation, biological or chemical safety, contact the University of Wyoming Safety Office and the Office of Research and Economic Development.

	Review any ongoing experiments that were running during the hibernation that could have been affected by loss of electricity, water, or other services.
	<p>Ensure chemical fume hoods are functioning properly.</p> <ul style="list-style-type: none"> • If the fume hoods are on a schedule, confirm everyone in the laboratory understands the schedule • Check the certification date – it should have been certified within the last 12 months. If fume hood certification is expired, contact the UW Safety Office to arrange certification (307-766-3277).
	<p>Ensure biosafety cabinets are functioning properly.</p> <ul style="list-style-type: none"> • If the biosafety cabinets are on a schedule, confirm everyone in the laboratory understands the schedule. • Check the certification date – it should have been certified within the last 12 months. If the biosafety cabinet certification expired, contact the UW Biosafety Specialist (307-766-2723) to arrange certification.
	Ensure that all refrigerators, freezers, and incubators are functioning properly.
	Ensure any essential equipment that was on emergency power is functioning properly.
	Ensure any sensitive electrical equipment that was shut off and unplugged is functioning properly.
	<p>Review equipment operation safety.</p> <ul style="list-style-type: none"> • Review equipment manuals for safe startup instructions. • Review equipment state and safely release any stored-up energy sources. • Check inside of ovens/shakers for research materials such as tubes that may have been left behind. • Check for mold inside refrigerators, incubators and other equipment, Decontaminate if necessary. For extensive amounts of mold, contact the UW Safety Office. • Check inside incubators, refill water tray, if needed
	Ensure any unplugged non-essential electrical devices, particularly heat-generating equipment such as hot plates, stir plates, vacuum pumps, or ovens are functioning properly.
	Confirm all chemicals and glassware on the benchtops or stored in cabinets are still secured.
	Confirm dewars and cryogen containers used for sample storage and critical equipment are still filled and tubing intact.
	Confirm that storage of perishable items that used alternate cooling methods (e.g. liquid nitrogen, dry ice, etc.), vulnerable items that were put in storage units that have power backup systems, or items that were stored in duplicate locations are still secured and safe.
	Check to ensure containers of chemicals, biohazardous materials, radioactive materials, and hazardous waste are still properly labeled, closed, and secured in appropriate storage areas.
	Check infectious materials and toxins that were put away for storage are still secure.
	<p>Check all gas cylinders to ensure that they are still secured and valves closed.</p> <p>Ensure regulators are still not attached and caps are still in place on cylinders.</p> <p>Ensure natural gas lines in the laboratory are still closed.</p>
	Ensure that all water sources (e.g. circulating water baths, aspirators, etc.) are not leaking. Run water until it is clear.
	Return any elevated equipment, supplies, electrical wires, or chemicals that were off the floor to protect against flooding from broken pipes.
	Ensure animals used in your research have been cared for and safe.

	<p>If necessary, restore any backed up secure data and turn on non-essential/non-critical computers and equipment.</p> <p>Return stored laboratory notebooks and computers in areas that may have been impacted by possible broken water pipes.</p> <p>Return any secured laptop computers or other easy to remove electronic devices.</p>
	Remove any post related to the lab ramp down
	<p>Review safety procedures.</p> <ul style="list-style-type: none"> • Review/update any internal laboratory hazard analysis. • Review/update the Chemical Hygiene Plan, Radiation Safety Manual, Biosafety Manual, and any other Standard Operating Procedures.
	<p>Survey the laboratory for any unsafe conditions.</p> <ul style="list-style-type: none"> • Chemical leaks, spills, or releases. • Biological leaks, spills, or releases. • Supplies, equipment, glassware, and other items left out during the hibernation. • Manage any expired, outdated, peroxide-forming, self-reactive, or other reagents with a limited lifespan appropriately. • Secure, correctly label, and/or request a pickup of any hazardous wastes. • Manage any biological wastes appropriately.
	During the COVID-19 pandemic
	<p>Establish social distancing: of at least six feet.</p> <p>Face coverings are required in all indoor areas with the exception of being alone in one's office with the door closed.</p> <p>Locations where social distancing and face coverings are required:</p> <ul style="list-style-type: none"> • Shared office spaces, meeting rooms. • Break areas/food preparation areas. • Research laboratories. • Field locations when with more than one person. • Shared research spaces such as cold rooms, common rooms, any enclosed rooms <p>Explore and plan for flexible arrangements</p> <p>Consider social distancing strategies:</p> <ul style="list-style-type: none"> ○ Use remote collaboration tools when possible (i.e., video and phone conferencing tools), even for those onsite in the same office suite ○ Decrease density in shared office or workspaces, so that people are working at least 6 feet apart ○ Reevaluate assignments and activities that can be performed with reduced face-to-face interactions ○ Staggered use of shared equipment <p>Establish policies and procedures for cleaning and disinfecting.</p>
	Establish staggered schedules (AM vs PM, every other day, every other desk, etc.) for areas with insufficient space to maintain 6' distancing.
	<p>Review any shared facilities, such as microscopy areas, analytical laboratories, etc., for any use restrictions.</p> <ul style="list-style-type: none"> • Delays due to start-up procedures. • May have restricted schedules to accommodate social distancing. • Shared areas, rooms, equipment should be disinfected each time after use.
	<p>Prepare for supply chain disruptions and limited availability.</p> <ul style="list-style-type: none"> • Recognize that order placement may be slower as the volume of requests increases. • Plan for limited sales of high demand items.

	<ul style="list-style-type: none"> • Plan for limited Personal Protective Equipment availability (including N95 filtering facepiece respirators, face shields, gowns, over gowns, and gloves). • Plan for some reagents having limited availability. • Plan for some consumables having limited availability. • Communicate delivery instructions to vendors
	Review and revise communication plan including administrators, students and research staff Develop a standard operating procedure for the lab that incorporates all COVID-19 precautions that is shared and reviewed with all lab faculty, staff and students.
	Establish long-term strategies <ul style="list-style-type: none"> • Plan to freeze and maintain stocks of valuable research materials • Create contingency plans using minimal number of staff onsite • Establish shared data collection and analysis files using the institutional tools provided to ensure data security

	Biological Safety Restarting Research Checklist
	Occupational Medicine: For COVID-19 concerns utilize the UW COVID Command Center Hotline or email at 307-766-2683 or COVID19@uwyo.edu . Consider the following: <ul style="list-style-type: none"> • Questionnaire for those returning to work (re: COVID-19 infection, symptoms, family member sick, etc.) • Taking temperatures daily when enter the workplace? • Point person for COVID-19 concerns (questions, immunosuppressed, pregnant, over 60, policies, etc.) • How/where to isolate someone who becomes ill at work, who to contact, provide a mask, etc. • If someone is feeling sick before coming to work, who to contact, what to do
	Communicate with PIs and other managers return to work policies to be put into place, methods for social distancing, staggered shifts, working from home, temperature taking, how to isolate and deal with a sick employee, etc.
	Provide training/brochures/on-line/face-to-face to returning workers: <ul style="list-style-type: none"> • Need for social distancing, wearing face coverings, reporting symptoms, handwashing, keeping hands away from the face, cough etiquette, disinfection of commonly touched surfaces, how virus is transmitted, use of PPE, cleaning/disposal of PPE, etc. • Selection of disinfectants (from Selected EPA Registered Disinfectants: https://www.epa.gov/pesticide-registration/selected-epa-registered-disinfectants) depending on what is handled in the laboratory.
	Consider additional engineering controls to increase worker safety: <ul style="list-style-type: none"> • Increasing ventilation rates in the work environment. Contact UW Operations Facilities Engineering for adjusting ventilation rates through the UW Operations Service Desk at 307-766-6225. • Installing physical barriers, such as clear plastic sneeze guards. • Verify airflow in research facilities. Contact UW Operations Control Shop through the UW Operations Service Desk at 307-766-6225.
	Touch base with UW offices to review schedules and potential problems with service: <ul style="list-style-type: none"> • Biohazardous Chemical or radioactive waste, through the UW RMMC at 307-766-3698 • Biological safety cabinet certification 307-766-2723 • Chemical fume hood certifications certifier 307-766-2649 • PPE provider, respirator testing through Grand Avenue Urgent Care. Call the UW Safety Office to answer questions at 307-766-3277.

	<ul style="list-style-type: none"> • Autoclave maintenance provider • Laundry services • Liquid Nitrogen, CO2, dry ice vendor – Communicate with Procurement to ensure that vendors are notified of the University’s requirement such as the use of cloth face covering, social distancing, etc.
	<p>Explore alternatives for respirator shortages</p> <ul style="list-style-type: none"> • PAPR instead of N-95, elastomeric respirators • Reuse of N-95 with approved methods (e.g., rotation, hydrogen peroxide, etc.), provide instructions

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