

OFFICE OF CAMPUS OPERATIONS AND FACILITIES (COPF)

Biosafety and Biosecurity of

Higher Risk Biosafety Level (BSL) 2 Lab Entry

Introduction

COPF personnel may need to service laboratory spaces that are deemed as Higher Risk BSL 2 spaces. These laboratories deal with research/instructional use of biological materials. When a laboratory requires maintenance, repair or emergency response, support staff and/or contractors may risk being exposed to residual materials in these "contaminated locations." COPF support staff and contractors who are required to conduct repair and maintenance activities must communicate with laboratory personnel before beginning work. Advance project planning and effective communication will help to ensure that everyone involved understands all the potential hazardous implications of the work, and can take appropriate steps to reduce potential risks. This document assigns responsibilities to facilities personnel, support staff, and laboratory researchers involved in maintenance, repair, or contact with potentially contaminated systems. In order to minimize risks associated with these activities, support staff/contractors, laboratory occupants, and other personnel must fulfill the following responsibilities.

Biosafety level 2 – Research laboratory personnel will inform COPF personnel, DPS, and Contractors of any hazards or biosecurity risk present. The research personnel are required to remove any hazards or secure biosecurity risk include biological, radiation and chemical items and their wastes before COPF can perform any tasks as well as protect regulated, biological materials (biosecurity). Appropriate PPE, depending on the task, will be worn upon entry.

- **Gloves:** Nitrile or other disposable gloves or similar underneath reusable full arm utility rubber gloves or puncture-resistant gloves.
- **Eye protection:** Appropriate protective eyewear such as safety glasses or goggles. Side shield safety glasses are to be worn while using any hand tool or power tool. Safety goggles may be necessary if aerosols or vapors are generated. Face shields if splashes anticipated.
- **Respirator:** If work will create potential exposure to particulates or aerosols. An evaluation should be done to determine the need for respiratory protection.
- **Other:** Disposable coveralls, hardhats, hearing protection, and other personal protective equipment may be required. Closed toe non-absorbing shoes/rubber boots, disposable sleeves or coveralls such as Tyvek or non-permeable apron based on professional discretion may be required.

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Call the Biosafety Program for questions and/or guidance.

When submitting a work request (eFacilities AiM system), indicate the designated biosafety level of your laboratory. Include the name and cellular contact number of the person that can be notified to follow up for additional information, possible escorting of COPF, and training of COPF staff of potential issues within the laboratory to be cautious of.

If there is an emergency, an emergency call is placed with Work Coordination

- 956-7134 between 7:00 AM - 4:00 PM (Monday thru Friday, excluding holidays)
- 956-6911 (Campus Security) after regular business hours.

The laboratory personnel must provide detailed information of the potential hazards that exist in the laboratory. **Remember, the research personnel must mitigate the hazard or secure the biosecurity risk prior to support staff entering.**

Three levels of Higher Risk Biosafety Level 2 labs.

Restricted - No one may enter (unless trained, show identification, escorted at all times) (e.g. Select Agent Lab).

Escorted - Persons must meet with the PI or Responsible Party first and then be escorted to the work area (e.g. Virus lab).

Acknowledge Entry - Persons must meet with the PI or responsible party first before entering (e.g., Transgenic Plants, Vivarium, Human materials lab).

In order to eliminate confusion, COPF will treat all Higher Level BSL 2 labs with the same protocols.

Duties and Responsibilities

Laboratory Researchers:

- Shall provide a 24/7 contact number on the front entrance to the lab and on any work orders submitted to Work Coordination. A secondary 24/7 number shall be provided if primary will not be available.
- Shall post Universal Biohazard entry signage or signal at the entrance to a lab that is doing active manipulation of hazardous materials.
- Shall understand that submission of work order is certifying that their lab is safe to enter to conduct work requested.
- Shall understand that charges or fees may be involved if work is not in the scope of typical maintenance tasks

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- Cease all active work and remove biological, and safety hazards from the affected area prior to work. Decontaminated all areas that COPF support staff may have contact. All instruments that may be near the COPF work must be deconned and probably tagged "cleaned."
- Ensure maintenance and service staff are aware of special conditions that require extra protection. Laboratory should provide special PPE if warranted. Post warning signs on equipment, such as sinks or hoods, which may be affected. Be sure to remove the signs when the work is finished.
- Heed all notifications and obey all restrictions on the use of areas or equipment during maintenance, repair or replacement of potentially contaminated laboratory systems.
- Provide any necessary technical assistance to support staff or contractors during service activities (such as clearing materials from an additional part of the lab, assisting with small spill clean-up, etc.)
- Will place normal wastes containers outside of laboratory doors for janitors to empty. Biological wastes, sharp containers, and glass wastes are segregated, kept in the lab and are the responsibility of the laboratory.
- Will be responsible for general cleaning of the lab including floor care and furniture/fixture maintenance. (If lab is decontaminated and cleaned, COPF may enter upon advice of researcher).
- Shall ensure that the lab is free of hazards when idle. This is to ensure safety of personnel responding to after work hour emergencies.
- Shall understand that entry to the lab can occur at any time in order to conduct tasks vital to Campus Operations or to handle emergency situations.
- Shall understand that they will be held responsible for any damages or loss (to equipment, structures, research, etc.) due to Facilities Personnel not being able to respond in a timely manner to any emergency situations.

Support Staff & Contractors

- Inform the lab supervisor about the type of work you will be performing, the affected work area and equipment, and the approximate duration of the work.
- Make sure the lab supervisor has removed chemical, biological radiation and other hazards from the affected work areas before you start. Your work area may include hoods, sinks, cabinets, benches, bench tops floors and or equipment.
- Notify the occupants of all affected areas immediately before beginning work.
- Understand working with some potentially contaminated equipment and/or surfaces such as sink traps or ductwork may require special procedures.
- Procedures may require biosafety or radiation surveys or other hazard evaluations. If information by the escort indicates that exposure to hazardous materials may occur, contact Biosafety or Radiation Safety Program respectfully as far in advance as possible to notify of the planned work.
- Conduct assigned tasks making sure to wear appropriate personal protective equipment such as but not limited to gloves, safety glasses, face shield, hearing protection, respiratory protection, safety footwear. Facilities Personnel may also wear PPE suggested by Responsible Lab Person (i.e. lab coat) as trained to do so.

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- Do not touch, move or handle containers of any materials in a laboratory. Assume unmarked containers are holding hazardous material. Items in storage (incubators, shakers, oven, cabinets, must not be handled). Ask for assistance from lab personnel
- Avoid the generation of airborne particulates/vapors whenever possible. A light spray of water helps prevent the generation of aerosols.
- When working on the interiors of ducts or pipes contain significant amounts of dust and debris, as each section of duct is removed, the ends should be sealed with plastic film or cardboard, and duct tape.
- Clean up the work site. Wipe down the area if appropriate. In general, only wet cleaning methods should be used. Do not dry dust or vacuum.
- Waste generated from the task may need to be decontaminated. Leave manageable pieces with the laboratory to decontaminate or autoclave.
- Upon completion of the work, clean and disinfect all tools and equipment. (Disinfectant are available on site, ask laboratory).
- Notify the Biosafety Officer, COPF Safety Officer and their Manager immediately of any incidents and/or injuries that occur in these labs. The laboratory is responsible to clean up any spill or containment release.
- Contact the Biosafety or COPF Safety Officer with any questions or concerns.

Biosafety Officer

- Provide support for health and safety related issues regarding entry into BSL 2 labs.
- Monitor and update lab safety protocols, which includes keeping accurate 24/7 contact information for all Higher Risk BSL 2 Labs.
- Conducts periodic evaluation of Higher Risk BSL 2 procedures.
- Notifies COPF Safety Officer of any changes to the list in a timely manner.
- Provides specialized training related to entry into the labs.
- Will provide the all clear notification to the requesting, responding or emergency contact person as appropriate

COPF Safety Officer

- Provide support for health and safety related issues regarding entry into BSL 2 labs
- Act as liaison between Biosafety Office and COPF
- Evaluate and coordinate health and safety training as needed to enter the labs

Biosecurity

For labs requiring biosecurity, a current inventory must be readied of regulated, controlled, biological material (UHLID B). After completion of work, account for all biological materials. If items are missing, notify appropriate Federal and State agencies prior to the UH Biosafety Program.

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UH Manoa only: List of Higher Risk Level BSL 2 Labs (Current as of November 2023)

RESTRICTED ENTRY	<i>Must show ID, sign in, trained, escort at all times. Regulated under USDA-APHIS, Homeland Security, FBI</i>		
St. John 312A	Dr. Mohammed Arif	956-7765	arif@hawaii.edu

ESCORTED ENTRY	<i>Escorted by a laboratory researcher</i>		
PBRC 221, 222, 222B	Dr. Mari-Lou Andres	956-8036	andres@hawaii.edu
Biomed T-606	Dr. Harry Davis	956-7178	harryd@hawaii.edu
Biomed T701 G&H	Dr. Tao Yan	956-6024	taoyan@hawaii.edu

ACKNOWLEDGE ENTRY	<i>Advise upon entry, Regulated by USDA, CDC and/or DOA</i>		
Agriculture Sciences 414B	Dr. David Christopher	956-8550	dchr@hawaii.edu
IAAB 303C	Dr. Matthew Medeiros	956-8187	mcmdeir@hawaiiie.edu
Biomed Vivarium	Dr. Michael Wong	956-6428	wongmich@hawaii.edu
St. John 300, 301, 304 Pope 104,107	Dr. Miaoying Tian	956-5303	mtian@hawaii.edu
IAAB 318D	Dr. Tung Hoang	956-3522	tongh@hawaii.edu
Pope 108H. SJ 203, 204	Dr. Michael Muszynski	956-5313	mgmuszyn@hawaii.edu
IAAB 322D	Dr. Sladjana Priscic	956-8055	priscic@hawaii.edu
IAAB 203A	Dr. Joerg Graf	956-5472	joergg@hawaii.edu
IAAB 223B and 223D	Dr. Michael Norris	956-6489	mhnorris@hawaii.edu

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