UTC Laboratory Inspection Form

Date of Inspection: _____ Building & Lab Room #: _____ Lab PI: _____

IBC and Lab Personnel Present at Inspection: _____

	Yes √	No √	NA √	Comments/ Corrective Action	Date Resolved
GENERAL LABORATORY SAFETY					
Exits and Lighting					
Exits and other traffic areas are unobstructed					
All exits and exit signs are illuminated and unobstructed					
All lighting in lab and safety cabinets/fume hoods is functional					
Fire Protection					
Fire extinguishers are accessible and location is clearly distinguished					
Fire doors are free of obstructions and alterations					
Closing and latching devices on fire doors are in working order					
Self-closing doors are not held open with wedges or other unapproved means					
Fire walls and draft stops are in good condition					
Fire standpipes and sprinkler systems are unobstructed					
Bunsen burner tubing and connections are intact					
Waste materials in contact with flammable liquids are stored in closed metal waste bins and disposed of daily					
Excessive combustibles (e.g., paper) are not stored in work areas					
Waste receptacles are non-combustible					
Labels & Signage					
All bottles or containers with liquids or solids in them are labeled legibly					
All lab-made reagents or samples are labeled with user's name, date, contents, and any necessary hazard labels					
Where appropriate, UV light or laser light hazard signs are in place					
Lab refrigerators and microwaves have "No food or drink" signs					
Compressed Gases					
Gas cylinders are labeled with contents and with empty/in use/full tag					
Gas cylinders are securely chained to wall					
Gas cylinders either have a regulator attached or a safety cap on					

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Electrical					
Permanent wiring is used to minimize use of extension cords—write up work request to hard-wire where applicable					
Wiring, extension cords, and/or power strips are in good condition					
Electrical installations are being maintained in safe condition					
Electrical equipment and wiring are protected from mechanical damage and environmental deterioration					
There is 36" clearance from all electrical panels					
There are covers or barriers on outlets, junction boxes, fittings and enclosures to prevent accidental contact with live parts					
Only qualified persons work on electrical equipment					
All electrical conductors are appropriately insulated					
Electric cords and phone cables are secured to prevent tripping hazards					
Housekeeping					
Work areas are clean and orderly; no food or drink is present					
Non-hazardous waste material is properly disposed of in approved containers					
Hotplates are properly wired and turned off when not in use					
Heaviest materials are stored in bottom drawers of file cabinets					
Spilled materials or liquids are cleaned up immediately					
No evidence of insect or rodent damage within laboratory					
No damage affecting function of furniture or equipment					
No damage to floor coverings that may cause a hazard					
Lab benches are clean and uncluttered					
Lab is stocked with appropriate disinfectants and countertop cleanser					
Sinks are free of dirty glassware					
Hand soap and paper towels are available at every sink					
Any spill kits in the lab are fully stocked as labeled					
Tubing on faucets or water dispensers is removed after use and not left to drip					
Labs that run overnight reactions with water running have label tags and an adequate supply of hose clamps with a screwdriver to tighten hosing					
General Laboratory Waste					
If the lab uses sharps (disposable needles and razor blades), a labeled sharps waste container is available and not more than ¾ full					
Glassware disposal box is available and not more than ¾ full					
Broom and dustpan are available					

	Yes √	No √	NA √	Comments/ Corrective Action	Date Resolved
Storage					
Storage areas are orderly, with entrances/exits unobstructed					
Material is stored so it does not create a hazard—height of piles, stacks and racks is limited to prevent tipping, falling, and spreading					
Aisles are unobstructed and have minimum 36 inches of clearance side-to-side					
Heavy objects are confined to lower shelves					
No boxes or bottles are stored on the floor					
Hazardous liquids are stored below eye level and all shelving has a minimum 18 inches clearance to any fire protection/suppression equipment					
There is adequate clearance between heating appliances and combustible material					
No food or drink is stored in lab areas or refrigerators					
Building exterior: There is at least a 5' clearance between dumpsters and building openings, combustible walls, or roof eaves					
Administrative and Engineering Controls					
Signage is posted outside the work area indicating potential hazards, rules and responsibilities, and emergency contact info					
Laboratory Safety Equipment					
First aid kit is easily accessible, with the necessary supplies available and unexpired					
Eyewash and/or safety shower are unobstructed and functional, with inspection tag dated within the past 1 year					
Lab has access to a cart and appropriate safety carriers available for transferring materials between labs					
Personal Protective Equipment and Safety Practices					
PPE (glasses/goggles, lab coats, gloves) is supplied for all lab personnel and visitors					
Protective equipment is maintained in a sanitary condition and ready for use					
If lab uses cryogens or -80°C freezer: cryogenic safety equipment is available (padded gloves, cryogenic storage vials, dewars with plastic mesh or tape covering the glass)					
If lab uses autoclave: autoclave gloves, autoclave tape, secondary container and other required supplies are available					
Lab coats not in use are hung on hooks or stored properly					
Appropriate hand protection is worn when hands are exposed to harmful substances					

	Yes √	No √	NA √	Comments/ Corrective Action	Date Resolved
Appropriate foot protection is worn					
Appropriate eye and/or face protection is worn where there is risk of injury from flying or aerosolized particles, hazardous substances or harmful light rays					
Long hair is kept tied up or otherwise secured					
Respiratory Protection (consult with departmental lab manager)					
Approved respirators are supplied when exposure to harmful airborne contaminants is possible					
Personnel are trained in the need, use, fit testing, sanitary care and limitations of respiratory equipment					
Respirators are inspected and sanitized after each use, inspected monthly, and are within their expiration periods					
Head Protection					
Head protection is used if the potential exists for exposure to falling or flying objects					
Hearing Protection					
If need for hearing protection exists, noise level has been tested and the result is posted					
Hearing conservation is being monitored and proper hearing protection is being worn when extreme equipment noise is present					

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BIOLOGICAL LABORATORY SAFETY					
Training and Documentation					
Each lab member has taken safety training within the past year; documentation is verified and up-to-date					
If applicable, lab SOPs and other approval paperwork is in designated notebook					
If applicable, biohazardous waste protocol(s) are included in designated notebook					
Biologicals Lab Inventory is documented and is less than 1 year old					
Prior safety checklists are archived and signed					
BSL1 labs are equipped with:					
A door sign at the lab entry that includes the universal biohazard symbol and emergency contact information					
Refrigerators/freezers containing biohazards that are orderly and organized with good labeling					
Separate, labeled receptacles for biohazard waste					
A door to separate the lab from public areas; the door must be fire-rated and large enough to accommodate the delivery or removal of required lab equipment					
A sink for hand washing, equipped with soap and paper towels and located near the exit door					
Impervious, non-absorbent work surfaces that are easy to clean and decontaminate, and resistant to damage by standard laboratory disinfectants and the chemicals anticipated for use within the lab					
Lab benches and tables that are strong enough to support the lab equipment placed on top of them					
Lighting sufficient for the tasks performed					
Emergency lighting that activates during a power outage, fire, or other emergency					
Hard-plumbed, manifold gas delivery system for incubators, if applicable					
Fly screens on any windows that can be opened by researchers					
Office space should be separate from lab space; office space within labs should be enclosed with floor-to-ceiling walls and a door (to enable individuals to eat and drink in this space with the door closed)					
Areas for eating, drinking, and food storage must be located outside the laboratory					
BSL2 labs should meet BSL1 specifications, plus have:					
Doors that are lockable to limit access to authorized personnel only					
Doors that are kept closed when BSL2 work is in progress					

	Yes √	No √	NA √	Comments/Corrective Action	Date Resolved
Fire-rated lab doors that remain closed at all times except for entry or exit					
Floors, walls, and ceilings that are resistant to disinfectants or fumigants that may be used for space decontamination—solid, seamless sheet flooring with a coved floor (raised and sealed to the wall) is used when possible					
Access to an autoclave on the floor or within the building for decontamination of biological waste					
Lab chairs covered with a non-fabric synthetic material to permit easy decontamination					
Negative airflow (air flowing into the lab from surrounding spaces is strongly recommended)					
An air handling system that does not recirculate air within the lab or to other indoor spaces (unless filtered for the range of hazards that may be found in the exhaust air)					
Ceilings that are at least eight feet high to accommodate the placement of biological safety cabinet(s)					
Biological Safety Cabinets:					
Have been tested and certified to manufacturer specifications at installation and are retested annually					
Include a posted record documenting that filters are replaced at recommended intervals					
Be placed away from the doors of the laboratory (opening and closing of lab doors can interfere with effective operation)					
Be placed in a low-traffic area within the lab (keep activity behind the biological safety cabinet operator to a minimum when work is in progress)					
Be placed away from overhead supply diffusers that can disrupt the inward flow of air into the BSC					
Be separated by a distance of at least 8 feet if BSCs must be placed across from each other					
Have sufficient clearance for effective use and for access during certification: • A minimum of 3" on the sides of the BSC • A minimum of 1.5" behind the BSC • At least 10" above the BSC					
Have an electrical outlet that is a 20-amp dedicated circuit					
Use a flexible connection if connected to a gas supply—a shutoff valve must be installed at the outlet of the gas supply piping system upstream of the connector					
Use a flexible connection to connect the BSC to a house vacuum system					

Inspection Summary, Required and Recommended Actions, and Notes

Summary of Findings		Yes	No
MAJOR FINDINGS	Do any deficiencies pose an immediate threat to the life or health of students, faculty, staff, and/or visitors?		
	Do any deficiencies pose an immediate risk of harm or damage to property of the University?		
	Are any of the deficiencies violations of federal, state, or local laws (vs. violations of regulations or standard laboratory practices) that may be subject to legal action or civil fines?		
MINOR FINDINGS	Do any deficiencies represent serious deviations from federal, state, local, or institutional regulations (vs. best practices guidance or recommendations)?		
	Do any procedures occurring in the laboratory pose a serious risk to human health, the environment, university property, or the compliance integrity of the university?		

Examples of Major Findings – Immediate Risks: Absence of appropriate PPE when working with BSL-2 hazards or corrosive chemicals; failure to conduct work within a BSC or chemical fume hood when warranted; BSC/fume hood maintenance and certification records out of date; exposed electrical wiring conductors; poor housekeeping that poses an immediate risk of injury or exposure; untrained personnel working with hazardous materials; other activities or processes at the discretion of the inspector.	**Requirements:** Major Findings qualify as *Serious Actions* and require immediate corrective and risk mitigation actions in accordance with *IBC SOP #5, Escalation Procedures for Noncompliance.* Notify the IBC Chair, Director of Safety and Risk Management, and IBC Designated Official immediately. A written Corrective Action Plan is required within three business days. Corrective action status reports are required every 10 business days until all corrective actions have been completed and verified by re-inspection.
Examples of Minor Findings – Serious Risks: Labels missing from hazard containers; open containers of biological or chemical waste; poor housekeeping that may create a serious hazard; food and/or drinks present in lab; other activities or processes at the discretion of the inspector.	**Requirements:** Minor Findings qualify as *First-Level Events* in accordance with *IBC SOP #5, Escalation Procedures for Noncompliance.* A written Corrective Action Plan is required within three business days. Unless deficiencies are sufficiently critical to the life and health of the lab workers or the regulatory status of the laboratory, laboratories will be given a minimum of 10 business days to correct deficiencies. Corrective action status reports are required every 10 business days until all corrective actions have been completed. Re-inspection will occur upon completion of corrective actions or during the next inspection cycle as warranted by risk.
Observations – Low-Risk Noncompliance: Inadequate labeling of containers; one electrical cord with damaged insulation; poor housekeeping that does not pose an immediate hazard; other activities or processes at the discretion of the inspector.	**Requirements:** A written Corrective Action Plan is required within three business days. Corrective action status reports are required every 10 business days until all corrective actions have been completed. Re-inspection will occur when warranted by risk.
Recommendations: In compliance but not following best practices.	Re-evaluate during next inspection.

Inspection Notes
Major Findings:
Minor Findings - include recommended deadline for corrective action (minimum 10 business days) and recommendation regarding need for follow-up inspection:
Observations:
Recommendations – in compliance but not following best practices:

APPENDIX A: CHEMICAL LABORATORY SAFETY CHECKLIST

	Yes √	No √	NA √	Comments/Corrective Actions	Date Resolved
CHEMICAL LABORATORY SAFETY					
Training and Paperwork					
Chemical Hygiene Plan is in designated notebook in lab					
Lab Chemical Inventory is in designated notebook or digitally archived and is less than 1 year old					
Prior safety checklists are in designated notebook and signed					
SDS are available in print or online for all chemicals on the lab inventory					
Chemical compatibility chart is posted in lab					
Glove compatibility booklet is present in lab					
DHS Chemicals of Interest Inventory list is present					
Chemical Fume Hoods					
Chemical fume hoods are closed when not in active use					
Chemical fume hood inspection tag is dated within the past year					
Hoods are clear of clutter, not being used for storage					
Hazardous Waste					
Hazardous waste containers are labeled, dated, and capped tightly when not in immediate use					
Hazardous waste containers are no more than ¾ full; any "full" containers have been requested for pickup					
If the lab has P-list chemicals in their inventory, then there is a posted sign near waste accumulation area indicating disposal warnings https://www.epa.gov/hw/defining-hazardous-waste-listed-characteristic-and-mixed-radiological-wastes#PandU				*If no postings, Chemical Hygiene Officer or other official must post this information, not the PI*	
Chemical Storage					
Acids are stored within secondary containment in an acid cabinet; organic acids are stored in separate secondary containment from mineral acids					
Nitric acid is stored in secondary containment away from other acids					
Flammable solvents are in flammable storage cabinets or explosion-proof refrigerators					
Non-explosion-proof refrigerators contain no flammable reagents or solvents					
Chemicals are dated when received and when opened					
Expired chemicals are removed and properly discarded as hazardous waste					
Chemicals outside of storage cabinets are in secondary containment when appropriate					
Containers are clearly labeled with full name of chemical (not just symbol)					
Doors to storage cabinets are kept closed					
Hazardous materials are dated upon receipt and when first opened					