Biological Safety Inspection Checklist

SECTION A: CONTACT INFORMATION (PRINCIPAL INVESTIGATOR)

Permit Holder :	Contact Person :	Date :
Department :	Location(s) of Inspection :	Time :
Containment Level :	Biohazardous Materials :	ERSO # (if applicable) :

SECTION B: CONTAINMENT ZONE ENTRY

3.1.1	Openable windows positioned on the containment barrier to include effective pest control.	Y I N
3.1.4	Windows to provide security as determined by a biosecurity risk assessment.	Y I N
3.2.1 / 3.2.2	Biohazard warning signage to be posted at points of entry to the containment zone, animal room, animal cubicle, PM room, and areas where unique hazards exist. Door placard at all entrances to containment zone with international biohazard warning symbol; containment level; required PPE; entry requirements, if applicable; and emergency contact information.	Y I N
3.2.4	Containment zones to be separated from public and administrative areas by a lockable door.	Y I N
3.2.9	Space to be provided inside the containment zone for dedicated PPE that has been worn and may be reused.	Y I N
4.2.3	Visitors, maintenance and janitorial staff, contractors, and others who require temporary access to the containment zone to be trained and/or accompanied by authorized personnel, in accordance with their anticipated activities in the containment zone.	Y I N
4.4.1	Doors and other openings to the containment zone, animal room, animal cubicle, and PM room to be kept closed.	Y I N
4.4.2	Only authorized individuals to be granted access to the containment zone, animal room, animal cubicle, PM room, room housing an effluent decontamination system, and to areas where other services supporting the containment zone are located.	Y I N

SECTION C: LAB DESIGN AND WORK PRACTICES

3.2.3	In areas where regulated materials are stored outside the containment zone, biohazard warning signage to: be posted at points of entry to these areas or on equipment in which regulated materials are stored; include the international biohazard warning symbol; include the risk group of the regulated materials; and include emergency contact information.	Y I N
INT	Biosafety certificate posted in or outside containment zone; all lab members know where it is located.	Y I N
3.3.1	In accordance with function, surfaces and coatings, including floors, ceilings, walls, doors, frames, casework, benchtops, and furniture, to be: cleanable; non-absorbent; resistant to physical damage; and resistant to damage caused by decontamination procedures and products.	Y I N
3.3.2	Surfaces that may come in contact with regulated materials to be continuous with adjacent and overlapping materials.	Y I N
3.6.8	Mechanisms to be provided to prevent contamination of vacuum systems and the release of regulated materials.	Y I N
4.5.3	Containment zone to be kept clean and the presence of the following to be minimized: obstructions; materials that are in excess or not required; and items that cannot be easily decontaminated.	Y I N
4.5.8	Verification of small in-line filter assemblies associated with vacuum pump systems to be performed at a frequency based on use.	Y I N
4.5.9	Verification of primary containment devices to be performed at a frequency based on use.	Y I N
4.5.27	A mechanism to be in place to prevent, detect, and respond to pest control issues.	Y I N
5.1.3	Visual inspection of small in-line filter assemblies to be conducted and filters to be replaced or tested in accordance with manufacturer's specifications.	Y I N
3.6.1	BSCs or other primary containment devices to be provided, based on an LRA.[Not required for areas where the room serves as primary containment.]	Y I N
4.5.20	A BSC or other primary containment device to be used for activities with open vessels, based on the risks associated with: the inherent characteristics of the regulated material; the potential to produce infectious aerosols or aerosolized toxins; the handling of high concentrations of regulated materials; and the handling of large volumes of regulated materials. [Not required when inoculating or collecting samples from regulated animals housed in an animal cubicle.]	Y I N
4.5.22	BSCs and other primary containment devices to be located and operated in a manner that minimizes airflow disruption of the devices.	Y I N
5.1.1/ 5.1.6	Class II BSCs to be certified under typical conditions of use in accordance with NSF/ANSI 49, if such certification is possible. Annually and after any change or repair.	Y I N

SECTION D: GOOD LAB PRACTICES

3.5.4	Sinks to be provided to facilitate handwashing.	Y I N
4.4.11	Open wounds, cuts, and scratches to be covered in a manner that prevents exposure prior to entering the containment zone.	Y I N
4.4.12	Jewellery that may become contaminated or compromise PPE to be removed or covered prior to entering the containment zone.	Y I N
4.4.19	Personnel to wash hands when exiting the containment zone, containment barrier, animal room, animal cubicle, or PM room.	Y I N
4.5.2	Traffic and work flow patterns to be established and followed to prevent the spread of contamination.	Y I N
4.5.4	Contact of the face or mucous membranes with items contaminated or potentially contaminated with regulated materials to be prevented.	Y I N
4.5.5	Hair that may become contaminated when working in the containment zone to be restrained or covered.	Y I N
4.5.12	Personnel to doff activity-specific PPE in a manner that minimizes contamination of the skin, hair, and personal clothing (where worn) after completing work activities and when PPE may have become contaminated.	Y I N
4.5.13	Primary containers of regulated materials to be opened only at the containment level to which the material and activities have been assigned by the PHAC and the CFIA.	Y I N
4.5.14	Primary containers of regulated materials removed from the containment zone to be stored in a labelled, leak-proof, impact-resistant secondary container, and kept either in locked storage equipment or within an area with limited access.	Y I N
4.5.19	Procedures to be in place to prevent a leak, drop, spill, or similar event during storage or the movement of regulated materials.	Y I N
4.5.23	Centrifugation of regulated materials that are primarily infectious or transmitted by inhalation to be carried out in sealed safety cups or rotors that are unloaded using a mechanism that prevents their release.	Y I N
4.7.5	HEPA and high efficiency filters to be: 1. decontaminated in situ prior to removal; or 2. contained using an alternative mechanism during removal and subsequent decontamination.	Y I N

SECTION E: DECONTAMINATION AND WASTE DISPOSAL

4.5.6	Use of sharp and glass objects to be strictly limited and avoided when suitable alternatives can be used.	Y I N
4.5.7	Use of needles and syringes to be strictly limited. Bending, shearing, re-capping, or removing needles from syringes to be avoided, and if necessary, performed only as specified in SOPs.	Y I N
4.7.1	Gross contamination to be removed from surfaces and equipment prior to their decontamination.	Y I N
4.7.2	Surfaces that may become contaminated to be cleaned and decontaminated at a frequency determined by an LRA.	Y I N
4.7.3	Disinfectants and neutralizing chemicals effective against the regulated materials handled or stored to be available and used in the containment zone.	Y I N
4.7.4	Sharps to be discarded in containers that are leak-proof, puncture-resistant, and fitted with lids, or constructed for the purpose of sharps disposal.	Y I N
4.7.6	Contaminated liquids to be decontaminated prior to release into sanitary sewers.	Y I N
4.7.7	Regulated materials, contaminated items, and waste to be: 1. decontaminated prior to disposal or removal from the containment zone, animal room, animal cubicle, or PM room, or prior to testing or repair of equipment; or 2. placed in closed, labelled, and leak-proof secondary containers that have been surface decontaminated prior to removal from the containment zone, animal room, animal cubicle, or PM room.	Y I N
3.6.5	Decontamination technologies to be provided within the containment zone, or procedures to be in place to safely and securely move or transport waste for decontamination outside the containment zone.	Y I N

SECTION F: PERSONAL PROTECTIVE EQUIPMENT

4.3.1	PPE selection to be determined by an LRA. Cryogenic gloves? Respirators?	Y I N
4.3.2	Gloves to be worn when handling regulated materials or regulated animals, as determined by an LRA.	Y I N
4.4.8	Personal clothing and belongings to be stored separately from dedicated PPE that has been worn in the containment zone.	Y I N
4.4.9	Personal belongings and items for personal use not required for work to be kept separate from areas where regulated materials are handled or stored.	Y I N
4.4.13	Personnel to don dedicated PPE prior to entering the containment zone in accordance with entry procedures.	Y I N
4.4.16	Activity-specific PPE or an additional layer of PPE to be donned prior to beginning the activity in the containment zone.	Y I N
4.4.18	Dedicated and activity-specific PPE to be doffed in a manner that minimizes contamination of the skin, hair, and personal clothing (where worn), and stored or disposed of within the containment zone or containment barrier.	Y I N

SECTION G: EMERGENCY AND BIOSECURITY

4.5.1	Procedures to be followed to prevent personnel exposure to regulated materials and the spread of contamination during tasks.	Y I N
4.8.3	Emergency medical contact card to be issued to containment zone personnel handling non-human primates or regulated materials that cause uncommon diseases or illnesses in Canada, as determined by an LRA.	Y I N
4.8.4	ERP to describe emergency procedures for incidents within and outside the containment zone that may lead to personnel exposure to regulated materials, or their release from containment.	Y I N
4.8.5	ERP to include procedures for: the notification of key internal personnel and relevant regulatory authorities (e.g., PHAC, CFIA); biosafety or biosecurity incident investigation and follow-up; and the implementation of measures to mitigate future risks.	Y I N
4.8.8	Suitable PPE and materials needed to respond to biological spills to be available.	Y I N
4.8.9	Biosafety and biosecurity incidents to be reported immediately to the appropriate internal authority. (So that PHAC can be notified)	Y I N
4.8.10	Investigation of biosafety and biosecurity incidents to be conducted and documented to determine root causes and measures to mitigate future risks.	Y I N
4.8.13	Where non-indigenous terrestrial animal pathogens are handled or stored, or in accordance with conditions of the terrestrial animal pathogen import permit, the CFIA to be informed without delay of incidents involving: regulated materials or regulated animals, including a possible release or animal escape; and failure of containment systems or control systems.	Y I N

SECTION H: RECORD KEEPING / ADMINISTRATIVE CONTROL

4.1.6	An LRA to be conducted, documented, and kept up to date for activities involving regulated materials.	Y I N
4.1.9	A medical surveillance program based on an overarching risk assessment and LRAs to be developed, documented, implemented, followed, and kept up to date.	Y I N
4.1.10	SOPs for operational practices and performance and verification testing to be developed, documented, implemented, followed, kept up to date, and communicated and made available to authorized personnel.	Y I N
4.2.1	A training needs assessment to be conducted, documented, kept up to date, and reviewed annually.	Y I N
4.2.2	All personnel working in lab added to authorized personnel list and uploaded to ERSO? Training completed: Biosafety, spills, WHMIS? Lab safety Orientation Checklist acceptable.	Y I N
4.2.4	Personnel to demonstrate knowledge of the relevant elements of the biosafety manual and proficiency in the procedures on which they were trained before engaging in unsupervised activities with regulated materials and regulated animals.	Y I N
4.8.1	An ERP, based on overarching and local risk assessments, to be developed, documented, implemented, reviewed, and kept up to date.	Y I N
4.9.4	All biosafety and biosecurity training to be documented; records to be kept on file.	Y I N
4.9.5	An inventory of regulated materials in long-term storage to be maintained and to include locations and risk groups.	Y I N
4.9.8	Records of containment zone (including support areas) and equipment maintenance, repair, inspections, deficiencies, corrective measures, testing, and certification (including performance and verification testing records) to be kept on file. O-ring replacements log.	Y I N
4.9.10	Documents (e.g., certificates) demonstrating calibration was valid at the time of testing to be kept on file for equipment used for performance and verification testing of containment systems and essential biosafety equipment.	Y I N

SECTION I: GENERAL LAB SAFETY

1	Heavy objects are confined to lower shelves	Y I N
2	Incompatible materials are segregated (acid, bases, flammable, oxidizers etc.)	Y I N
3	Primary and secondary chemical containers are labeled with identity and appropriate hazard warnings	Y I N
4	Chemical containers are in good condition (not leaking, lids not cracked)	Y I N
5	No storage of glass chemical containers on floor	Y I N
6	Corrosives and flammables are stored below eye level	Y I N
7	Unused or outdated materials are removed from laboratories and chemical storage areas	Y I N
8	Safety carriers are available and in use while transporting chemicals	Y I N
9	Flammable liquids are stored away from heat or other ignition source and oxidizing chemicals (oxidizers)	Y I N
10	Flammable liquids not in use are stored in approved flammable solvent cabinets, maximum 3 flammable cabinets per lab	Y I N
11	Maximum of 250L flammable and 250L combustible materials stored in each cabinet	Y I N
12	Explosion safe or explosion proof refrigerators used for volatile and flammable liquids	Y I N
13	Gas cylinders are properly chained / secured. Caps in place if cylinders not in use.	Y I N
14	Gas cylinders are stored away from excessive heat or ignition sources	Y I N
15	Fuel gas cylinders are at least 6 m (20') away from oxygen cylinders	Y I N
16	Gas cylinders are properly labeled as to their content	Y I N
17	Full and empty cylinders are stored separately	Y I N
18	Empty gas cylinders are labeled "EMPTY"	Y I N
19	Hoses, tubing and regulators are in good working condition	Y I N
20	Waste material is not allowed to accumulate on the floors, in corners or under shelves/tables in laboratories	Y I N
21	Containers of hazardous waste are labeled properly (date and lab number) and have closed lid	Y I N
22	Radioactive Wastes are appropriately marked	Y I N
23	No evidence of liquid waste disposal in sinks or the sewer	Y I N
24	Broken glass containers are in use for disposal of broken glass	Y I N
25	Tools and equipment are in safe working condition	Y I N
26	Electrical cords are in good condition (no frayed wires or broken insulation)	Y I N
27	Exits are clearly marked and free from obstruction	Y I N
28	All fire doors are self-closing and are kept closed	Y I N
29	Fume hoods are available and have an inspection label (performance tested within past 12 months)	Y I N
30	Fume hoods are not being used for storage	Y I N
31	Hoses or cords are not inserted through the face of the fume hood (they must run underneath the airfoil so the sash can close completely)	Y I N
32	Safety showers and eye wash stations are located within 10 second walk (approx.55') of all laboratories (ANSI Std. Z-358.1-2009)	Y I N
33	All showers and eye wash stations are clean and free of obstruction	Y I N
34	Safety showers and eye wash stations are tested and documented (ANSI Std. Z-358.1-2009)	Y I N
35	Fire extinguishers are the appropriate type for the hazard in the work area	Y I N
36	Fire extinguishers are unobstructed and inspected.	Y I N
37	Laboratory personnel are aware of the nearest: First aid kit or first aid station, Fire extinguisher, Spill Kit, Evacuation Route.	Y I N
38	Laboratory personnel are familiar with: SOP for all equipment, work alone procedures, spill response plans, accident reporting, emergency phone numbers, Lab specific emergency procedures (eg. audibility of fire alarm, equipment shut off procedures)	Y I N
39	General training conducted for equipment / techniques unique to the laboratory (eg. drill press)	Y I N
40	Lab safety training for end users completed by all students working in the lab (compressed gas, cryogenic, laser, x-ray,)	Y I N