UNIVERSITY OF OTTAWA
BIOSAFETY INSPECTION CHECKLIST

Principal Investigator: _____ Laboratory Delegator: _____

Laboratory Location: _____ Date of Inspection: _____

Inspected by: _____ Follow-up Required: Yes_____ No_____

No.	Items	Ref.	Compliance			Comments
			Y	N	N/A	
Physical Containment						
Containment Barrier and Access						
1-1	Openable windows positioned on the containment barrier to include effective pest control.	3.1.1*				
1-2	Windows to provide security as determined by a biosecurity risk assessment.	3.1.4				
1-3	Biohazard warning signage to be posted at points of entry to the containment zone and areas where unique hazards exist. Signage to include (international biohazard warning symbol, containment level, required PPE, emergency contact information, and entry requirements, if applicable).	3.2.1 3.2.2				
1-4	In areas where regulated materials are stored outside the containment zone, biohazard warning signage to: be posted at the points of entry to these areas or on equipment in which regulated materials are stored; include the international biohazard warning symbol; risk group and emergency contact information.	3.2.3				
1-5	Containment zones to be separated from public and administrative areas by a lockable door.	3.2.4				
1-6	Space to be provided inside the containment zone for dedicated PPE that has been worn and may be reused.	3.2.9				
Surface finishes, Facilities and services						
1-7	In accordance with function, surfaces and coatings, including floors, ceilings, walls, doors, frames, casework, bench tops and furniture to be: cleanable; non-absorbent; resistant to physical damage; and resistant to damage caused by decontamination procedures and products.	3.3.1				
1-8	Surfaces that may come in contact with regulated materials to be continuous with adjacent and overlapping materials.	3.3.2				
1-9	Sinks to be provided to facilitate handwashing.	3.5.4				
Essential biosafety equipment						

1-10	BSCs or other primary containment devices to be provided, based on an LRA (local risk assessment). Class II BSCs to be certified (annually) under typical conditions of use in accordance with NSF/ANSI 49, if such certification is possible. Note: BSC SOP available and posted (uOttawa biosafety web page; Working with BSC SOP).	3.6.1 5.1.6				
1-11	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 of the containment zone (uOttawa biosafety web page; University of Ottawa Autoclave Procedures).	3.6.5				
1-12	Mechanisms to be provided to prevent contamination of vacuum systems and the release of regulated materials. Visual inspection of small in-line filter assemblies (such as those associated with vacuum pump systems) to be conducted and filters to be replaced or tested in accordance with manufacturer`s specifications. Note: mechanisms include the use of HEPA or high efficiency filters, small in-line filters (e.g., 0.2 µm filter) and disinfectant traps.	3.6.8 4.5.8 5.1.3				
Operational Practices						
Biosafety program, PPE and Entry/Exit						
2-1	An LRA to be conducted, documented and kept up to date for activities involving regulated materials (uOttawa biosafety web page; Local Risk Assessment).	4.1.6				
2-2	The uOttawa biosafety manual to be communicated and made available to authorized personnel (uOttawa biosafety web page).	4.1.7				
2-3	SOPs for operation practices and performance and verification testing to be developed, documented, implemented, followed, kept up to date, communicated and made available to authorized personnel. e.g`s include SOPs for use of primary containment devices (such as BSC), decontamination/waste management and secure movement of regulated material.	4.1.10				
2-4	PPE selection to be determined by an LRA.	4.3.1				
2-5	Gloves to be worn when handling regulated materials as determined by an LRA. Gloves are changed frequently when working with infectious material, prior to working with "clean" equipment (microscopes) and after possible contamination.	4.3.2				
2-6	Doors and other openings to the containment zone to be kept closed.	4.4.1				
2-7	Only authorized individuals to be granted access to the containment zone or to areas where other services supporting the containment zone are located.	4.4.2				

2-8	Personal clothing and belongings not required for work (including food and drinks) to be stored separately from dedicated PPE that has been worn in the containment zone, and from workstations where regulated materials are handled or stored.	4.4.8 4.4.9				
2-9	Open wounds, cuts, scratches, and grazes to be covered in a manner that prevents exposure prior to entering the containment zone.	4.4.11				
2-10	Jewellery that may become contaminated or compromise PPE to be removed or covered prior to entering the containment zone.	4.4.12				
2-11	Personnel to don dedicated PPE prior to entering the containment zone in accordance with entry procedures. Activity specific PPE or an additional layer of PPE to be donned prior to beginning the activity in the containment zone.	4.4.13 4.4.16				
2-12	Dedicated and activity specific PPE to be doffed in a manner that minimizes contamination of the skin, hair, personal clothing (where worn) and stored or disposed of (if contaminated) within the containment zone or containment barrier.	4.4.18 4.5.12				
2-13	Personnel to wash hands when exiting the containment zone or containment barrier.	4.4.19				
Work practices						
2-14	Procedures to be followed to prevent personnel exposure to regulated materials and the spread of contamination during tasks. (Through adherence to SOPs including those for good microbiological practices, decontamination of surfaces and removal of contaminated PPE).	4.5.1				
2-15	Traffic and workflow patterns (from clean to dirty) to be established and followed to prevent the spread of contamination (including working in the BSC and separating computer/paperwork stations from areas where regulated materials are handled).	4.5.2				
2-16	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 can not be easily decontaminated.	4.5.3				
2-17	Contact of the face or mucous membranes with items contaminated or potentially contaminated with regulated materials to be prevented.	4.5.4				
2-18	Oral pipetting of any substance is prohibited. Mechanical pipetting devices are used for all pipetting procedures.	GMLP*				
2-19	Hair that may become contaminated when working in the containment zone to be restrained or covered.	4.5.5				

2-20	Use of needles, syringes and other sharp objects to be strictly limited and avoided when suitable alternatives can be used. Bending, shearing, re-capping or removing needles from syringes to be avoided and if necessary performed only as specified in SOPs.	4.5.6 4.5.7				
2-21	Verification of primary containment devices (under normal operating conditions) to be performed at a frequency based on use. e.g., for BSC, holding a tissue at the sash to confirm air is drawn into the BSC. Integrity of primary containment devices other than BSCs and ventilated devices to be tested in accordance with testing procedures. Results need to be documented. e.g., visually inspecting O-rings in centrifuge buckets. O-rings and gaskets that appear dried may be greased and those that are damaged replaced.	4.5.9 5.1.8				
2-22	Primary containers of regulated materials to be opened only at the containment level to which the material and activities have been assigned by the regulatory party.	4.5.13				
2-23	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 a locked storage equipment or within an area with limited access.	4.5.14				
2-24	Procedures to be in place to prevent a leak, drop, spill or similar event during storage of material (including waste) or the movement of regulated materials (within a containment zone or between containment zones within a building).	4.5.19				
2-25	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.	4.5.20				
2-26	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 in a BSC. Note: allow aerosols to settle before opening.	4.5.23				
2-27	A mechanism to be in place to prevent, detect and respond to pest control issues.	4.5.27				
Decontamination and waste management						
2-28	Gross contamination to be removed from surfaces and equipment prior to their decontamination.	4.7.1				
2-29	Surfaces that may become contaminated to be cleaned and decontaminated at a frequency determined by an LRA.	4.7.2				

2-30	Disinfectants and neutralizing chemicals effective against the regulated materials handled or stored to be available and used in the containment zone.	4.7.3				
2-31	Sharps to be discarded in containers that are leak proof, puncture-resistant, fitted with lids or constructed for the purpose of sharps disposal. Note: Proper waste containers are used throughout the containment zone and containers are not filled beyond the 2/3rd full position. uOttawa biosafety web page; University of Ottawa Biomedical Waste Disposal Procedures.	4.7.4 uOttawa std*.				
2-32	Contaminated liquids to be decontaminated prior to disposal as chemical waste. Note: Decontaminated liquids should not be poured down the drain at uOttawa.	4.7.6 uOttawa std.				
2-33	Regulated materials, contaminated items and waste to be: decontaminated prior to disposal or removal from the containment zone or prior to testing or repair of equipment; or placed in closed, labelled, and leak-proof secondary containers that have been surface decontaminated prior to removal from the containment zone.	4.7.7				
Emergency response						
2-34	An Emergency response plan (ERP) to be developed, documented, implemented, reviewed and kept up to date (uOttawa biosafety web page; Emergency Response Plan for CL2 Labs). Note: Review annually with personnel and keep records (signage sheet).	4.8.1				
2-35	Suitable PPE and materials needed to respond to biological spills to be available. Note: Spill response plan posted in the laboratory (uOttawa biosafety web page; Biological Spill Response Plan).	4.8.8 uOttawa std.				
2-36	Biosafety and biosecurity incidents to be reported immediately to the appropriate internal authority. Note: Are lab personnel aware of this.	4.8.9				
2-37	Alarmed equipment is identified and emergency contact information is affixed to the equipment. Contingency plans are in place, e.g. -80◦C freezers are labeled and inventory of contents available.	uOttawa std.				
Training program and Records/documentation						
2-38	Personnel have taken the uOttawa Biosafety Training as well as lab specific training and submitted a BMUR form. Refresher training taken every 4 years. All biosafety training to be documented and records to be kept on file.	4.2.4 4.9.4 uOttawa std.				

	Personnel to demonstrate knowledge of the biosafety manual and proficiency in the procedures before engaging in unsupervised activities.					
2-39	A training needs assessment to be conducted, documented, kept up to date and reviewed annually.	4.2.1				
2-40	Visitors, maintenance, 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.	4.2.3				
2-41	An inventory of regulated materials in long term storage to be maintained and to include locations and risk groups. BMUC inventory up to date. Note: All transfers of regulated material to be approved by the BSO, records available.	4.9.5				
2-42	Records of containment zone (including support areas) and equipment maintenance, repair, inspections, deficiencies, corrective actions, testing and certification to be kept on file. Records to be kept on file for a minimum of: 5 years for licence activities with human pathogens and toxins; 2 years following the date of disposal, complete transfer or inactivation of the imported material in accordance with terrestrial animal pathogen import permit requirements; and 5 years for performance and verification test records or until repeat testing is conducted, whichever is longer.	4.9.1 4.9.8				
2-43	Inspections of the containment zone (e.g., surfaces, equipment, procedures) to be conducted; when deficiencies are identified, implementation of corrective measures to be verified. Results need to be documented.	5.1.2				

*Reference shown as numbers: Containment Level 2 (CL2) requirements, as per the Canadian Biosafety Standards, 3rd Ed;
uOttawa std.: University of Ottawa standards, guidelines and procedures;
GMLP: Good Microbiological Laboratory Practices, as per the Canadian Biosafety Handbook (CBH), 2nd Ed.