Self-Inspection 2018
Biosafety Containment Level 2 Requirements
To be verified at an Inspection by Biohazard Committee Members

Containment requirements of the "Canadian Biosafety Standard", 2nd Edition, 2015, published by the Public Health Agency of Canada (PHAC) and Queen's University policies.

This checklist is to be filled out by the Principal Investigator, or designate, as a self-audit prior to a biohazard lab inspection.

- ***Answer each question prior to the inspection by ticking N/A, Yes or No, and present the completed form to the inspectors when they arrive.***
- ***Fill this form out for your main CL2 lab and begin the inspection there. A short version of the form is available for your other labs.***
- ***The person who filled out the form is to be present at the inspection to discuss answers on the form with the inspectors.***
- ***Other lab members are welcome to attend the inspection.***
- ***Training records are to be available in one of your laboratories for review by the inspectors. They may be stored elsewhere at other times.***

Investigator: _____ Secondary Biohazard Contact: _____ **Person completing self-audit:** _____

Building & Room # _____ Biohazard Containment Level _____

Biohazard Committee Inspection Team: _____ _____

Signatures: _____ _____ Inspection Date: _____

Comments for the attention of the lab and/or the University Biosafety Officer: _____

_____

Abbreviations: N/A, not applicable**, Yes,** compliance; **No**, compliance lacking; **VI**, Inspectors Verified at Inspection; **CL2**, required only in CL2 or 2+ lab; CBS requirement number from Canadian Biosafety Standard, 2nd Edition. ***Where the containment level is not indicated, the requirement applies to all biohazard labs.***

Item #	CL2 or 2+	Item	Compliance			
			N/A	Yes	No	VI
1. Biohazardous Material Information						
1.1		**What are the biohazardous materials used in this lab?** **General types of material (as listed on biohazard sign) : _____** _____				
1.2		**Is an inventory of biological agents handled or stored in the containment zone, maintained and kept up to date?** **Note:** the inventory must contain a list of all agents and materials, their risk group, source and the rooms or locations in which they are used or stored. Quantities are not required. Inventory must be kept up to date in biohazard permit in TRAQ/Romeo.				

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			N/A	Yes	No	VI
1.3	CL2	Transfer of biohazardous material to another research group / individual / company, either at Queen's or outside the University, is reported to the Biosafety Officer prior to such transfer to ensure that all the appropriate safety and regulatory requirements are met.				
2. Signage						
2.1		Biosafety warning sign posted on laboratory door indicates containment level.				
2.2		Sign has current contact information for the supervisor and other responsible person (usually the secondary biohazard contact).				
2.3		Sign lists types of biohazardous material (eg. RG1 bacteria (cloning strains only), RG1 bacteria (opportunistic infection risk), RG1&2 mammalian cell lines, RG2 amphotropic retrovirus).				
2.4	CL2	Are there any special provisions for entry beyond general level 2 provisions? (e.g. immunizations, health restrictions); relevant information is included on the biohazard sign on the door.				
Comment re signage:						
3. General Lab Facilities and Procedures						
3.1		Access to the laboratory is at the discretion of the laboratory director (children should not be present in laboratory areas).				
3.2		Trainees and visitors must be accompanied by a trained staff member.				
3.3		Door to the laboratory kept closed.				
3.4		Lab kept clean and tidy. No cardboard boxes on the floor.				
3.5		Visual inspections of the **containment zone** to be conducted in order to identify faults and/or deterioration; when found, corrective actions to be taken. Lab benches, floor, equipment, etc. are in good condition, with surfaces and caulking intact, so that they can be readily decontaminated.				
3.6		All spills, accidents and overt or potential exposures must be reported promptly in writing to the Departmental Safety who is: _____				
3.7		• Emergency Plan posted in the laboratory is current (updated and reposted annually at the time of annual retraining) • familiar to all personnel • includes site specific information on spill clean-up, fire, and where applicable, BSC failure, animal escape, etc.				
3.8		Eyewash in accordance with containment zone activities (or, depending on the hazard, eyewash in hall within 10 seconds access and no more than one door); access not obstructed; tested weekly and card initialled.				
3.9		Safety shower in accordance with containment zone activities within 10 seconds access time and through no more than one door.				
3.10		Sink identified for hand washing has soap and paper towels; if lab has more than one sink and if feasible then dedicate sink near lab exit for hand washing only; **if hand washing sink is not near the exit** then a sign must be posted near the exit to remind personnel to wash their hands.				

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3.11		Personnel are to wash hands after completing tasks that involve the handling of infectious material or toxins and before undertaking other tasks in the containment zone. Hands washed after removal of gloves, after handling potentially biohazardous material, immediately before leaving the laboratory.				
3.12		Eating, drinking, smoking, storing food or utensils, applying cosmetics and inserting or removing contact lenses is not permitted.				
3.13		Paperwork and computers kept separate from biohazardous materials work areas. If the "desk" is on a bench beside where work with biohazards is done, without a change in the height to separate the desk area, then there is a line of tape on the bench to indicate the clean area.				
3.14		Long hair tied back so as not to contact hands, specimens, containers or equipment.				
3.15		All pipetting using automatic pipets (No oral pipetting).				
3.16		Creation of aerosols and their effects minimized – indicate method for different procedures in use (e.g. during pipetting, vortexing, centrifuging, for sonicating).				
3.17	CL2	Traffic flow patterns from areas of lower contamination (i.e., clean) to areas of higher contamination (i.e., dirty) to be established and followed, as determined by a local risk assessment (LRA). CBS requirement 4.6.7 to limit the spread of contamination.				
3.18	CL2	Two-way communication system(s) to be provided inside the containment barrier that allows communication between inside the containment barrier to outside the containment zone, in accordance with function. (e.g. a phone, or a window in door to permit communication through a window (e.g., using notes and signs, or hand signals). CBS requirement 3.7.18 to facilitate response in an emergency and to reduce traffic in and out of containment zone.				
3.17	CL2	Centrifugation performed in closed containers (tubes) to contain aerosols. Tubes are opened only in the biological safety cabinet unless risk assessment indicates otherwise (and approved written operational procedures are in place).				
3.18	CL2	Lids for centrifuge buckets that are aerosol resistant are used for level 2 material that is known to be infectious (e.g. blood from individuals known to be infected with a blood borne pathogen, risk group 2 infectious pathogenic bacteria and viruses). O-rings are checked routinely and replaced when they are cracked or appear dried out.				
3.19		Vacuum aspiration equipment is protected with a **HEPA filter** as per SOP-Biosafety-01 (available in Botterell biobar).				
3.20	CL2	Leak-proof containers are used for transport of infectious materials between labs. i.e. double contained. Procedures, as determined by a LRA, to be in place to prevent a leak, drop, spill, or similar event during the **movement** of infectious material or toxins within the containment zone or between containment zones within a building.				
3.21		Biohazard bags are supported in solid containers that have a biohazard symbol.				
3.22		Use of needles, syringes, and other sharp objects is strictly limited and avoided when suitable alternatives are available.				
3.23		Bending, shearing, re-capping, or removing needles from syringes is avoided, and, when necessary, performed only as specified in written SOPs.				
Comment re lab facilities and procedures:						
4. Biological Safety Cabinet (BSC)						
4.1		Aware of SOP-Biosafety-03 Biological Safety Cabinets.				

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4.2		Intake and rear grilles are clear of obstructions. BSC is not overcrowded and only equipment and supplies needed immediately for the work being done are in the BSC.				
4.3		Work surfaces and under front grill are clean and free of visible biological residue.				
4.4		Bunsen burners and/or open flames are not used in biological safety cabinets. Open flames are not permitted inside BSCs; consider an alternative, such as an electrical bacticinerator.				
4.5	CL2	Biosafety Cabinet located away from high traffic areas, doors, and air supply/exhaust diffusers?				
4.6	CL2	Procedures to be followed to prevent the inadvertent spread of contamination from items removed from the BSC after handling infectious material or toxins. (i.e. everything surface decontaminated before being removed from the BSC)				
4.7	CL2	BSC used for procedures that may produce infectious aerosols and that involve high concentrations or large volumes, (unless a risk assessment in consultation with the University Biological Safety Officer/Biohazard Committee has indicated otherwise).				
4.8	CL2	BSCs to be certified upon initial installation, annually, and after any repairs, modification, or relocation. **Date for next annual BSC certification:_____**				
Comment re BSC:						
5. Personal Protective Equipment						
5.1		Fastened lab coat worn.				
5.2	CL2	Dedicated lab coat for level 2 work.				
5.3		Lab coat stored separately from street clothing and not on top of each other on hooks.				
5.4		Lab coat removed prior to entering non-laboratory areas.				
5.5		How and where are lab coats laundered?				
5.6	CL2	If a known or suspected exposure occurs is contaminated clothing decontaminated before laundry? How?				
5.7		Closed toe and heal footwear worn by all personnel. Type of footwear worn to be selected to prevent injuries and incidents, in accordance with containment zone function.				
5.8		Suitable eye and face protection when required (check availability of goggles &/or face shield).				
5.9		Contact lenses worn only when other corrective eyewear is not suitable and if worn then other eye protection is worn when there is a splash risk.				
5.10		Gloves worn for work with infectious agents, toxins, blood and other potentially biohazardous material.				
5.11		Open wounds, cuts, and breaks in the skin should be covered with a waterproof dressing.				
5.12		Glove material not permeated by substances used in conjunction with biohazards (e.g. chemical hazards, cancer chemotherapeutics).				
5.13		Gloves to be removed prior to leaving laboratory (or "one glove method" if carrying hazardous materials).				
5.14		If N95 respirators are required, all users have been fit tested through EH&S every 2 years.				

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5.15	CL2	A written donning and doffing procedure for the particular PPE worn in your laboratory must be developed and posted. See Queen's Biosafety Manual 2017 page 64-66 for an example.				
Comment re PPE:						
6. Storage, Decontamination and Disposal						
6.1	CL2	Containers of pathogens, toxins, or other regulated infectious material stored outside the containment zone to be: • In containers that are labelled, leakproof, and impact resistant • kept either in locked storage equipment **or** within an area with **limited access** (e.g. a corridor on a floor where the door is always locked). • Storage locations outside of the containment zone are noted on the inventory (and thereby on the biohazard permit).				
6.2		**Gross contamination** to be removed prior to decontamination of surfaces and equipment, and disposed of accordingly. i.e. clean to remove most of the organic matter so that chemical decontamination is effective.				
6.3		Decontamination to be performed with a disinfectant effective against the pathogen(s) in use, or a neutralizing chemical effective against the toxin(s) in use, at a frequency to minimize the potential of exposure to infectious material or toxins.				
6.4		Equipment, supplies, wastes, etc. are disinfected prior to removal from the laboratory **or** if waste is being removed for decontamination or disposal through EH&S, then double contained and surface decontaminated.				
6.5		All biohazardous material decontaminated prior to disposal (or disposed as hazardous waste through EH&S). Contaminated aqueous liquids to be decontaminated prior to release to sanitary sewers. – indicate method(s):_____				
6.6		If autoclaves are used for decontamination, lab is aware of SOP-Biosafety-09 Autoclaves – Biohazardous Waste Treatment and biological indicators (*Bacillus stearothermophilus* spores) are used weekly to monitor efficacy in a representative waste load.				
6.7		Name of person responsible for biological indicator testing: _____				
6.8		Biohazard labels, if present, are defaced after autoclave decontamination and prior to disposal. (do not use red biohazard bags with a printed biohazard label for waste that will be autoclaved and discarded in the municipal waste)				
6.9		Biohazardous material contaminated with chemical hazards or radioisotopes is disposed through EH&S. Human and animal tissues are disposed through EH&S for incineration.				
6.10		Bench coat (paper backed with plastic) may be used to contain hazardous material. If used it is changed regularly & not taped to benches.				
6.11		Contaminated sharps are placed in an approved labelled puncture-proof disposable container for decontamination.				
Comment re storage, decontamination & disposal:						

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7. Training						
7.1		Lab biosafety information is available including Queen's Biosafety Policies and Manual 2017 (check – there should be either a link on computer or a hardcopy; confirm that lab members know how to find their biohazard permit and SOPs either in the lab or in TRAQ/Romeo).				
7.2		All staff/students have received the appropriate training; check that training record was signed by the trainee and the supervisor (or designate). • Training records should be organized with those for each individual together. • Training records for those still working in the lab should be in a group. • Records for those who have left the lab should be grouped separately and retained for 5 years.				
7.3		Lab is aware that everyone listed on a biohazard permit is to complete the appropriate Queen's EH&S Biosafety Training quiz (level 1 or level 2).				
7.4		Refresher training on emergency response procedures is provided annually and documented in the lab.				
Comment re training:						
8. Medical Surveillance						
8.1		• Lab is aware that in an Emergency they should go to KGH Emergency; • that Walsh and Associates is the Occupational Health Services provider for Queen's (no longer KGH OHS); • Walsh and Associates will provide appropriate follow-up care after an incident • Walsh and Associates will provide any medical surveillance for the lab as specified in the biohazard permit e.g. immunizations, titre checks, etc.				
8.2		Immunizations required for work in the lab?				
8.3		Any specific immune-surveillance or incident response info required and posted? E.g. if human blood, tissues or bodily fluids are used, the lab is aware of SOP-Biosafety-08; has posted the first aid response to an exposure incident and a map to KGH Emergency and contact information for Walsh and Associates OHS				
Comment re medical surveillance:						