



Office of Biohazard, Containment and Safety
Science Branch
59 Camelot Drive
Ottawa ON K1A 0Y9
biocon@inspection.gc.ca
Fax (613) 228-6129

Bureau du confinement des biorisques et de la sécurité
Direction générale des sciences
59, promenade Camelot
Ottawa ON K1A 0Y
biocon@inspection.gc.ca
Télééc. (613) 228-6129

Drawings Review Checklist for Containment Level 3 Facilities

Facility: _____

Rooms: _____

Items to Consider		Yes	No	N/A	Plan #
Overall Design					
1	Containment barrier outlined and appropriate				
2	Office area located outside of laboratory				
3	Clean/Dirty change area separated by a walk-through shower				
4	Double door pass-through autoclave with interlocking doors or visual/audible alarm				
5	Large door to allow entry of equipment				
6	Interlocking door system (with manual override) or SOPs				
7	Decontamination ports (optional)				
8	Airlock area for gaseous decontamination (optional)				
9	Dunk tank (optional)				
10	Pass through (optional)				
Surfaces (Specifications)					
1	Able to withstand disinfectants				
2	Continuous (can have welded seams)				
3	Impact resistant				
4	Seal maintained between floor and walls (cove floor finish 15cm up the wall is recommended)				
5	Floor slip resistant				
6	Doors and frames non absorptive				



Perimeter				
1	All penetrations are sealed at the containment perimeter (verify the specification for product detail) -Water plumbing -Gas, etc.			
2	Windows (if present) to be sealed and provide the proper level of security			
Air Handling				
1	Pressure monitoring devices provided at the laboratory zone entrance to monitor negative pressure between containment zones.			
2	Pressure point reference (to what?; corridor, clean change area)			
3	Room static pressure monitoring lines provided with filters of at least equal efficiency to HEPA filter.			
4	Alarm to be provided inside/outside the laboratory to signal air handling systems failure			
A) Supply				
1	Separate from other areas of lower containment or, if combined with areas of lower containment provided with a bubble tight damper or HEPA filter after the connection (e.g. downstream from the connection)			
2	Equipped with motorized bubble tight damper or HEPA filter for backdraft protection			
3	Equipped with bubble tight dampers to permit gaseous decontamination – can be same bubble tight dampers as required for backdraft protection and for isolation of HEPA filters			
4	Bubble tight damper and HEPA filter to be located close to containment barrier			
5	Supply diffusers located at least 1.5m from BSC or equipped with diffuser (what type of diffuser)			
6	Location of supply does not interfere with inward directional airflow			
7	Interlocked with exhaust to prevent positive pressurization			
8	Ductwork between the room perimeter and bubble tight damper sealed with Class A (SMACNA)			
9	Air flow control device and duct sensor located upstream of the supply bubble tight damper or HEPA filter			



B) Exhaust					
1	Separate from other areas of lower containment or, if combined with areas of lower containment provided with a bubble tight damper or HEPA filter before the connection (e.g. upstream from the connection)				
2	HEPA filtered				
3	Equipped with bubble tight dampers to permit gaseous decontamination – can be same bubble tight dampers as required for backdraft protection and for isolation of HEPA filters				
4	Bubble tight damper and HEPA filter to be located as close to containment barrier				
5	Exhaust ducts located at least 1.5m from BSC or equipped with diffuser				
6	Interlocked with supply to prevent positive pressurization				
7	Ductwork between the room perimeter and bubble tight damper sealed with Class A (SMACNA)				
8	Air flow control device and duct sensor located downstream of the bubble tight damper or HEPA filter				
Laboratory Services					
1	Communication system between containment area and outside support area				
2	Water supply control located outside of containment				
3	Water supply provided with backflow preventers at containment barrier				
4	Hands-free hand washing sink located at point of exit				
5	Emergency eyewash facility in accordance with applicable regulations				
6	Emergency shower (if applicable)				
7	Drainage traps required to be deep seal depth in considerations of air pressure differentials (15 cm P-traps are recommended)				
8	Dedicated drainage systems				
9	For non-indigenous agents, drains (including autoclave chamber condensate) and associated piping to be connected to an effluent sterilization system. For indigenous agents drains (including autoclave chamber condensate) and associated piping to be connected to an effluent sterilization system consistent with laboratory activity and local regulations				
10	Drains connected to effluent sterilization sloped towards sterilization system to ensure gravity flow; consideration should be given to the installation of valves to isolate sections for decontamination; piping to be heat and chemical resistant consistent with application; joints should be by thermo/chemical fusible means or welding to ensure integrity of entire system				



11	Plumbing vent lines to be independent of lower containment plumbing lines or to be provided with HEPA filters when connected with laboratories of lower containment				
12	Plumbing vent lines to be heat resistant				
13	Power circuit breaker outside containment				
14	Autoclave condensate drain located on dirty side (or clean side, when provided with a closed connection)				
15	Autoclave to be equipped with a cycle log recorder (to record time, temperature and pressure)				
16	Critical equipment supported by the emergency generator				
17	Emergency lighting to be provided				

HEPA Filter Housings

1	Provided with a bubble tight damper for isolation on the air inlet and outlets				
2	Provided with fumigation ports upstream and downstream				
3	Provided with upstream injection port and downstream access port for scanning purposes				
4	Leak tight				

BSCs

1	Type and class of BSCs (thimble, hard-ducted, recirculated, charcoal filter, etc.)				
2	Located 1.5m from supply/exhaust diffusers, doors, air generating equipment				
3	30cm clearance between exhaust outlet and ceiling?				
4	30cm around cabinet for access?				