Canadian Food Inspection Agency | Agence canadienne d'inspection des aliments

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Drawings Review Checklist for Aquatic Containment Level 3 (AQC3) 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	Anteroom allowing for separation of clean and dirty PPE				
4	Double door pass-through autoclave with interlocking doors or visual/audible alarm				
5	Size of door openings designed to allow passage of all anticipated equipment and aquatic animal tanks				
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 15 cm 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				

Items to Consider		Yes	No	N/A	Plan #
Air Handling					
1	Pressure monitoring devices provided at the laboratory zone entrance to monitor negative pressure (inward directional airflow) between containment zones.				
2	Pressure point reference				
3	Alarm to be provided inside/outside the laboratory to signal air handling systems failure				
4	Supply diffusers and exhaust ducts located at least 1.5 m from BSC or equipped with diffuser (what type of diffuser)				
5	Location of supply and exhaust do not interfere with inward directional airflow				
6	Supply air system to be interlocked (i.e., fans, dampers, electrical) with exhaust air system, to prevent sustained laboratory positive pressurization.				

The requirements for air quality, supply and exhaust air, and air recirculation within a containment zone for a veterinary biologics manufacturing and testing facility depend on the specific pathogen(s), procedures performed, and design and construction of the facility. Therefore, HVAC requirements for veterinary biologics manufacturing and testing facilities will be determined on a case-by-case basis. Some of these requirements include HEPA filtration of supply and exhaust air as well as sealed and dedicated supply and exhaust ductwork. For more details on these requirements, VBS must be contacted.

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	Drains and associated piping to be separated from zones of lower levels of containment.				
8	Drainage traps required to be deep seal depth in considerations of air pressure differentials (15 cm P-traps are recommended)				
9	Plumbing vent lines to be heat resistant				
10	Power circuit breaker outside containment				
11	Electrical outlets to be installed well above floor level, sealed to be water tight, and covered.				

Items to Consider		Yes	No	N/A	Plan #
12	Alarm system to be provided to indicate failures (excessive water levels, failure of backflows, etc.).				
13	Autoclave condensate drain located on dirty side (or clean side, when provided with a closed connection)				
14	Autoclave to be equipped with a cycle log recorder (to record time, temperature and pressure)				
15	Life-safety systems, lighting, BSCs and other critical equipment to be supported by emergency power				
16	Emergency lighting to be provided				
Liquid Effluent Treatment for Live Animal (*in vivo*) Facilities					
1	Drains from live animal holding tanks, sinks, sumps, showers, or drainage in contact with contaminated materials to be connected to an effluent treatment system				
2	Drains connected to effluent treatment systems to be sloped towards the decontamination system to ensure gravity flow; consideration should be given to installing valves to isolate sections for decontamination.				
3	The effluent treatment system (e.g., piping, valves, tank) to be heat and chemical resistant consistent with use.				
4	Water decontamination processes (chlorine, ultra violet, heat, ozone injection, etc.) must be equipped with a monitoring and log recording system to record critical operational parameters.				
5	A backup effluent decontamination system or holding system in place.				
6	Effluent treatment systems that are not completely closed and contained must be housed in a room designed to the same containment level as the highest level of containment of the laboratory being serviced.				
7	Room housing a completely closed and contained liquid effluent treatment system: • Doors must be kept locked at all times. • Doors must have appropriate signage. • Room must accommodate the volume capacity of the effluent treatment system. • Floor surfaces must be sealed. Floor drains must be sealed or re-routed to the effluent treatment system.				
8	Alarm system provided to indicate failure of effluent treatment system.				
9	Exposed facility service piping with stand-offs to allow access for maintenance and cleaning.				
10	Water supply shut-off valves and other controls located outside the containment zone.				
11	Effluent drainage pipes accessible for regular inspection for any leaks, repair and maintenance.				
12	The effluent system equipped with a sludge/sediment removal/ collection system.				

Items to Consider		Yes	No	N/A	Plan #
BSCs (if applicable)					
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	30 cm clearance between exhaust outlet and ceiling				
4	30 cm around cabinet for access				