**Biocontainment Facility Inspection Guideline – Internal PC2**

This guidance document is designed to assist in conducting thorough and efficient safety audits across PC1 and PC2 laboratories at Victoria University. The following steps align with the sections of the **Lab Safety Inspection Audit Checklist**.

**Step A: Pre-Inspection Preparation**

**A.1 Gather Necessary Information:**

* **Facility and Personnel**: Confirm the Institute / College, campus, building, room number and lab classification (PC1 or PC2). Ensure that the date of the last inspection is available and record the full names of personnel present during the audit.

**A.2 Review Past Inspection Records:**

* Review outcomes from the previous inspection, including any unresolved action items. Familiarise yourself with the lab's specific requirements based on its classification.

**Step B: Conducting the Inspection**

**Section 2: Access Control and Security**

* **What to Look For**:
  + Verify that lab access is restricted to authorised personnel via secure methods such as FOBs.
  + Check if access logs are maintained and reviewed regularly.
  + Ensure that lab doors are kept closed when work is in progress to prevent unauthorised access.
  + Confirm that all necessary signage (e.g., biohazard symbols, restricted access) is clearly displayed and securely attached.
* **Documentation**: Record any issues with access control or signage and recommend corrective actions.

**Section 3: Signage and Labelling**

* **What to Look For**:
  + Ensure all lab areas, especially restricted areas are clearly and securely labelled with required PPE specifications.
  + Check that hazard signage (biohazard, chemical, radiation) is prominently displayed and secure.
  + Confirm that emergency contact information is up-to-date, visible, and secure.
* **Documentation**: Record any missing or outdated signage and verify that emergency contact details are current.

**Step C: Safety and Hygiene**

**Section 4: Personal Protective Equipment (PPE)**

* **What to Look For**:
  + Ensure that appropriate PPE (gowns, gloves, masks, safety glasses) is available and in good condition.
  + Check that PC2 gowns are back closing and long-sleeved.
  + Check that respiratory protection is available for aerosol-generating procedures.
  + Verify that PPE is stored correctly to prevent contamination.
* **Documentation**: Record any deficiencies in PPE availability or storage and recommend corrective actions.

**Section 5: Cleanliness, Housekeeping, and Hygiene**

* **What to Look For**:
  + Inspect the lab for cleanliness and organization, ensuring that work surfaces are decontaminated regularly.
  + Check that sinks, glassware, and handwashing stations are clean and functional.
  + Check that waste bins are emptied regularly and that chemical storage areas are free from spills.
* **Documentation**: Note any housekeeping concerns and recommend specific improvements where needed.

**Step D: Equipment and Storage**

**Section 6: Fridges, Freezers, and Cold Rooms**

* **What to Look For**:
  + Check that fridges and freezers are clean, organised, and properly labelled.
  + Verify temperature logs are maintained, especially for critical storage units like ULT (Ultra-Low temperature) freezers.
  + Ensure that alarms for cold storage units are operational and tested regularly.
  + Check that inventory lists are maintained and up to date.
* **Documentation**: Record any issues with temperature monitoring or inventory management and ensure proper labelling of storage units.

**Section 7: Chemical and Hazardous Materials Management**

* **What to Look For**:
  + Ensure chemicals are stored according to compatibility and hazard class.
  + Check that chemical containers are properly labelled with content, concentration, and expiration dates, and where appropriate, with ownership.
  + Check that Safety Data Sheets (SDS) are accessible and up to date.
  + Verify that hazardous waste containers are labelled and stored correctly.
* **Documentation**: Note any improperly stored or labelled chemicals and ensure that SDS are accessible.

**Step E: Biological Safety and Environmental Controls**

**Section 8: Biological Safety and Waste Disposal**

* **What to Look For**:
  + Verify that biological agents are stored in secure, labelled containers with appropriate biohazard symbols.
  + Check that a decontamination process is in place for biological waste disposal.
  + Ensure autoclaves are functional, regularly tested, and that logs are up to date.
  + Confirm that sharps containers are available, labelled, and not overfilled.
* **Documentation**: Record any issues with biological waste handling or autoclave logs and recommend corrective actions.

**Section 9: Ventilation, Air Quality, and Environmental Controls**

* **What to Look For**:
  + Ensure that ventilation systems are adequate, especially in PC2 labs with negative pressure requirements.
  + Verify that HEPA filters are installed and maintained where required.
  + Check that air handling units (AHUs) are inspected and serviced regularly.
  + Confirm that room temperature and humidity are monitored and controlled.
* **Documentation**: Note any ventilation issues or air quality issues.

**Step F: Critical Equipment and Emergency Preparedness**

**Section 10: Biological Safety Cabinets (BSCs) and Fume Hoods**

* **What to Look For**:
  + Ensure that BSCs are certified annually, kept clean, and follow proper decontamination protocols after use.
  + Check that fume hoods are functional, certified, and free from clutter, and that sash heights are maintained at safe levels during use.
  + Verify that procedures involving volatile chemicals are conducted only within fume hoods.
* **Documentation**: Record any BSC or fume hood issues and confirm certification records are up to date.

**Section 11: Spill Management and Emergency Preparedness**

* **What to Look For**:
  + Ensure that spill kits are available and fully stocked for chemical, biological, and radiation spills.
  + Verify that personnel are trained in spill response procedures and that training is documented.
  + Check that fire extinguishers, eyewash stations, and safety showers are functional, unobstructed, and regularly inspected.
  + Confirm that there is a designated assembly point in case of evacuation and that fire alarms and emergency lighting are tested regularly.
* **Documentation**: Record any deficiencies in spill kits or emergency equipment and recommend corrective actions.

**Step G: Safety Readiness and Competency Verification**

**Section 12: First Aid, Incident Response, and Documentation**

* **What to Look For**:
  + Ensure First Aid kits are fully stocked and that contents are checked regularly.
  + Verify that personnel have current First Aid certifications.
  + Check that all incidents and near misses are documented, reviewed, and corrective actions taken, where required.
  + Confirm that safety manuals and emergency procedures are accessible to all personnel.
* **Documentation**: Record any First Aid or incident response issues via the online Elumina Management System.

**Section 13: Training and Competency Review**

* **What to Look For**:
  + Verify that all staff are trained in lab safety protocols and emergency procedures, with refresher training provided regularly.
  + Ensure that competency assessments are conducted for those handling hazardous materials.
  + Confirm that contractors and visitors receive a lab safety and compliance induction before entry.
* **Documentation**: Record any gaps in training or competency assessments and schedule necessary training sessions.

**Step H: Final Equipment and Safety Checks**

**Section 14: Equipment Maintenance and Calibration**

* **What to Look For**:
  + Ensure that all critical equipment (e.g., autoclaves, centrifuges, freezers) is maintained and calibrated annually.
  + Verify that maintenance and calibration records are up-to-date and accessible.
  + Check that safety interlocks and emergency shutoffs on equipment are tested regularly.
* **Documentation**: Record any equipment maintenance or calibration issues and confirm that preventive maintenance schedules are followed.

**Section 15: Fire Safety and Environmental Sustainability**

* **What to Look For**:
  + Confirm that fire extinguishers are present, easily accessible, and inspected regularly.
  + Check that fire exits are clearly marked, unobstructed, and accessible.
  + Ensure that energy-saving practices (e.g., energy-efficient equipment) are implemented and that recycling programs are in place.
  + Verify that sustainable lab practices are promoted (e.g., reducing single-use plastics).
* **Documentation**: Record any fire safety or sustainability issues and suggest specific improvements.

**Step I: Final Review and Sign-Off**

**Section 16: Incident and Near Miss Review**

* **What to Look For**:
  + Review all incidents and near misses documented since the last inspection.
  + Confirm corrective actions have been taken and that lessons learned are shared with relevant staff.
* **Documentation**: Document any outstanding issues from incident reviews and confirm follow-up actions.

**Section 17: Regulatory Compliance and Permit Review**

* **What to Look For**:
  + Confirm that all required permits and licenses (e.g., for poisons, biologicals, radiation) are up-to-date and conditions are being met.
  + Verify that compliance records are accessible and regularly reviewed.
  + Ensure there is a process for renewing permits and licenses before expiration.
* **Documentation**: Record any permit or license issues and initiate renewal processes if needed.

**Section 18: Action Items and Follow-Up**

* **What to Look For**:
  + Review and document all action items identified during the inspection.
  + Assign responsibility for each action and set a due date for resolution.
  + Ensure follow-up actions are tracked and completed.
* **Documentation**: Complete the inspection by recording all necessary actions and ensuring that they are assigned and tracked.

**Section 19: Inspection Sign-Off**

* Have all inspectors sign off on the inspection, including their roles and the date of the inspection.