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| **Inspection Report for BSL-2 Teaching and Research Laboratories**  **West Texas A&M University** | | | | | | |
| Inspection Date: | | | | | | |
| Inspected By: | | | | | | |
| Reason for Inspection: | | | | | | |
| Lab Location (Building & Room Number): | | | | | | |
| Shared Lab? | | | | | | |
| Lab PI/Supervisor Name, Phone and Email: | | | | | | |
| Department: | | | | | | |
| Department Chair Name, Phone and Email: | | | | | | |
| **List of BSL-2 and/or RG2 agents used/stored in lab:** | | | | | | |
| Bacteria | |  | | | | |
| Virus/Viral Vectors | |  | | | | |
| Fungi | |  | | | | |
| Cell Lines | |  | | | | |
| Other | |  | | | | |
| **A** | **Standard Microbiological Practices** | | **Yes** | **No** | **N/A** | **Comments/Notes** |
| A1 | The laboratory supervisor must enforce the institutional policies that control access to the laboratory. | |  |  |  |  |
| A2 | Persons must wash their hands after working with potentially hazardous materials and before leaving the laboratory. | |  |  |  |  |
| A3 | Eating, drinking, smoking, handling contact lenses, applying cosmetics, and storing food for human consumption must not be permitted in laboratory areas. Food must be stored outside the laboratory area in cabinets or refrigerators designated and used for this purpose. | |  |  |  |  |
| A4 | Mouth pipetting is prohibited; mechanical pipetting devices must be used. | |  |  |  |  |
| A5 | Policies for the safe handling of sharps, such as needles, scalpels, pipettes, and broken glassware must be developed and implemented. Whenever practical, laboratory supervisors should adopt improved engineering and work practice controls that reduce risk of sharps injuries. These include A5a – A5d below: | |  |  |  |  |
| A5a | Careful management of needles and other sharps are of primary importance. Needles must not be bend, sheared, broken, recapped, removed from disposable syringe, or otherwise manipulated by hand before removal. | |  |  |  |  |
| A5b | Used disposable needles and syringes must be carefully placed in conveniently located puncture-resistant containers used for sharps disposal. | |  |  |  |  |
| A5c | Non-disposable sharps must be placed in a hard-walled container for transport to a processing area for decontamination, preferably by autoclaving. | |  |  |  |  |
| A5d | Broken glassware must not be handled directly. Instead, it must be removed using a brush and dustpan, tongs, or forceps. Plasticware should be substituted for glassware whenever possible. | |  |  |  |  |
| A6 | Perform all procedures to minimize the creation of splashes and/or aerosols. | |  |  |  |  |
| A7 | Decontaminate work surfaces after completion of work and after any spill or splash of potentially infectious material with appropriate disinfectant. | |  |  |  |  |
| A8 | Decontaminate all cultures, stocks, and other potentially infectious materials before disposal using an effective method. Depending on where the decontamination will be performed, the following methods should be used prior to transport (A8a – A8b): | |  |  |  |  |
| A8a | Materials to be decontaminated outside of the immediate laboratory must be placed in a durable, leak-proof container and secured for transport. | |  |  |  |  |
| A8b | Materials to be removed from the facility for decontamination must be packed in accordance with applicable local, state, and federal regulations. | |  |  |  |  |
| A9 | A sign incorporating the universal biohazard symbol must be posted at the entrance to the laboratory. The sign must include the name of the agent(s) in use and/or storage, and the name and phone number of the laboratory supervisor or other responsible personnel. The MSDS for each agent must be printed and available in the laboratory. Agent information should be posted in accordance with the institutional policy. | |  |  |  |  |
| A10 | An effective integrated pest management program is required. | |  |  |  |  |
| A11 | The laboratory supervisor must ensure that laboratory personnel receive appropriate training regarding their duties, the necessary precautions to prevent exposures, and exposure evaluation procedures. Personnel must receive annual updates or additional training when procedural or policy changes occur. Personal health status may impact an individual’s susceptibility to infection, ability to receive immunizations or prophylactic interventions. Therefore, all laboratory personnel and particularly women of child-bearing age should be provided with information regarding immune competence and conditions that may predispose them to infection. Individuals having these conditions should be encouraged to self-identify to the institution’s healthcare provider for appropriate counseling and guidance. | |  |  |  |  |
| **B** | **BSL-2 Special Practices** | | **Yes** | **No** | **N/A** | **Comments/Notes** |
| B1 | All persons entering the laboratory must be advised of the potential hazards and meet specific entry/exit requirements. This includes B1a – B1b below: | |  |  |  |  |
| B1a | Successful completion of CITI biosafety/biohazard training. | |  |  |  |  |
| B1b | Completion of lab-specific training. One component of lab-specific training is that the laboratory supervisor must ensure all laboratory personnel demonstrate proficiency in standard and special microbiological practices before working with BSL-2 agents. | |  |  |  |  |
| B2 | Laboratory personnel must be provided medical surveillance and offered appropriate immunizations for agents handled or potentially present in the laboratory. | |  |  |  |  |
| B3 | All approved IBC Permits (which include the preparation and adoption as policy of a laboratory-specific biosafety manual and biosafety SOP) must be available and accessible. | |  |  |  |  |
| B4 | Potentially infectious materials must be placed in a durable, leak-proof container during collection, handling, processing, storage, or transport within a facility. | |  |  |  |  |
| B5 | Laboratory equipment should be routinely decontaminated, as well as after spills, splashes, or other potential contamination. | |  |  |  |  |
| B6 | Spills involving infectious materials must be contained, decontaminated, and cleaned up by staff properly trained and equipped to work with infectious material. | |  |  |  |  |
| B7 | Equipment must be decontaminated before repair, maintenance, or removal from the laboratory. | |  |  |  |  |
| B8 | Incidents that may result in exposure to infectious materials must be immediately evaluated and treated according to procedures described in the laboratory biosafety manual and/or biosafety SOP. All such incidents must be reported to the laboratory supervisor. Medical evaluation, surveillance, and treatment should be provided and appropriate records maintained. | |  |  |  |  |
| B9 | Animals and plants not associated with the work being performed must not be permitted in the laboratory. | |  |  |  |  |
| B10 | All procedures involving the manipulation of infectious materials that may generate an aerosol should be conducted within a BSC or other physical containment devices. | |  |  |  |  |
| **C** | **BSL-2 Safety Equipment**  **(Primary Barriers and Personal Protective Equipment)** | | **Yes** | **No** | **N/A** | **Comments/Notes** |
| C1 | Each BSL-2 laboratory must contain at least one properly maintained BSC (preferably Class II). Other appropriate protective equipment, or other physical containment devices must be used whenever (C1a – C1b below): | |  |  |  |  |
| C1a | Procedures with a potential for creating infectious aerosols or splashes are conducted. These may include pipetting, centrifuging, grinding, blending, shaking, mixing, sonicating, opening containers of infectious materials, inoculating animals intranasally, and harvesting infected tissues from animals or eggs. | |  |  |  |  |
| C1b | High concentrations or large volumes of infectious agents are used. Such materials may be centrifuged in the open laboratory using sealed rotor heads or centrifuge safety cups. | |  |  |  |  |
| C2 | Protective laboratory coats, gowns, smocks, or uniforms designated for laboratory use must be worn while working with hazardous materials. Remove protective clothing before leaving for non-laboratory areas (e.g., cafeteria, library, offices). Dispose of protective clothing appropriately, or deposit it for laundering by the institution. It is recommended that laboratory clothing not be taken home. | |  |  |  |  |
| C3 | Eye and face protection (goggles, mask, face shield or other splatter guard) is used for anticipated splashes or sprays of infectious or other hazardous materials when the microorganisms must be handled outside the BSC or containment device. Eye and face protection must be disposed of with other contaminated laboratory waste or decontaminated before reuse. Persons who wear contact lenses in laboratories should also wear eye protection. | |  |  |  |  |
| C4 | Gloves must be worn to protect hands from exposure to hazardous materials. Alternatives to latex gloves should be available. Gloves should not be worn outside the laboratory. In addition BSL-2 workers should (C4a – C4c below): | |  |  |  |  |
| C4a | Change gloves when contaminated, integrity has been compromised, or when otherwise necessary. Wear two pairs of gloves when appropriate. | |  |  |  |  |
| C4b | Remove gloves and wash hands when work with hazardous materials has been completed and before leaving laboratory. | |  |  |  |  |
| C4c | Do not wash or reuse disposable gloves. Dispose of used gloves with other contaminated laboratory waste. Hand washing protocols must be rigorously followed. | |  |  |  |  |
| **D** | **BSL-2 Laboratory Facilities**  **(Secondary Barriers)** | | **Yes** | **No** | **N/A** | **Comments/Notes** |
| D1 | Laboratories should have self-closing doors and have locks in accordance with institutional policies. | |  |  |  |  |
| D2 | Laboratories must have a sink for handwashing. The sink may be manual, hands-free, or automatically operated. It should be located near the exit door. | |  |  |  |  |
| D3 | The laboratory should be designed so that it can be easily cleaned and decontaminated. Carpets and rugs in laboratories are not permitted. | |  |  |  |  |
| D4 | Laboratory furniture must be capable of supporting anticipated loads and uses. Spaces between benches, cabinets, and equipment should be accessible for cleaning. | |  |  |  |  |
| D5 | Bench tops must be impervious to water and resistant to heat, organic solvents, acids, alkali, and other chemicals. | |  |  |  |  |
| D6 | Chairs used in laboratory work must be either non-porous or covered with a non-porous material that can be easily cleaned and decontaminated with appropriate disinfectant. | |  |  |  |  |
| D7 | Laboratory windows that open to the exterior are not recommended. However, if a laboratory does have windows that open to the exterior, they must be fitted with screens. | |  |  |  |  |
| D8 | BSCs must be installed so that fluctuations of the room air supply and exhaust do not interfere with proper operations. BSCs should be located away from doors, windows that can be opened, heavily traveled laboratory areas, and other possible airflow disruptions. | |  |  |  |  |
| D9 | Vacuum lines should be protected with High Efficiency Particulate Air (HEPA) filters, or their equivalent. Filters must be replaced as needed. Liquid disinfectant traps may be required. | |  |  |  |  |
| D10 | An eyewash station must be readily available. | |  |  |  |  |
| D11 | HEPA-filtered exhaust air from a Class II BSC can be safely recirculated back into the laboratory environment if the cabinet is tested and certified at least annually and operated according to manufacturer’s recommendations. BSCs can also be connected to the laboratory exhaust system by either a thimble (canopy) connection or a direct (hart) connection. Provisions to assure proper BSC performance and air system operation must be verified. | |  |  |  |  |
| D12 | A method for decontaminating all laboratory wastes should be available in the facility. This information should be included, at minimum, in the laboratory biosafety manual and/or biosafety SOP. | |  |  |  |  |