

Animal Facility Biosafety Level 3 Checklist

(date: April 16, 1998)

Date: _____
Location: _____
Responsible: _____
Project Title: _____
Inspector: _____

These questions are based on the Biosafety Level 3 section of *Biosafety in Microbiological and Biomedical Laboratories*, 3rd ed., pages 52-59. Additions and modifications are consistent with prudent practices. They address work with animal pathogens and reflect requirements of the USDA, Animal and Plant Health Inspection Service (APHIS), National Center for Import and Export.

Circle the response that best describes the laboratory in which work with select agents will be carried out.

N.A. = "not applicable", must be supported by brief explanation.

Standard Practices

- Yes, No, N.A. 1. Access to the animal facility is limited or restricted at the discretion of the laboratory or animal facility director.
- Yes, No, N.A. 2. Personnel wash their hands after handling cultures and animals, after removing gloves, and before leaving the animal facility.
- Yes, No, N.A. 3. Eating, drinking, smoking, handling contact lenses, and applying cosmetics, and storing food for human use are not permitted in animal rooms. Persons who wear contact lenses in animal rooms should also wear goggles or a face shield.
- Yes, No, N.A. 4. All procedures are carefully preformed to minimize the creation of aerosols.
- Yes, No, N.A. 5. Work surfaces are decontaminated after use or after any spill of viable materials.
- Yes, No, N.A. 6. Doors to animal rooms open inward, are self-closing and are kept closed when experimental animals are present.
- Yes, No, N.A. 7. All wastes from room are appropriately decontaminated, preferably by autoclaving, before disposal. Infected animal carcasses are incinerated after being transported from the animal room in leakproof, covered containers.
- Yes, No, N.A. 8. An insect and rodent control program is in effect.

Special Practices

- Yes, No, N.A. 1. The laboratory director or other responsible person restricts access to the animal room to personnel who have been advised of the potential hazard and who need to enter the room for program or service purposes when infected animals are present. Persons who are at increased risk of acquiring infection, or for whom infection might be unusually hazardous, are not allowed in the animal room. Persons at increased risk may include children, pregnant women, and persons who immunodeficient or immunosuppressed. The supervisor has the final responsibility for assessing each circumstance and determining who may enter or work in the facility.
- Yes, No, N.A. 2. The laboratory director or other responsible person establishes policies and procedures whereby only Persons who have been advised of the potential hazard and meet any specific requirements (e.g., for immunization) may enter the animal room.
- Yes, No, N.A. 3. When the infectious agent(s) in use in the animal room requires special entry provisions (e.g., the need for immunizations and respirators) a hazard warning sign, incorporating the universal biohazard symbol, is posted on the access door to the animal room. The hazard warning sign identifies the infectious agent(s) in use, lists the name and telephone number of the animal facility supervisor or other responsible person(s), indicates the special requirement(s) for entering the animal room.

- Yes, No, N.A. 4. Laboratory personnel receive appropriate immunizations or tests for the agents handled or potentially present in the laboratory (e.g., hepatitis B vaccine or TB skin testing).
- Yes, No, N.A. 5. Baseline serum samples from all personnel working in the facility and other at-risk personnel should be collected and stored. Additional serum samples may be collected periodically and stored. The serum surveillance program must take into account the availability of methods for the assessment of antibody to the agent(s) of concern. The program should provide for the testing of serum samples at each collection interval and the communication of results to the participants.
- Yes, No, N.A. 6. A biosafety manual is prepared or adopted. Personnel are advised of special hazards, and are required to read and to follow instructions on practices and procedures.
- Yes, No, N.A. 7. Laboratory personnel receive appropriate training on the potential hazards associated with the work involved, the necessary precautions to prevent exposures, and the exposure evaluation procedures. Personnel receive annual updates, or additional training as necessary for procedural or policy changes.
- Yes, No, N.A. 8. A high degree of precaution must always be taken with any contaminated sharp items, including needles and syringes, slides, pipettes, capillary tubes, and scalpels. Needles and syringes or other sharp instruments should be restricted in the laboratory for use only when there is no alternative, such as parenteral injection, blood collection, or aspiration of fluids from laboratory animals and diaphragm bottles. Plasticware should be substituted for glassware whenever possible.
- Yes, No, N.A. a. Only needle-locking syringes or disposable syringes-needle units (i.e., needle is integral to the syringe) are used for injection or aspiration of infectious materials. Used disposable needles must not be bent, sheared, broken, recapped, removed from disposable syringes, or otherwise manipulated by hand before disposal; rather, they must be carefully placed in conveniently located puncture-resistant containers used for sharps disposal. Non-disposable sharps must be placed in a hard-walled container, preferably containing a suitable disinfectant, for transport to a processing area for decontamination, preferably by autoclaving.
- Yes, No, N.A. b. Syringes which re-sheath the needle, needle-less systems, and other safe devices should be used when appropriate.
- Yes, No, N.A. c. Broken glassware must not be handled directly by hand, but must be removed by mechanical means such as a brush and dustpan, tongs, or forceps. Containers of contaminated needles, sharp equipment, and broken glass are decontaminated before disposal, according to any local, state, or federal regulations.
- Yes, No, N.A. 9. Cultures, tissues, or specimens of body fluids are placed in a container that prevents leakage during collection, handling, processing, storage, transport, or shipping.
- Yes, No, N.A. 10. Cages are autoclaved or thoroughly decontaminated before bedding is removed or before they are cleaned and washed. Equipment and work surfaces should be decontaminated with an appropriate disinfectant on a routine basis, after work with infectious materials is finished, and especially after overt spills, splashes, or other contamination by infectious materials. Contaminated equipment must be decontaminated according to any local, state, or federal regulations before it is sent for repair or maintenance or packaged for transport in accordance with applicable local, state, or federal regulations, before removal from the facility.
- Yes, No, N.A. 11. Spills and accidents which result in overt exposures to infectious materials are immediately reported to the laboratory director. Medical evaluation, surveillance, and treatment are provided as appropriate and written records are maintained.
- Yes, No, N.A. 12. All wastes from the animal room are autoclaved before disposal. All animal carcasses are incinerated. Dead animals are transported from the animal room to the incinerator in leakproof covered containers.
- Yes, No, N.A. 13. Animals or plants not involved in the work being performed are not permitted in the lab.
- Yes, No, N.A. 14. Freezers and refrigerators or other storage units are labeled to identify hazard and provide contact information.

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Safety Equipment (Primary Barriers)

- Yes, No, N.A. 1. Personal protective equipment for all activities involving manipulations of infectious materials or infected animals. Equipment and clothing removed prior to shower out and exit, collected and decontaminated before reuse. All materials removed from the animal room are treated or contained prior to removal.

- Yes, No, N.A. a. Wrap-around or solid-front gowns or uniforms are worn by personnel entering the animal room. Front-button laboratory coats are unsuitable. Protective gowns should be appropriately contained until decontamination or disposal.
- b. Personnel wear gloves when handling infected animals. Gloves are removed aseptically and autoclaved with other animal room wastes before disposal. Gloves are never washed or reused.
- c. Appropriate face/eye and respiratory protection is worn by all personnel entering animal rooms housing nonhuman primates.
- d. Boots or other protective footwear are available and used when indicated.
- Yes, No, N.A. 2. Physical containment devices and equipment appropriate for the animal species are used for all procedures and manipulations of infectious materials or infected animals.
- Yes, No, N.A. 3. The risk of infectious aerosols from infected animals or their bedding also can be reduced if animals are housed in partial containment caging systems, such as open cages placed in ventilated enclosures (e.g., laminar flow cabinets), solid wall and bottom cages covered with filter bonnets, or other equivalent primary containment systems.

Animal Facilities (Secondary Barriers)

- Yes, No, N.A. 1. The animal facility is designed and constructed to facilitate cleaning and housekeeping, and is separated from areas which are open to unrestricted personnel traffic within the building. Passage through two sets of doors is the basic requirement for entry into the animal room from access corridors or other contiguous areas. Physical separation of the animal room from access corridors or other activities is provided by a double-door clothes change room.
- Yes, No, N.A. 2. The interior surfaces of walls, floors, and ceilings are water resistant so that they may be easily cleaned. Penetrations in these surfaces are sealed or capable of being sealed to facilitate fumigation or space decontamination.
- Yes, No, N.A. 3. A foot, elbow, or automatically operated hand washing sink is provided in each animal room near the exit door.
- Yes, No, N.A. 4. If vacuum service (i.e., central or local) is provided, each service connection should be fitted with liquid disinfectant traps and a HEPA filter.
- Yes, No, N.A. 5. If floor drains are provided, they are protected with liquid traps that are filled with water or disinfectant.
- Yes, No, N.A. 6. Windows in the animal room are non-operating and sealed.
- Yes, No, N.A. 7. Animal room doors are self-closing and are kept closed when infected animals are present.
- Yes, No, N.A. 8. A pass-thru autoclave for decontaminating wastes is present within the animal facility. Materials are transferred to the autoclave in a covered leakproof container whose outer surface has been decontaminated. Methods for decontamination are verified (tested) periodically.
- Yes, No, N.A. 9. A non-recirculating ventilation system is provided. The supply and exhaust components of the system are balanced to provide for directional flow of air into the animal room. The exhaust air is discharged directly to the outside and clear of occupied areas and air intakes. Personnel must periodically validate that proper directional airflow is maintained.
- Yes, No, N.A. 10. The HEPA filtered exhaust air from Class I, Class II, or Class III biological safety cabinets or other primary containment devices is discharged directly to the outside or through the building exhaust system. Biological safety cabinets are certified annually. Exhaust air from these primary containment devices may be recirculated within the animal room if the device is tested and certified at least every 12 months. If the HEPA filtered exhaust air from Class I or Class II biological safety cabinets is discharged to the outside through the building exhaust system, it is connected to this system in a manner (e.g., thimble unit connection) that avoids any interference with the performance of either the cabinet or building exhaust system.

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ADDENDUM

The following enhancements or requirements for biosecurity are dependant on the biological agent and the National Center for Import and Export. All, or a combination of the enhancements may be stipulated as a basis for import permit authorization.

Personnel quarantine for visitors and staff is in effect. Persons who are working in or visiting a facility (laboratory or animal) where high risk animal pathogens may have been present are restricted from contact with susceptible animals after last possible contact with a pathogen of concern for a period determined by Import/Export Staff. The quarantine policy is presented to and reviewed with staff and visitor and acknowledged by signature.

All personal clothing is removed, including undergarments in the outer change area and a complete clothing set is provided for use while inside the facility. Upon exit, all clothing worn in the animal room is removed, left on the inside change area, and a complete shower out is required.

Treatment of exhaust air is through a type of biological filtration system which effectively removes infectious agents prior to release of exhaust air to atmosphere from biosecure facilities.

Treatment of supply air is through a type of biological filtration system which effectively protects the environment in the event of reverse air flow during mechanical failures.

Exhaust and supply air system are interlocked to prevent pressurization during system failures.

Liquid waste treatment (typically high temperature) and solid waste (infected carcasses) treatment (typically incineration) systems are in place which destroy pathogens prior to release of materials to the environment.

Inspector conclusion summary and action points:

Report Date: _____

Inspector Signature: _____

Inspector Contact Information:

(Name & contact info.) _____

Institutional Representative:

(Name & contact info.) _____

Responsible Facility Official:

(Name & contact info.) _____

Additional persons present during audit: _____

