UNIVERSITY OF SOUTH CAROLINA
SCHOOL OF MEDICINE
BLOODBORNE PATHOGENS
EXPOSURE CONTROL PLAN

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This plan has been adapted to meet the specific requirements of the USC School of Medicine and is applicable to all USC SCHOOL OF MEDICINE departments. Additional information about laundry care and other procedures may be obtained from the appendices of the USC exposure control plan (available from USC Environmental and Health Services). The Exposure Control Plan should be reviewed and updated at least annually, and whenever necessary to reflect new or modified tasks, and / or new or revised employee positions which affect occupational exposure.

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In accordance with the OSHA Blood borne Pathogens Standard, 29 CFR 1910.1030, the following exposure control plan has been developed.

Purpose

The purpose of this exposure control plan is to:

- Eliminate or minimize employee occupational exposure to blood and other potentially infectious materials.
- Comply with the OSHA Blood borne Pathogens Standard 29 CFR 1910.1030

Exposure Determination

Policy for Immunization of Employees at Risk for Hepatitis B:

Hepatitis B is a virus that infects the liver and can cause acute and chronic liver disease. The virus is transmitted by exposure to infectious body fluids, usually blood or blood components. Blood borne pathogens may be transmitted in the following ways during work activities:

- injuries from sharps
- skin or eye contact
- scratches or cuts
- bites or other wounds

Occupational exposure means reasonably anticipated skin, eye, mucous membrane, or parenteral contact with blood or other potentially infectious materials that may result from the performance of an employee's duties. Although universal precautions can provide protection from exposure to Hepatitis B, pre-exposure risks are defined based on the probability of exposure to potentially infectious materials.

CATEGORY I

Positions in which employees may be routinely exposed to blood borne pathogens or other potentially infectious materials.

- The normal work routine involves procedures or job related tasks that have an inherent potential for risk.
- Designated first aid providers who render assistance on a regular basis in the course of their work are included in this category.
- **The Hepatitis B Vaccine will be offered to all employees in Category I.**

CATEGORY II

Positions in which employees are not usually exposed to blood borne pathogens or other potentially infectious materials; but they may be exposed under certain conditions.

- The normal work routine does not involve procedures or job related tasks that have an inherent potential for risk.
- Designated first aid providers whose primary job assignment does not involve rendering of first aid are included in this category.
- **The hepatitis B vaccine will be offered to some employees in Category II.**

CATEGORY III
Positions in which employees should not ever be exposed to blood borne pathogens or other potentially infectious materials.

- **Hepatitis B vaccination is not necessary for Category III employees.**

Job Classifications
Job Classifications in which **all** employees have occupational exposure to blood or other potentially infectious materials (Category I) (this list is intended to be thorough, but may not be completely exhaustive):

Job Classification	Tasks/Procedures
Athletic trainers	Provide first aid, exposure to blood and body fluids
First Responders	Provide first aid, exposure to blood and body fluids
Infectious Waste Handlers	Handles and transports infectious waste
Clinical Laboratory Personnel	Works with sharps, exposure to blood and body fluids
Custodial Staff in Clinical Setting	Handles contaminated laundry, empties trash, cleans contaminated areas
Nursing Staff in Clinical Setting	Works with sharps, exposure to blood and body fluids
Physicians in Clinical Setting	Works with sharps, exposure to blood and body fluids
Forensic Anthropologist and Assistant	Exposure to sharps, blood, body fluids; handling of deceased persons
Radiology staff in clinical Setting	Exposure to blood and body fluids: Non-invasive procedures performed.

Job classifications in which **some** employees have occupational exposure (Category II):

Job Classification	Tasks/Procedures
Staff working with developmentally disabled	Working with clients who may be combative; human bite exposure
International traveler	Travel to region with high hepatitis B exposure risk
Laundry/Locker room personnel	Laundry and other items may be contaminated by blood/body fluids.
Researchers in laboratory setting	Exposure to blood or blood products, infectious waste, virus.

Compliance Methods

Universal precautions will be observed at the University of South Carolina School of Medicine in order to prevent contact with blood or other potentially infectious materials. All blood or other potentially infectious material will be considered infectious regardless of the perceived status of the source individual.

Hand Washing Facilities shall be made available to the employees who incur exposure to blood or other potentially infectious materials. OSHA requires that these facilities be readily accessible after incurring exposure. *(If hand washing facilities are not feasible, USCSM will provide either an antiseptic cleanser in conjunction with clean cloth/paper towels or antiseptic towelettes. If these alternatives are used then the hands are to be washed with soap and running water as soon as feasible.)*

Each department shall ensure that employees wash their hands immediately or as soon as feasible after removal of gloves or other personal protective equipment. Additionally, employees shall wash their hands and any other skin with soap and water, or flush mucous membranes with water immediately or as soon as feasible following contact of such body areas with blood or other potentially infectious materials.

Work practice controls

In work areas where there is a reasonable likelihood of exposure to blood or other potentially infectious materials, employees are not to eat, drink, apply cosmetics or lip balm, smoke, or handle contact lenses. Food and beverages are not to be kept in refrigerators, freezers, shelves, cabinets, or on counter tops or bench tops where blood or other potentially infectious materials are present.

Engineering Controls
Contaminated needles and other contaminated sharps shall not be bent, recapped or removed unless it can be demonstrated that no alternative is feasible or that such action is required by a specific procedure. Such bending, recapping or needle removal must then be accomplished through the use of a mechanical device or a one-handed technique. Shearing or breaking of contaminated needles is prohibited.

Immediately after use, contaminated reusable sharps shall be placed in appropriate containers until properly reprocessed. These containers shall be puncture resistant, labeled or color-coded, and leak proof on the sides and bottom.

Implementation of Safer Medical Devices
The Needlestick Safety and Prevention Act was signed into law on November 6, 2000, in response to the advances made in technological developments that increase employee protection. Safer medical devices replace sharps with non-needle devices or incorporate safety features designed to reduce the likelihood of injury.

Safer medical devices that are appropriate, commercially available, and effective must be implemented. An effective safer medical device is one that, based on reasonable judgment, will decrease the risk of an exposure incident involving a contaminated sharp. Since employees are required to utilize the devices, they shall have input in the identification, selection, and evaluation of effective work practice and engineering controls. After initial use of the devices by employees, there needs to be a continued and documented evaluation of the devices. It may be necessary to replace the device originally selected with a more suitable device. An effective safer device may not be available in the marketplace for every situation.

Engineering controls shall be examined and maintained or replaced on a regular schedule to ensure their effectiveness.

Safety Procedures
All procedures will be conducted in a manner that will minimize splashing, spraying, splattering, and generation of droplets of blood or other potentially infectious materials. Mouth pipetting/suctioning of blood or other potentially infectious materials is prohibited.

Specimens of blood or other potentially infectious materials will be placed in a container that prevents leakage during the collection, handling, processing, storage, and transport of the specimens. The container used for this purpose will be labeled or color-coded.

Any specimens that could puncture a primary container will be placed within a secondary container that is puncture resistant. If outside contamination of the primary container occurs, the primary container shall be placed within a secondary container that prevents leakage during the handling, processing, storage, transport, or shipping of the specimen.

Equipment which may become contaminated with blood or other potentially infectious materials shall be examined prior to servicing or shipping and shall be decontaminated as necessary, unless the department can demonstrate that decontamination of such equipment or portions of such equipment is not feasible. A readily observable label shall be attached to the equipment stating

which portions remain contaminated. The department shall ensure that this information is conveyed to all affected employees, the servicing representative, and/or the manufacturer, as appropriate; prior to handling, servicing, or shipping so that appropriate precautions will be taken.

Personal Protective Equipment
Each department is responsible for ensuring that the following provisions are met.

- All personal protective equipment used at this facility will be provided without cost to employees.
- Personal protective equipment will be chosen based on the anticipated exposure to blood or other potentially infectious materials.
- The protective equipment will be considered appropriate only if it does not permit blood or other potentially infectious materials to pass through or reach the employees clothing, skin, eyes, mouth, or other mucous membranes under normal conditions of use and for the duration of time the protective equipment will be used.

Personal Protective Equipment Use
Each department shall ensure that the employee uses appropriate PPE unless the supervisor shows that employee temporarily and briefly declined to use PPE when under rare and extraordinary circumstances, it was the employee's professional judgment that in the specific instance its use would have prevented the delivery of healthcare or posed an increased hazard to the safety of the worker or co-worker. When the employee makes this judgment, the circumstances shall be investigated and documented in order to determine whether changes can be instituted to prevent such occurrences in the future.

PPE Accessibility
Each department shall ensure that appropriate PPE in the appropriate sizes is readily accessible at the worksite and is issued without to employees. Hypoallergenic gloves, glove liners, powderless gloves, or other similar alternatives shall be readily accessible to those employees who are allergic to the gloves normally provided.

PPE Cleaning, Laundering and Disposal
All personal protective equipment will be cleaned, laundered, repaired, replaced, or disposed of by the employer at no cost to the employee.

All garments that are penetrated by blood shall be removed immediately or as soon as feasible. All PPE will be removed prior to leaving the work area. When PPE is removed, it shall be placed in an appropriately designated area or container for storage, washing, decontamination or disposal.

Gloves
Gloves shall be worn where it is reasonably anticipated that employees will have hand contact with blood, other potentially infectious materials, non-intact skin, and mucous membranes; when performing vascular access procedures and when handling or touching contaminated items or surfaces.

Disposable gloves used at this facility are not to be washed or decontaminated for re-use and are to be replaced as soon as practical when they become contaminated or as soon as feasible if they are torn, punctured, or when their ability to function as a barrier is compromised. *Utility* gloves may be decontaminated for re-use provided that the integrity of the glove is not compromised. Utility gloves will be discarded if they are cracked, peeling, torn, punctured, or exhibits other signs of deterioration or when their ability to function as a barrier is compromised.

Eye and Face Protection
Masks in combination with eye protection devices, such as goggles or glasses with solid side shield, or chin length face shields, are required to be worn whenever splashes, spray, splatter, or droplets of blood or other potentially infectious materials may be generated and eye, nose, or mouth contamination can reasonably be anticipated.

Gowns, Aprons, and Other Protective Body Clothing.

Appropriate protective clothing such as, but not limited to, gowns, aprons, lab coats, clinic jackets, or similar outer garments shall be worn in occupational exposure situations. The type and characteristics will depend upon the task and degree of exposure anticipated.

Surgical caps or hoods and/or shoe covers or boots shall be worn in instances when gross contamination can reasonably be anticipated (e.g., autopsies, surgery).

Housekeeping Procedures
Each department shall ensure the worksite is maintained in a clean and sanitary condition. An appropriate written schedule for cleaning and method of decontamination is based upon the location within the facility, type or surface to be cleaned, type of soil present, and tasks or procedures being performed in the area.

Contaminated work surfaces shall be decontaminated with an appropriate disinfectant after completion of procedures; immediately or as soon as feasible when surfaces are overtly contaminated or after any spill of blood or other potentially infectious materials; and at the end of the work shift if the surface may have become contaminated since the last cleaning.

All bins, pails, cans, and similar receptacles shall be inspected and decontaminated on a regularly scheduled basis.

Any broken contaminated glassware will <u>not</u> be picked up directly with the hands. Dustpans and hand brooms or forceps/ tongs are available for use.

Protective coverings, such as plastic wrap, aluminum foil, or imperviously-backed absorbent paper used to cover equipment and environmental surfaces, shall be removed and replaced as soon as feasible when they become overtly contaminated or at the end of the work-shift if they may have become contaminated during the shift.

Reusable sharps that are contaminated with blood or other potentially infectious materials shall not be stored or processed in a manner that requires employees to reach by hand into the

containers where these sharps have been placed.

Regulated Waste Disposal
Disposal of all regulated waste shall be in accordance with applicable federal, state and local regulations**,** and follow the USC Infectious Waste Management Plan available from the USC Environmental Health and Safety Office.

Disposable Sharps
Contaminated sharps shall be discarded immediately or as soon as feasible in containers that are capable of being sealed, puncture resistant, leak proof on sides and bottom and labeled or color coded. During use, containers for contaminated sharps shall be easily accessible to personnel and located as close as is feasible to the immediate area where sharps are used or can be reasonably anticipated to be found (e.g., laundries). The containers shall be maintained upright throughout use and replaced routinely and not be allowed to overfill.

When moving containers of contaminated sharps from the area of use, the containers shall be closed immediately prior to removal or replacement to prevent spillage or protrusion of contents during handling, storage, transport, or shipping.

The container shall be placed in a secondary container if leakage of the primary container is possible. The second container shall be capable of being sealed, constructed to contain all contents and prevent leakage during handling, storage and transport, or shipping. The second container shall be labeled or color-coded to identify its contents.

Reusable containers shall not be opened, emptied, or cleaned manually or in any other manner that would expose employees to the risk of percutaneous injury.

Other Regulated Waste
Other regulated waste shall be placed in containers that are closeable, constructed to contain all contents and prevent leakage of fluids during handling, storage, transportation or shipping. The waste must be labeled or color-coded and closed prior to removal to prevent spillage or protrusion of contents during handling, storage, transport, or shipping.

If outside contamination of the regulated waste container occurs, it shall be placed in a second container. The second container shall be closable; constructed to contain all contents and prevent leakage of fluids during handling, storage, transport or shipping; appropriately labeled or color-coded; and closed prior to removal to prevent spillage or protrusion of contents during handling, storage, transport, or shipping.

Laundry Procedures
Laundry contaminated with blood or other potentially infectious materials will be handled as little as possible and will not be sorted or rinsed in the area of use. Such laundry will be placed in appropriately marked (biohazard labeled, or color-coded red bag) bags at the location where it was used.

Whenever contaminated laundry is wet and presents a reasonable likelihood of soak-through of or leakage from the bag or container, the laundry shall be placed and transported in bags or containers which prevent soak-through and/or leakage of fluids to the exterior.

Employees who have contact with contaminated laundry wear protective gloves and other appropriate personal protective equipment.

If contaminated laundry is shipped off-site to a second facility which does not utilize universal precautions in the handling of all laundry, prior to shipping, the contaminated laundry must be placed in bags or containers which are appropriately labeled or color-coded.

Labels and Signs

Each department shall ensure biohazard labels are affixed to containers of regulated wastes, refrigerators and freezers containing blood or other potentially infectious materials, and other containers used to store, transport, or ship blood, or other potentially infectious materials.

The universal biohazard symbol shall be fluorescent orange or orange-red. Red bags or containers may substitute for labels; however, regulated wastes must be handled in accordance with the rules and regulations of the organization having jurisdiction. (DHEC)

Hepatitis B Vaccination

The USC School of Medicine Employee Health office shall make available the Hepatitis B vaccination series to all employees at risk of occupational exposure. The USC School of Medicine Employee Health office maintains copies of the employee's hepatitis vaccination status including the dates of all the vaccinations and any medical records relative to the employee's ability to receive vaccination.

The USC School of Medicine shall ensure that all medical evaluations and procedures including the Hepatitis B vaccine and vaccination series are:

- made available at no cost to the employee;
- made available to the employee at a reasonable time and place;
- performed under the supervision of a licensed physician or under the supervision of another licensed healthcare professional; and
- provided according to the recommendations of the U.S. Public Health Service.

All laboratory tests (titers) shall be conducted by an accredited laboratory at no cost to the employee.

Hepatitis B vaccination shall be made available after the employee has received the blood borne pathogens training and within 10 working days of initial assignment to all employees who have occupational exposure unless the employee has previously received the complete Hepatitis B vaccination series, antibody testing has revealed that the employee is immune, or the vaccine is contraindicated for medical reasons. Participation in a pre-screening program is not a prerequisite for receiving Hepatitis B vaccination.

All employees who decline the offered Hepatitis B vaccination shall sign the OSHA required waiver indicating their refusal. If the employee initially declines Hepatitis B vaccination but at a later date while still covered under the standard decides to accept the vaccination, the vaccination shall then be made available.

If a routine booster dose of Hepatitis B vaccine is recommended by the U.S. Public Health Service at a future date, such booster doses shall be made available.

Post Vaccination Testing of Immune Status
Testing for immunity is advised only for persons whose subsequent clinical management depends on knowledge of their immune status. Post vaccination testing is considered for persons at high levels of occupational risk.

USC School of Medicine Employee Health Services will offer post vaccination testing free of charge to those employees at high risk for contracting blood borne disease. The anti-HBS laboratory test will be performed one to two months after completion of the Hepatitis B vaccination series to appropriate individuals in the job classifications listed below:

- health care workers who work in a clinical setting, and
- researchers in a laboratory setting who routinely work with human blood or blood components.

Post Exposure Evaluation and Follow-up

Following a report of a blood/body fluid exposure incident, the USC School of Medicine shall make immediately available to the exposed employee a confidential medical evaluation and follow-up that includes the following elements:

- Documentation of the route(s) of exposure, and the circumstances under which the exposure incident occurred;

- Identification and documentation of the source individual, unless the employer can establish that identification is infeasible or prohibited by state or local law;

- The source individual's blood shall be tested as soon as feasible in order to determine HBV and HIV infectivity. South Carolina law permits testing of source patients to be performed, even without consent, with proper legal authority.

- Results of the source individual's testing shall be made available to the exposed employee, and the employee shall be informed of applicable laws and regulations concerning disclosure of the identity and infectious status of the source individual.

Procedures to Follow After a Potential BBP Exposure
Exposed employees should wash the area thoroughly (soap and water if skin, water if eyes) and notify their supervisor of the incident immediately. If a supervisor is not immediately available, they should contact the Employee Health office without delay.

Any employee that experiences an exposure incident will be offered an immediate medical evaluation, post-exposure evaluation and follow-up in accordance with the OSHA standard. All post-exposure follow-up will be performed by the USC School of Medicine Employee Health Service. Management will include counseling regarding risks, evaluation of the medical risk and of reported illnesses, and treatment and follow-up as indicated.

The USC School of Medicine Employee Health Service shall be contacted immediately following an exposure to blood and/or body fluids. The contact numbers for the USC School of Medicine Employee Health office, **in order of preference**, are:

- Donna Wall, LPN: 803-434-2479, beeper 803-303-0035.
- Joshua R. Mann, MD, MPH: 803-434-4575, beeper 803-654-3143.
- Department of Family and Preventive Medicine administrative office: 803-434-6116.

The exposed employee may or may not need to present in person to the Employee Health Service, depending on the nature of the exposure and the availability of the 'source patient' for testing. The employee will be instructed by Employee Health staff regarding whether a face to face consultation is necessary. The employee health office is located in Department of Family and Preventive Medicine at 3209 Colonial Drive, Columbia, SC 29203.

Employees with exposures occurring after 4:30 p.m. or on weekends or holidays should follow-up immediately with the infection control office or emergency department of the facility in which the individual is working – in most cases, the Palmetto Health Richland Hospital Emergency Room (803-434-7561). The USC School of Medicine Employee Health office must be notified on the first business day following the exposure, and follow-up must be pursued through the Employee Health Service.

Students or employees working at facilities outside of Columbia should pursue immediate evaluation by the infection control office or emergency department of the facility at which they are working, and should notify the USC School of Medicine Employee Health office as soon as possible after receiving initial evaluation and management.

Collection and testing of blood from Source Patients for HCV, HBV and HIV

In order to properly evaluate an employee following an exposure to potentially infectious blood or body fluid, testing for blood-borne pathogen infection should be conducted on the "source patient," assuming the source of the exposure is known. Each clinical department should have a protocol to follow that includes testing of the "source patient" for infection with HIV, hepatitis B, and hepatitis C. The employee's supervisor and/or clinical staff in the department should be able to ensure that the proper tests are ordered without delay. (This includes rapid HIV, hepatitis B surface antigen, and hepatitis C antibody).

If there are any questions regarding what tests should be ordered or how to order them, or if the employee is unable to find a supervisor or clinical employee who can order the needed tests, the employee should contact the USC School of Medicine Employee Health nurse right away at 803-434-2479. To expedite the process, the employee should know the patient's name and medical record number.

Collection and testing of blood from Employee for HCV, HBV and HIV

Testing the employee is not necessary unless the source patient tests positive for a blood-borne infection. If the source patient tests positive for one of the above infections, the exposed employee's blood shall be collected as soon as feasible and tested after consent is obtained.

If the employee consents to baseline blood collection, but does not give consent at that time for HIV serologic testing, the sample shall be preserved for at least 90 days. If, within 90 days of the exposure incident, the employee elects to have the baseline sample tested, such testing shall be done as soon as feasible.

Post-exposure prophylaxis, when medically indicated, will be provided as recommended by the U.S. Public Health Service.

Healthcare Professional's Written Opinion

The USC School of Medicine Employee Health office shall obtain and provide the employee with a copy of the evaluating healthcare professional's written opinion within 15 days of the completion of the evaluation.

The healthcare professional's written opinion for Hepatitis B vaccination shall be limited to whether Hepatitis B vaccination is indicated for an employee, and if the employee has received such vaccination.

The healthcare professional's written opinion for post-exposure evaluation and follow-up shall be limited to the following information:

- That the employee has been informed of the results of the evaluation; and
- That the employee has been told about any medical conditions resulting from exposure to blood or other potentially infectious materials which require further evaluation or treatment.

All other findings or diagnoses shall remain confidential and shall not be included in the written report.

Record Keeping for BBP Exposures

The USC School of Medicine Employee Health office shall establish and maintain an accurate record for each employee with occupational exposure. This record shall include:

- The name and social security number of the employee;
- A copy of all results of examinations, medical testing, and follow-up procedures;
- The employer's copy of the healthcare professional's written opinion; and
- A copy of the information provided to the healthcare professional.

Record keeping following BBP pathogen exposure will also address:

- Documentation of the routes of exposure,
- The circumstances under which the exposure incident occurred,
- A description of the exposed employee's duties as they relate to the exposure incident, results of the source individual's blood testing, if available, and
- Other information related to the exposure incident shall be provided to/acquired by the licensed physician or other licensed healthcare professional who is evaluating the exposure incident.

Confidentiality

Medical records for employees with occupational exposure are maintained by the facility that provides the medical evaluation. Required employee medical records shall be kept confidential and will not be disclosed or reported without the employee's express written consent to any person within or outside the workplace except as required by OSHA regulations or other applicable laws.

Medical records will be kept confidential, and must be maintained for at least the duration of employment plus 30 years.

Sharps Injury Log

The USC School of Medicine Employee Health office shall maintain a sharps injury log for the recording of percutaneous injuries from contaminated sharps. The information is recorded and maintained in such a manner as to protect the confidentiality of the injured employee.

The sharps injury log shall contain, at a minimum:

- The type and brand of device involved in the incident,
- The department or work area where the exposure incident occurred, and
- An explanation of how the incident occurred.

Blood Borne Pathogens Training

Each department shall notify the USC School of Medicine Employee Health office of all employees and new hires who are at risk of blood borne pathogen exposure due to their job duties.

Each department, with the aid of the Employee Health office, shall ensure that training is provided at the time of initial assignment to tasks where occupational exposure may occur, within ninety days after the effective date of the standard, and at least annually thereafter. Each department is responsible for ensuring that the additional training is repeated on an annual basis. The training shall be tailored to the education and language level of the employee, be provided at no cost to the employee, and offered during the normal work shift. The training will include:

a.) A copy of the standard and an explanation of its contents;
b.) A discussion of the epidemiology and symptoms of blood borne diseases;
c.) An explanation of the modes of transmission of blood borne pathogens;
d.) An explanation of the University of South Carolina School of Medicine's Blood borne Pathogen Exposure Control Plan (this program), and a method for obtaining a copy.
e.) The recognition of tasks that may involve exposure.
f.) An explanation of the use and limitations of methods to reduce exposure: work practice and engineering controls, and personal protective equipment (PPE).
g.) Information on the types, use, location, removal, handling, decontamination, and disposal of PPE.
h.) An explanation of the basis of selection of PPE.
i.) Information on the Hepatitis B vaccination, including efficacy, safety, method of administration, benefits, and it will be offered free of charge.
j.) Information on the appropriate actions to take and persons to contact in an emergency involving blood or other potentially infectious materials.
k.) An explanation of the procedures to follow if an exposure incident occurs, including the method of reporting and medical follow-up.
l.) Information on the evaluation and follow-up required after an employee exposure incident.
m.) An explanation of the signs, labels, and color- coding systems.
n.) An opportunity for interactive questions and answers regarding the information covered.

Training must be conducted by someone knowledgeable in the subject matter.

Those who have received training on blood borne pathogens in the twelve months preceding the effective date of the standard only need training with respect to the provisions of the standard which were not included.

Additional training shall be provided to employees when there are any changes of tasks or procedures affecting the employee's occupational exposure. Each department should notify Employee Health of any changes in tasks or procedures.

BBP Training-Related Record Keeping

USC School of Medicine Employee Health Services and each department are responsible for maintaining training records for at least three years from the date of training. The following information shall be documented:

- the dates of the training sessions;
- an outline describing the material presented;
- the names and qualifications of persons conducting the training;
- the names and job titles of all persons attending the training sessions.

Criteria for All BBP-Related Record-Keeping

Availability

All employee records shall be made available to the employee in accordance with 29 CFR 1910.20. All employee records shall be made available to the Assistant Secretary of Labor for the Occupational Safety and Health Administration and the Director of the National institute for Occupational Safety and Health upon request.

Transfer of Records

If at some point this facility is closed or there is no successor employer to receive and retain the records for the prescribed period, the director of the NIOSH shall be contacted for final disposition.

Evaluation and Review

USC School of Medicine Employee Health is responsible for annually reviewing this program, its effectiveness, and for updating the program as needed. Input from clinical employees in non-supervisory positions will be solicited during the updating process.

Appendix A: Special Requirements for laboratories working with HIV and/or HBV

This section (the remainder of the document) applies to research laboratories and production facilities engaged in the culture, production, concentration, experimentation, and manipulation of HIV and HBV. It does not apply to clinical or diagnostic laboratories engaged solely in the analysis of blood, tissues, or organs. These requirements apply in addition to the other requirements of the standard.

Research laboratories and production facilities shall meet the following criteria:

- All regulated waste shall either be incinerated or decontaminated by a method such as autoclaving known to effectively destroy blood borne pathogens.
- Laboratory doors shall be kept closed when work involving HIV or HBV is in progress.
- Contaminated materials that are to be decontaminated at a site away from the work area shall be placed in a durable, leak-proof, labeled or color-coded container that is closed before being removed from the work area.
- Access to the work area shall be limited to authorized persons. Written policies and procedures shall be established whereby only persons who have been advised of the potential biohazard, who meet any specific entry requirements, and who comply with all entry and exit procedures shall be allowed to enter the work areas and animal rooms.
- When other potentially infectious materials or infected animals are present in the work area or containment module, a hazard warning sign incorporating the universal biohazard symbol shall be posted on all access doors.

- All activities involving other potentially infectious materials shall be conducted in biological safety cabinets or other physical-containment devices within the containment module. No work with these other potentially infectious materials shall be conducted on the open bench.

- Laboratory coats, gowns, smocks, uniforms, or other appropriate protective clothing shall be used in the work area and animal rooms. Protective clothing shall not be worn outside of the work area and shall be decontaminated before being laundered.

- Special care shall be taken to avoid skin contact with other potentially infectious materials. Gloves shall be worn when handling infected animals and when making hand contact with other potentially infectious materials is unavoidable.

- Before disposal all waste from work areas and from animal rooms shall either be incinerated or decontaminated by a method such as autoclaving known to effectively destroy blood borne pathogens.

- Vacuum lines shall be protected with liquid disinfectant traps and high-efficiency particulate air (HEPA) filters or filters of equivalent or superior efficiency and which are checked routinely and maintained or replaced as necessary.

Hypodermic needles and syringes shall be used only for parenteral injection and aspiration of fluids from laboratory animals and diaphragm bottles. Only needle-locking syringes or disposable syringe-needle units (i.e., the needle is integral to the syringe) shall be used for the injection or aspiration of other potentially infectious materials. Extreme caution shall be used when handling needles and syringes. A needle shall not be bent, sheared, replaced in the sheath or guard, or removed from the syringe following use. The needle and syringe shall be promptly placed in a puncture-resistant container and autoclaved or decontaminated before reuse or disposal.

All spills shall be immediately contained and cleaned up by appropriate professional staff or others properly trained and equipped to work with potentially concentrated infectious materials. A spill or accident that results in an exposure incident shall be immediately reported to the laboratory director or other responsible person.

A biosafety manual shall be prepared or adopted and periodically reviewed and updated at least annually or more often if necessary. Personnel shall be advised of potential hazards, shall be required to read instructions on practices and procedures, and shall be required to follow them.

Containment Equipment.

Certified biological safety cabinets (Class I, II, or III) or other appropriate combinations of personal protection or physical containment devices, such as special protective clothing, respirators, centrifuge safety cups, sealed centrifuge rotors, and containment caging for animals, shall be used for all activities with other potentially infectious materials that pose a threat of exposure to droplets, splashes, spills, or aerosols.

Biological safety cabinets shall be certified when installed, whenever they are moved and at least annually.

Each laboratory shall contain a facility for hand washing and an eye wash facility which is readily available within the work area.

HIV and HBV production facilities shall meet the following criteria:

- The work areas shall be separated from areas that are open to unrestricted traffic flow within the building.
- Passage through two sets of doors shall be the basic requirement for entry into the work area from access corridors or other contiguous areas.
- Physical separation of the high-containment work area from access corridors or other areas or activities may also be provided by a double-doored clothes-change room (showers may be included), airlock, or other access facility that requires passing through two sets of doors before entering the work area.

The surfaces of doors, walls, floors and ceilings in the work area shall be water resistant so that they can be easily cleaned. Penetrations in these surfaces shall be sealed or capable of being sealed to facilitate decontamination.

Each work area shall contain a sink for washing hands and a readily available eye wash facility. The sink shall be foot, elbow, or automatically operated and shall be located near the exit door of the work area.

Access doors to the work area or containment module shall be self-closing.

An autoclave for decontamination of regulated waste shall be available within or as near as possible to the work area.

A ducted exhaust-air ventilation system shall be provided. This system shall create directional airflow that draws air into the work area through the entry area. The exhaust air shall not be recirculated to any other area of the building, shall be discharged to the outside, and shall be dispersed away from occupied areas and air intakes. The proper direction of the airflow shall be verified (i.e., into the work area).

Additional Initial Training for Employees in HIV and HBV Laboratories and Production Facilities

Employees in HIV or HBV research laboratories and HIV or HBV production facilities shall receive the following initial training in addition to the above training requirements.

- The laboratory director shall assure that employees demonstrate proficiency in standard microbiological practices and techniques and in the practices and operations specific to the facility before being allowed to work with HIV or HBV.
- The laboratory director shall assure that employees have prior experience in the handling of human pathogens or tissue cultures before working with HIV or HBV.
- The laboratory director shall provide a training program to employees who have no prior experience in handling human pathogens. Initial work activities shall not include the

handling of infectious agents. A progression of work activities shall be assigned as techniques are learned and proficiency is developed. Employees may participate in work activities involving infectious agents only after proficiency has been demonstrated.

Signs

The employer shall post signs at the entrance to HIV and HBV Research Laboratory and Production Facilities work areas, which shall bear the following legend:

(Name of the Infectious Agent)
(Special requirements for entering the area)
(Name, telephone number of the laboratory director or other responsible person.)

These signs shall be fluorescent orange-red, with lettering and symbols in a contrasting color.