National Institutes of Health

Exposure Control Program

for

Non-Hospital Personnel

Chairman, NIH Institutional Biosafety Committee (IBC)
Certification of Annual IBC Review and Approval

DIVISION OF OCCUPATIONAL HEALTH AND SAFETY
(Revised July, 2007)

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Introduction

National Institutes of Health (NIH) employees are at risk of infection and subsequent illness as a consequence of exposure to human blood or other potentially infectious body fluids and agents potentially infectious to humans. Risks also exist related to exposure to the blood, tissues, and body fluids of certain non-human primate (NHP) species. Therefore, this exposure control program (ECP) has been developed to minimize employee exposure to bloodborne pathogens, such as Hepatitis B virus (HBV) and human immunodeficiency virus (HIV).

This ECP establishes the policy for the implementation of procedures that relate to the control of infectious diseases that may be contracted by the bloodborne route. The ECP is in compliance with the Occupational Safety and Health Administration (OSHA) Bloodborne Pathogens Standard (29 CFR 1910.1030) and serves as both the written program, for compliance purposes, and as a training document. The ECP will be reviewed and updated by the NIH Institutional Biosafety Committee (IBC) at least annually and whenever necessary to (A) reflect changes in technology that eliminate or reduce exposure to bloodborne pathogens; and (B) document annually consideration and implementation of appropriate commercially available and effective safer medical devices designed to eliminate or minimize occupational exposure.

The Division of Occupational Health and Safety (DOHS) will, in concert with appropriate focus groups including non-managerial employees responsible for direct patient care who are potentially exposed to injuries from contaminated sharps, identify the availability of new technology including commercially available safer medical devices that can eliminate or reduce exposure to bloodborne pathogens in the workplace. The focus groups will aid DOHS in the identification, evaluation, and selection of effective engineering and work practice controls.

The review and implementation of safer medical devices will be documented in each subsequent annual review of the ECP. A copy of the ECP is made available to all NIH employees, the Assistant Secretary of Labor, and the Director, National Institute for Occupational Safety and Health, upon request, by contacting the Institute or Center (IC) Safety Specialist (301-496-2346) or DOHS (301-496-2960).

Exposure Determination

Job Classifications in which all or some of the employees may have occupational exposure:

- Laboratory personnel
- Law enforcement and emergency response personnel.

At the NIH, the principal method by which exposure determination information for laboratory personnel is gathered is with the *Registration of Materials (Potentially) Infectious for Humans* form (HPRD) (Attachment 1). All Principal Investigators (PIs) working with human pathogens, human blood, body fluids, or tissues, biological toxins, and the blood, tissues, or body fluids of old-world non-human primate (NHP) species, must submit a properly completed HPRD to the NIH Biosafety Officer for subsequent review by the NIH IBC. If animals are to be used in the research protocol, a copy of the animal study

proposal (ASP) must also be attached. After initial review, a copy of the registration document is forwarded to the Occupational Medical Service (OMS) for review and enrollment of participants in the appropriate medical surveillance program. Upon receipt of the registration document, the OMS will offer employees immunizations appropriate for the work being performed.

DOHS staff, to ensure that exposure determinations are adequately performed and correct, annually update information collected on the registration document. PIs have the ultimate responsibility to provide updated information to DOHS. Laboratory surveys and routine walk-through visits of areas are made to ensure that appropriate equipment is being used and procedures are being followed.

Law enforcement officers may face the risk of exposure to blood during the conduct of their duties. For example, at the crime scene or during the processing of suspects, NIH law enforcement officers may encounter blood-contaminated hypodermic needles or weapons, or be called upon to render emergency aid. Therefore, NIH law enforcement personnel are covered under the ECP for bloodborne pathogens and are offered hepatitis B immunization and will receive appropriate training.

Fire and emergency response personnel often provide emergency medical services and, therefore, encounter exposures common to those experienced by paramedics and emergency medical technicians. Job duties may be performed hurriedly in the pre-hospital setting under uncontrolled conditions. Fire and emergency response personnel are, therefore, covered under the ECP for bloodborne pathogens and are offered HBV immunization and will receive appropriate training.

The document entitled *Waste Disposal at NIH*, also referred to as the "NIH Waste Calendar," describes waste handling procedures at the NIH. The implementation of these procedures allows a negative exposure determination to be made for housekeeping, maintenance, and other support personnel. However, in an effort to reduce the chance of illness from an accidental HBV exposure, these NIH employees are offered HBV vaccine through OMS.

Methods of Compliance

Universal precautions or the equivalent (see below) shall be observed to prevent contact with blood or other potentially infectious materials. Under circumstances in which differentiation between body fluid types is difficult or impossible, all body fluids shall be considered potentially infectious materials.

A. Work Practice Controls: Biosafety Levels 2 and 3

Work practice controls must be used to eliminate or minimize worker exposure to blood or other potentially infectious materials. Where occupational exposure remains after institution of these controls, engineering controls or personal protective equipment shall also be used.

Certification of Biosafety Level 2 and 3 laboratory facilities is performed by DOHS.

All specimens of human blood, tissue, or body fluids are to be handled utilizing Biosafety Level 2 practices and procedures that equates with the concept of Universal Precautions in the clinical setting. In laboratories working with the human immunodeficiency viruses, other human retroviruses, infected cell lines, and/or simian immunodeficiency virus (SIV) at the research scale, Biosafety Level 3 practices and procedures must be utilized in a certified Biosafety Level 2 facility.

Cercopithecine herpesvirus 1 (also known as B virus, Monkey B virus, or CHV-1) can represent a significant hazard to those who handle the blood, tissues, or body fluids of old-world NHP species.

Biosafety Level 2 practices and facilities are recommended for all activities involving the use or manipulation of tissues, blood, or body fluid from old-world NHP species. Laboratories using or manipulating old-world NHP specimens must register with DOHS using an HPRD. Enrollment in the Animal Exposure Surveillance Program (AESP) is required for personnel who have direct contact with a variety of animals (including NHP), their viable tissues, body fluids, wastes or living quarters. Enrollment in Bloodborne Pathogen safety training given through DOHS is required for personnel who handle the tissue, blood, or body fluids of macaques, unless the employee can document equivalent NIH NHP safety training.

Large-scale work with HIV or the other human retroviruses must be performed in a Biosafety Level 3 facility using full Biosafety Level 3 practices and procedures. These requirements may extend to other human bloodborne pathogens.

Certain laboratory procedures or other factors may require that these organisms be handled at a higher biological safety level than described above. DOHS will conduct situational risk assessments on a case-by-case basis in order to determine the appropriate biological safety practices and procedures.

These practices, procedures, and facility requirements are described in the CDC/NIH publication entitled *Biosafety in Microbiological and Biomedical Laboratories* and are to be adhered to by all NIH employees working with potentially infectious material. A copy of this publication should be in all laboratories and is available to all NIH employees upon request from DOHS (301-496-2346). The document is also available online at:

http://www.cdc.gov/od/ohs/biosfty/bmbl5/bmbl5toc.htm

Fire, emergency response, and law enforcement personnel are required to follow procedures specific for their job categories, as outlined in *Guidelines for Prevention of Transmission of Human Immunodeficiency Virus and Hepatitis B Virus to Health-Care and Public Safety* Workers. Copies of this document are available from the NIH Biosafety Officer (301-496-3353).

B. Engineering Controls

Engineering controls must be used to eliminate or minimize worker exposure to blood or other potentially infectious materials. At the NIH these engineering controls include biological safety cabinets, mechanical pipetting devices, sharps disposal containers, self-sheathing needles, sharps with engineered sharps injury protections, and needleless systems.

Primary Barriers- Class II biological safety cabinets or other physical containment devices are to be used when procedures with a high potential for creating potentially infectious splashes or aerosols are conducted. Such procedures may include centrifuging, grinding, vortexing, blending, sonic disruption, flaming inoculation loops, transferring liquids, homogenizing, withdrawing liquids under pressure, and opening containers of infectious materials having internal pressures different from ambient pressures. Intranasal inoculations or animal necropsy may be performed on an open bench if it is determined by the NIH Biosafety Officer that conducting the procedure in a biological safety cabinet would place the employee at a significantly increased risk of percutaneous exposure to a bloodborne pathogen. In these cases, strict adherence to mucous membrane protective practices is required, which includes face masks and goggles or face shields with eye protection, as well as using appropriate gloves and protective garments.

Annual Inspections of Primary Barrier Equipment and Local Exhaust Ventilation - Annual

inspection and certification of all biological safety cabinets (BSC), fume hoods and other local exhaust ventilation equipment is performed by DOHS. Trouble calls or questions should be directed to the Technical Assistance Branch (301-496-3353) or the appropriate IC Safety Specialist (301-496-2346).

Mechanical Pipetting Devices - Mechanical pipetting devices are to be used for all pipetting activities. Mouth pipetting is strictly prohibited. Automatic pipetting devices are readily available in the NIH Self Service Stores or through the NIH stock catalog.

Handwashing facilities – The NIH will provide handwashing facilities, which are readily accessible to employees. When provision of handwashing facilities is not feasible, NIH shall provide either an appropriate antiseptic hand cleanser in conjunction with clean cloth/paper towels or antiseptic towelettes.

Needleless Systems - Needleless systems are devices that do not use needles for: 1) The collection of bodily fluids or withdrawal of body fluids after venous or arterial access is established; 2) The administration of medication or fluids; or 3) Any other procedure involving the potential for occupational exposure to bloodborne pathogens due to percutaneous injuries from contaminated sharps.

Sharps Containers - Puncture resistant sharps containers are to be used at all work sites where needles and syringes, Pasteur pipettes, scalpel blades, razor blades, and other sharps are used. When appropriately three-quarters filled, the containers are to be appropriately sealed and placed in a Medical Pathological Waste (MPW) box for disposal by incineration. Puncture resistant sharps containers are available from the NIH Self Service Stores and through the NIH stock catalog.

Safety Devices for Centrifuges - For low speed centrifugation of infectious materials, safety centrifuge cups are recommended. If used, the cups are to be loaded and unloaded within a BSC. High-speed centrifugation of infectious materials should be performed using a safety rotor that is loaded and unloaded within a BSC.

Devices with Engineered Sharps Injury Protections – A nonneedle sharp or a needle device that is engineered with injury protection. The device may utilize non-needle technology or incorporate built-in safety features or mechanisms that effectively reduce the risk of exposure incidents. These devices may be used for withdrawing body fluids, accessing a vein or artery, or administering medications or other fluids. Laboratories and animal care areas performing these activities are required to evaluate the availability and use of s engineered protective devices.

C. Personal Protective Equipment

A variety of personnel protective equipment (PPE) in a variety of sizes is available to all NIH employees through the NIH Self Service Stores or through the NIH stock catalog. The items stocked by the NIH for use by its employees are routinely reviewed by DOHS personnel to ensure that the items stocked meet the needs of the user community. New items are added as specific safety needs are identified. All personnel are encouraged to discuss their needs for PPE with the Safety Specialist assigned to their IC. The Specialist may be reached by calling 301-496-2346. If equipment is required which is not currently available through the NIH stores or stock catalog, it is to be ordered from the appropriate source at no cost to the employee. However, personal preference alone is not justification for special ordering of PPE.

Gloves - Gloves are to be worn by all employees when directly handling potentially infectious material or when in contact with contaminated surfaces. Based on individual need, the employee may choose vinyl examination, surgical latex, or nitrile gloves. Gloves are to be changed routinely and rigorous hand washing policies established in laboratory areas. Employees must inspect gloves routinely and replace

them whenever they are visibly soiled, torn, or punctured. All potentially contaminated gloves are to be discarded into the MPW stream, or decontaminated using an autoclave and subsequently be disposed as general waste. Hand-washing is mandatory when gloves are removed and upon completion of work.

Other Protective Garments - Laboratory coats, gowns, aprons, or suits, whichever is most appropriate for the particular application, are to be worn by all personnel manipulating or otherwise handling infectious or potentially infectious materials. These garments are not to be worn outside of the laboratory area. After disposable protective garments are used, discard them in the MPW stream as described in the NIH Waste Calendar. Cloth laboratory coats are not to be taken home by the employee for laundering. Each Institute is responsible for providing laundry service.

Respirators - Respirators must not be used in the laboratory without prior approval of DOHS. Supervisors are not authorized to select or recommend the use of respiratory protection, regardless of the type. Call your IC Safety Specialist (301-496-2346) if you feel respiratory protection is required. Surgical face masks, used for mucous membrane protection, are not considered respirators and are not to be used in situations where respiratory protection is required. All respirator users must be enrolled in the NIH Respiratory Protection Program. Each IC will supply and maintain the recommended respiratory protective device.

HIV and HBV Research Laboratories and Production Facilities

The NIH may have laboratories engaged in the culture, production, concentration, experimentation, and manipulation of HIV and HBV. Such laboratories must follow the same pathogen registration procedure described above.

DOHS will conduct a risk assessment based on the organism involved and the methodology used. The laboratory in question will be required to follow the appropriate level of biological containment practices and procedures as determined by DOHS.

In general, laboratories that use HIV, HBV, and SIV are required to operate at Biosafety Level 2 with 3 practices as described in the CDC/NIH publication entitled *Biosafety in Microbiological and Biomedical Laboratories*, current edition.

Hepatitis B Vaccination and Post-Exposure Evaluation and Follow-up

Occupationally acquired HBV - Hepatitis B is the leading occupationally acquired illness among health care workers, affecting approximately 15,000 workers annually. HBV, formerly known as "serum hepatitis," is one of several viruses that attack the liver producing swelling, tenderness, and liver damage. HBV is spread primarily through contact with blood and body fluids that contain blood. The virus may also be transmitted via blood transfusion, sexual contact, ear piercing, tattooing, and acupuncture if appropriate precautions are not taken.

Symptoms of HBV - The most frequent symptoms of HBV infection include fatigue, mild fever, muscle or joint pain, nausea, vomiting, loss of appetite, and abdominal pain. Many symptoms suggest a flu-like illness, but tend to last longer and jaundice may occur in up to 25% of cases. However, 50% of infected individuals have no symptoms.

Risk of HBV Infection - The risk of HBV infection for NIH employees is considered to be high if their jobs entail frequent contact with human blood and body fluids. NIH employees can protect themselves from occupationally acquired HBV infection by practicing Biosafety Level 2 practices (equivalent to

Universal precautions in a clinical setting) and by becoming immunized against HBV.

HBV Vaccine - A recombinant HBV vaccine is available, free of charge, to all NIH employees who may come in contact with blood and body fluids during the performance of their duties. To receive the vaccine, call the OMS at 301-496-4411. It is strongly recommended that eligible employees accept the vaccine.

The recombinant HBV vaccine does not contain any human blood products; it is both safe and effective. Clinical studies have shown that over 90% of healthy adults administered the vaccine-developed antibody to the hepatitis B virus. The HBV vaccine may also be used prophylactically in combination with hepatitis B immune globulin (HBIG) and is 90% effective in preventing hepatitis B following a documented exposure.

Side effects of the vaccine are minimal. The most common complaint (20%) is a sore arm lasting one or two days. A few individuals have reported headache, fatigue, weakness, or rarely, a low-grade fever.

Eligible employees who decline to accept the vaccination must sign the following statement:

> "I understand that due to my occupational exposure to blood or other potentially infectious material I may be at risk of acquiring hepatitis B virus (HBV) infection. I have been given the opportunity to be vaccinated with hepatitis B vaccine, at no charge to myself. However, I decline hepatitis B vaccination at this time. I understand that by declining this vaccine, I continue to be at risk of acquiring hepatitis B, a serious disease. If in the future I continue to have occupational exposure to blood or other potentially infectious materials and I want to be vaccinated with hepatitis B vaccine, I can receive the vaccination series at no charge to me."

Further information on hepatitis B and the HBV vaccine can be obtained by calling the OMS (301-496-4411).

Hepatitis C Virus (HCV)

Occupationally acquired HCV - HCV is a leading cause of chronic liver disease and is the leading reason for liver transplant in the United States. Although the potential for HCV transmission associated with percutaneous injury is low, varying between 3 and 10% depending on the study, the risk of infection appears to correlate with the severity of the wound. It is estimated that greater than 85% of people who acquire an HCV infection will become chronically infected, and greater than 70% of HCV-infected people will have chronically elevated levels of liver enzymes. About 5% to 10% of infections will not be detected unless polymerase chain reaction is used to detect HCV RNA. Cirrhosis and primary hepatocellular carcinoma may result from chronic HCV.

Symptoms of HCV - HCV infection has two phases. The first, experienced by 75% of infected people, is a flu-like illness that includes headache, loss of appetite, nausea and vomiting, and fatigue. Eventually, 20-30% of infected people will progress to the second phase of HCV infection, which includes the development of overt signs and symptoms such as jaundice, clay-colored stools, and dark brown urine.

Risk of HCV Infection - Employees who must routinely handle human blood and body fluids are considered to be at risk for HCV infection. The risk of occupationally acquired infection may be reduced through the use of Biosafety Level 2 practices and procedures (equivalent to Universal Precautions in a clinical setting) and appropriate mucous membrane and eye protection.

HCV Vaccine - There is currently no vaccine available to prevent infection with HCV, and immune globulin is not recommended for post-exposure prophylaxis. It is therefore very important to use PPE, and to be especially careful when handling sharps. It is also very important to report any potential exposures to OMS (301-496-4411).

Exposure Reporting Responsibilities – The ultimate responsibility for reporting exposures, spills, and other biological hazards rests with the Principle Investigators, supervisors, and the NIH employees. Such exposures and hazards need to be reported to supervisors, principle investigators, DOHS, and OMS. The following areas serve as examples:

- The ultimate responsibility for reporting exposure to a potentially infectious material rests with the NIH employee who has been exposed.
- Notifying employees of the presence of potentially infectious materials in any workplace is the responsibility of the Principle Investigator or supervisor in charge of the work area.
- Notifying emergency services, DOHS, and OMS of spills is the responsibility of all NIH employees.
- Notification of exposures, spills, and other hazards must be done immediately upon becoming aware of the situation.

Surveillance Programs

Retrovirus Exposure Surveillance Program - The Retrovirus Exposure Surveillance Program (RESP) is a medical surveillance program designed for NIH employees who either work with human retroviruses or have had a potential occupational exposure to human blood and body fluids or other potentially infected materials. The objectives of the RESP are to: 1) perform serologic monitoring of participants for antibodies to the retrovirus (es) to which they may be exposed and for which a licensed test is commercially available; 2) provide examination and periodic follow-up for individuals experiencing an overt (known) or suspected exposure; 3) collect epidemiological information related to daily work practices and overt exposures; and 4) provide updated epidemiological and safety information on avoidance of potential worksite exposures to retroviruses. Participation in the program is voluntary; however all eligible employees are encouraged to enroll. More information on the RESP may be obtained by calling OMS (301-496-4411).

Animal Exposure Surveillance Program - The Animal Exposure Surveillance Program (AESP) is a mandatory program designed to monitor and support the health of personnel who have direct contact with a variety of animals, their viable tissues, body fluids, wastes or living quarters. NIH employees are eligible for AESP if they participate in at least one of the following activities: 1) direct care of animals or housing; 2) direct contact with animals (live or dead), their tissues, body fluids, or wastes; or, 3) work with a zoonotic disease agent. **All employees must report bites and scratches promptly to OMS.** Further information on the AESP may be obtained by calling OMS (301-496-4411).

Emergency Steps to Take in the Event of a Potential Exposure - If an employee sustains a potential exposure to HIV or other bloodborne pathogen, immediate first aid should be initiated before leaving the worksite. Contaminated skin should be vigorously scrubbed for fifteen minutes using soap and copious amounts of water. Contaminated eyes and mucous membranes should be irrigated for 15 minutes using normal saline or water. Notify your supervisor, if he or she is immediately available. Report to OMS (Building 10, Room 6C306) within one hour of the exposure. If emergency transport is needed, call 911 (on campus). When OMS is closed, contact the Clinical Center Operator (301-496-1211) to notify an OMS physician.

A poster entitled *3 Emergency Steps to Take in the Event of a Potential Bloodborne Pathogen Exposure* is to be placed prominently in all work areas where there is a potential for exposure to human blood, body fluids, human retroviruses, or other potentially infectious material. Copies of this poster may be obtained by contacting your IC Safety Specialist (301-496-2346).

Post-Exposure Evaluation and Follow-up - Post exposure evaluation and follow-up for NIH employees is provided by OMS. Employee counseling is provided free of charge by the OMS.

Emergency Care - Emergency care will be provided to visitors and contract personnel who sustain a potential exposure. These individuals will be referred to their private or company physicians for follow-up.

Post-Exposure Incident Review - In the event an employee sustains a potential exposure to HIV or other bloodborne pathogen, the IC Safety and Health Specialist as well as the employee's supervisor will review the incident. The log contains information on the type and brand of device involved in the incident; the IC and work area where the incident occurred; and an explanation of how the incident occurred. The log will be maintained by DOHS, and used to gather information that may aid in the implementation of safer technologies.

As part of the incident review, a sharps injury log will be maintained for the recording of percutaneous injuries and mucous membrane exposures. The information in the sharps injury log shall be recorded and maintained in such manner as to protect the confidentiality of the injured employee.

All work-related needlestick injuries and cuts from sharp objects that are contaminated with another person's blood or other potentially infectious material (as defined by 29 CFR 1910.1030) will be entered in the OSHA 300 Log as an injury using the OSHA 301 Injury and Illness Incident Report. All required records are kept for a minimum of five (5) years following the end of the calendar year that the records cover.

Communication of Hazards to Employees

Employees must be notified of the presence of potentially infectious materials in any workspace. Laboratories and other work areas handling human blood and body fluids and any human pathogens must be posted with an NIH-approved biohazard sign. Work areas are posted by DOHS personnel upon completion of a survey and certification of the area at the appropriate biosafety level. Any special requirements (e.g., immunizations, personnel protective equipment) required for entry to a workspace will be designated on the biohazard sign affixed to the entry door.

All infectious waste transferred to the incinerators will be placed in a MPW box or a "burn box" imprinted with the international biohazard warning symbol.

All containers used to transport infectious materials between laboratories or buildings will be labeled with stickers carrying the international biohazard-warning symbol. These stickers are available in the Self-Service Store.

Training and Education

Training for employees, in compliance with the OSHA Bloodborne Pathogen Standard, is provided on a

monthly basis for all employees. PIs and supervisors are responsible for assuring that all employees under their direction who may be potentially exposed to a bloodborne pathogen attend one of these sessions prior to handling infectious materials and that they receive refresher training on an annual basis. Consult the DOHS website (http://dohs.ors.od.nih.gov/index.htm) or call the DOHS office (301-496-2960) for current course schedules. PIs and supervisors are responsible for job-specific safety training and must document that employees selected for jobs involving manipulation of infectious materials have been adequately trained to perform these tasks.

Fire, emergency response personnel, and NIH law enforcement officers receive training consistent with the information provided in the HHS publication entitled *Guidelines for Prevention of Human Immunodeficiency Virus and Hepatitis B Virus to Health-Care and Public-Safety Workers.* These guidelines were developed in response to P.L. 1000-607 *The Health Omnibus Programs Extension Act of 1988,* portions of which are specific for personnel working in the emergency response or law enforcement arenas. Training is provided upon employment and annually.

Bloodborne Pathogen Training Courses Available: For details contact DOHS at 301-496-2960.

Working Safely with HIV and Other Bloodborne Pathogens

Laboratory Safety at the National Institutes of Health

Bloodborne Pathogen Training for NIH Fire and Emergency Response Personnel

Bloodborne Pathogen Training for NIH Law Enforcement Officers

Bloodborne Pathogen Refresher Training for Laboratory Personnel

Miscellaneous Information

In order to serve as both a written program and training document as referred to in the Introduction, the following information is provided. These subjects provide relevant information for the safe handling of other potentially infectious materials at the NIH.

A. Transportation of Infectious Materials

All potentially infectious materials transported between NIH Bethesda campus and outlying buildings must be packaged and transported according to applicable Federal regulations (49 CFR 171-178 and 42 CFR 73.3). Only those individuals certified through an infectious substances shipping course are permitted to package and transport infectious materials. Guidance in complying with regulations pertaining to the shipment of biological materials can be obtained by contacting your IC Safety Specialist at 301-496-2346.

All potentially infectious materials transported between buildings on the NIH Bethesda campus must be placed in labeled, sealed and unbreakable primary and secondary containers. Between the primary and secondary containers, an amount of absorptive material adequate to contain a spill must be placed between the two containers.

International shipments of biological materials must be coordinated through the Quarantine Permit Service Office (QPSO) (301-496-2960) so that the correct import and export licenses can be issued (NIH Manual Issuance 1340-1).These shipments must be packaged and labeled according to International Air Transport Association (IATA) Dangerous Goods Regulations. Under no circumstances shall personal vehicles or public transportation be used to transport infectious materials to or from the Bethesda Campus. Only government vehicles or commercial carriers shall be used to transport infectious materials.

B. Decontamination and Spill Clean up

All work surfaces where blood, body fluids, any infectious agents or materials are handled must be disinfected after each use with an appropriate disinfectant. Additionally, work surfaces must be disinfected after any overt spill. Work surfaces should be covered with plastic-backed absorbent toweling to facilitate clean up and reduce production of aerosols that may result from a spill. Spills within work areas are to be cleaned up by laboratory or research personnel. Housekeeping staff is not authorized to clean up spills of potentially infectious material. Spills of potentially infectious material are to be cleaned up using the following method:

- Notify persons in the immediate area that a spill has occurred.
- Leave laboratory 20-30 minutes and allow potential aerosols to settle before reentering.
- Wearing the appropriate protective equipment (e.g., gloves, lab coat, etc.), cover the spill with absorbent toweling.
- Carefully, pour a freshly prepared 1 in 10 dilution of household bleach (or other suitable disinfectant prepared to manufacturer's specifications) around the edges of the spill working toward the center.
- Allow a 20 minute contact time.
- Using paper towels, wipe up the spill, working from the outside edges toward the center. Be careful to avoid cuts with broken glass. To eliminate the potential for cuts use tongs, dust pan or some other device for pickup and carefully discard into an approved sharps container.

- Repeat process with fresh disinfectant.
- Place all used materials into an MPW box for disposal.

In the event of an unusual or particularly large spill contact the NIH Fire Department (911) for clean up.

In the event of a spill of infectious material in a public access area (e.g., hallway, elevator, etc.), keep all persons away from the spill area and call 911 for clean up.

C. Infectious Waste Disposal

All employees shall comply with the guidance given in the NIH Waste Calendar. Additional copies of this document are available from your IC Safety Specialist (301-496-2346).

D. Equipment Repair and Transfer

All equipment which may have been exposed to hazardous materials (i.e., known hazardous chemical, radiological, or biological substances) must be appropriately decontaminated and certified by the user as being clear of hazards, using NIH Form 2683 before transfer, service, or repair is done (these forms are available at the NIH Self-Service stores and in the NIH Stock Catalogue). This includes all scientific/medical equipment and any office furniture/equipment or supplies that have been used in clinical areas, laboratories, or other potentially hazardous locations. Guidance for the decontamination of such equipment is provided by Instruction and Information (I&I) Memorandum DL 91-3.