

**ORDER**

U.S. DEPARTMENT OF TRANSPORTATION  
FEDERAL AVIATION ADMINISTRATION  
MIKE MONRONEY AERONAUTICAL CENTER  
OKLAHOMA CITY, OKLAHOMA

AC 3790.14

1/18/94

SUBJ: EXPOSURE CONTROL PLAN

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1. PURPOSE. This order establishes the Exposure Control Plan (ECP) for the Civil Aeromedical Institute (CAMI), as required by OSHA's standard 29 CFR 1910.1030, "Bloodborne Pathogens." It applies only to CAMI employees and to students employed by CAMI who may be occupationally exposed to blood or other potentially infectious materials. It does not apply to contract employees, or to other students. The purpose of the standard is to eliminate or minimize occupational exposure to Hepatitis B Virus (HBV), Human Immunodeficiency Virus (HIV), and other bloodborne pathogens.

2. DISTRIBUTION. This order is distributed to all managers and supervisors of CAMI. Supervisors shall ensure that employees are made aware of the contents of this order.

3. BACKGROUND. Based on its quantitative estimates of the lifetime risk of infection, clinical illness, and death from occupational exposure to HBV infected blood or other potentially infectious materials, and its qualitative evidence of occupational transmission of HIV, OSHA has determined that employees face a significant health risk. OSHA estimates that the implementation of a nationwide program including engineering and workplace controls, personal protective clothing and equipment, training, health surveillance, vaccination, and other provisions will result in a significant reduction of clinical illnesses, cases of HBV infections, and deaths among employees.

4. DEFINITIONS.

a. Blood. For the purposes of this order, human blood, human blood components, and products made from human blood.

b. Bloodborne pathogens. Pathogenic microorganisms that are present in human blood and can cause disease in humans. These pathogens include, but are not limited to, HBV and HIV.

c. Clinical laboratory. A workplace where diagnostic or other screening procedures are performed on blood or other potentially infectious materials.

d. Contaminated. The presence or the reasonably anticipated presence of blood or other potentially infectious materials on an item or surface.

e. Contaminated laundry. Laundry which has been soiled with blood or other potentially infectious materials or may contain sharps.

f. Contaminated sharps. Any contaminated object that can penetrate the skin including, but not limited to, needles, scalpels, broken glass, broken capillary tubes, and exposed ends of dental wires.

g. Decontamination. The use of physical or chemical means to remove, inactivate, or destroy bloodborne pathogens on a surface or item to the point where they are no longer capable of transmitting infectious particles and the surface or item is rendered safe for handling, use, or disposal.

h. Engineering controls. Controls that isolate or remove the bloodborne pathogens hazard from the workplace; e.g., sharps disposal containers, or self-sheathing needles.

i. Exposure incident. A specific eye, mouth, other mucous membrane, non-intact skin, or parenteral contact with blood or other potentially infectious materials that results from the performance of an employee's duties.

j. Handwashing facilities. A facility providing an adequate supply of running potable water, soap, and single use towels or hot air drying machines.

k. Licensed healthcare professional. A person whose legally permitted scope of practice allows him or her to independently perform the activities related to vaccination of employees who have occupational exposure. (See paragraph 7a).

l. Occupational exposure. A 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.

m. Other potentially infectious materials.

(1) The following human body fluids: Semen, vaginal secretions, cerebrospinal fluid, synovial fluid, pleural fluid, pericardial fluid, peritoneal fluid, amniotic fluid, saliva in dental procedures, and any body fluid that is visibly contaminated with blood, and all body fluids in situations where it is difficult or impossible to differentiate between body fluids.

(2) Any unfixed tissue or organ (other than intact skin) from a human (living or dead).

(3) HIV-containing cell or tissue cultures, organ cultures, and HIV- or HBV-containing culture medium or other solutions; and blood, organs, or other tissues from experimental animals infected with HIV or HBV.

n. Parenteral. The piercing of mucous membranes or the skin barrier through such events as needlesticks, human bites, cuts, and abrasions.

o. Personal protective equipment. Specialized clothing or equipment worn by an employee for protection against a hazard. General work clothes (e.g., uniforms, pants, shirts, or blouses) not intended to function as protection against a hazard are not considered to be personal protective equipment.

p. Regulated waste. Liquid or semi-liquid blood or other potentially infectious materials; contaminated items that would release blood or other potentially infectious materials in a liquid or semi-liquid if compressed; items that are caked with dried blood or other potentially infectious materials and are capable of releasing these materials during handling; contaminated sharps; and pathological and microbial wastes containing blood or other potentially infectious materials.

q. Source individual. Any individual, living or dead, whose blood or other potentially infectious materials, may be a source of occupational exposure to the employee. Examples include, but are not limited to, hospital and clinic patients; clients in institutions for the developmentally disabled; trauma victims; clients of drug and alcohol treatment facilities; residences of hospices and nursing homes; human remains; and individuals who donate or sell blood or blood components.

r. Sterilize. The use of a physical or chemical procedure to destroy all microbial life including highly resistant bacterial endospores.

s. Universal Precautions. An approach to infection control. According to the concept of Universal Precautions, all human blood and certain human body fluids are treated as if known to be infectious for HIV, HBV, and other bloodborne pathogens.

t. Work practice controls. Controls that reduce the likelihood of exposure by altering the manner in which a task is performed; e.g., by prohibiting the recapping of needles by a two-handed technique.

5. RESPONSIBILITIES.

a. The Director, Civil Aeromedical Institute (AAM-3), has the ultimate responsibility for the control of occupational exposure of CAMI employees to bloodborne pathogens as outlined in this order.

b. All CAMI Division Managers shall:

(1) Direct the enforcement of this order within their respective divisions to ensure that employees are protected from occupational exposure to bloodborne pathogens.

(2) Maintain a list of all job classifications in which all employees in those job classifications have occupational exposure. (See Appendix 1 for a consolidated listing.)

(3) Provide and maintain a list of all job classifications in which only some employees in those classifications have occupational exposure. (See Appendix 2 for a consolidated listing.)

(4) For those job classifications listed in accordance with paragraph (b) above, provide and maintain a current list of all tasks and procedures (or groups of closely related tasks and procedures) in which occupational exposure occurs. (See Appendix 3.)

(5) Ensure that the exposure determination is made without regard to the use of personal protective equipment.

(6) Review Appendices 1 through 3 at least annually. New or revised job classifications shall be reviewed and updated whenever necessary.

(7) Provide updated information for Appendices 1 through 3 as available to the Manager, Environmental Health Branch, AAM-730.

(8) Assist the Manager, AAM-730, in the training of division employees determined to have occupational exposure in accordance with paragraph 8.

(9) Review and update internal ECPs at least annually to maintain currency with this order and ensure that revised copies are sent to the Manager, AAM-730, for concurrence.

c. The Manager, Aeromedical Clinical Branch (AAM-720), shall:

(1) Provide hepatitis B vaccination and post-exposure evaluations to all CAMI employees determined to have occupational exposure in accordance with paragraph 7.

(2) Preserve and maintain employee medical records for all CAMI employees with occupational exposure in accordance with paragraph 9.

d. The Manager, AAM-730, shall:

(1) Work with all division managers to implement the terms of this order and to ensure adherence to proper handling of infectious or potentially infectious materials within CAMI.

(2) Establish training programs for all CAMI employees with occupational exposure in accordance with paragraph 8.

(3) Review and evaluate the effectiveness of this order at least annually and update listings of CAMI employees determined to have occupational exposure as necessary.

(4) Review and evaluate the effectiveness of any internally-developed ECPs to ensure conformance with this order and the OSHA standard.

e. All CAMI Branch Managers and Section Supervisors shall:

(1) Ensure that employees are familiar with this order and that they follow the handling procedures for infectious or potentially infectious materials in Appendix 5, Standard Operating Procedures (SOP).

(2) Ensure that personal protective equipment is available and in good working order.

(3) Ensure that appropriate training has been given to employees prior to their being placed in positions where occupational exposure may occur.

(4) Coordinate or consult with the Manager, AAM-730, to assure that existing procedures that may lead to occupational exposure are adequate.

f. Employees with occupational exposure shall:

(1) Familiarize themselves with this order.

(2) Plan and conduct each operation involving potentially infectious materials in accordance with Appendix 5.

(3) Develop and maintain good personal hygiene habits when working with all potentially infectious materials.

6. METHODS OF COMPLIANCE.

a. General. Universal precautions 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.

b. Standard Operating Procedures (SOP). The SOP in Appendix 5 includes handling procedures which are listed in the OSHA standard, and are intended primarily for clinic or laboratory settings; however, where potential for contact exists in other settings, such as aircraft accident scenes, certain paragraphs of the SOP may apply.

7. HEPATITIS B VACCINATION AND POST-EXPOSURE EVALUATION.

a. General.

(1) Hepatitis B vaccine and vaccine series shall be made available to all employees who have occupational exposure.

(2) All employees who have had an exposure incident shall receive post-exposure evaluation and follow-up.

(3) All medical evaluations and procedures including the hepatitis B vaccine and vaccination series and post-exposure evaluation and follow-up, including prophylaxis, shall be:

(a) Made available at no cost to the employee.

(b) Made available to the employee at a reasonable time and place.

(c) Performed by or under the supervision of a licensed physician or by or under the supervision of another licensed healthcare professional.

(d) Provided in accordance with the recommendations of the U.S. Public Health Service current at the time these evaluations and procedures take place, except as provided in this paragraph.

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

b. Hepatitis B Vaccination.

(1) Hepatitis B vaccination shall be made available to all employees with occupational exposure immediately after the employee has received the training required in paragraph 8 of this order or within 10 working days of initial assignment, unless:

(a) The employee has previously received the complete hepatitis vaccination series;

(b) Antibody testing has revealed that the employee is immune;

(c) The vaccine is contraindicated for medical reasons; or

(d) The employee is likely to render first aid only as a collateral duty, in which case vaccination can be deferred with the following provisions:

1 The vaccine will be offered to unvaccinated first aid responders who have rendered assistance in a first aid incident involving the presence of blood or potentially infectious material *no later than 24 hours* after the incident regardless of whether the employee has actually incurred an exposure incident.

2 All incidents of first aid will be reported by the end of the work shift to the employee's supervisor in order to ensure that proper precautions concerning the incident are followed and that the vaccine is offered to the unvaccinated employee within 24 hours.

(2) No employee shall be required to participate in a prescreening program as a prerequisite for receiving hepatitis B vaccine.

(3) If an employee initially declines hepatitis B vaccination but at a later date, while still covered by the bloodborne pathogen rule, decides to accept the vaccination, the vaccination shall be made available at that time.

(4) Employees who decline to accept hepatitis B vaccine must sign a "Hepatitis B Vaccine Declination" form (see Appendix 4), which will be maintained in the employee's medical file.

(5) If a routine booster dose(s) of hepatitis B vaccine is recommended by the U.S. Public Health Service at a future date, such booster dose(s) shall be made available in accordance with paragraph 7a(3) above.

c. Post-Exposure Evaluation and Follow-up. Following a report of an exposure incident, a confidential medical evaluation and follow-up shall be made immediately available to the employee, and shall consist of at least the following elements:

(1) Documentation of the route(s) of exposure, and the circumstances under which the exposure incident occurred.

(2) Identification and documentation of the source individual, unless it can be established that identification is infeasible or prohibited by state or local law.

(a) The source individual's blood shall be tested as soon as feasible and after consent is obtained in order to determine HBV and HIV infectivity. If consent is not obtained, then documentation will be prepared that will establish that legally required consent cannot be obtained. When the source individual's consent is not required by law, the source individual's blood, if available, shall be tested and the results documented.

(b) When the source individual is already known to be infected with HBV or HIV, testing for the source individual's known HBV or HIV status need not be repeated.

(c) 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.

(3) Collection and testing of blood for HBV or HIV status.

(a) The exposed employee's blood shall be collected as soon as feasible and tested after consent is obtained.

(b) If the exposed employee consents to HBV baseline blood collection, but does not consent at that time to 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.

(4) Post-exposure prophylaxis, when medically indicated, as recommended by the U.S. Public Health Service.

(5) Counseling.

(6) Evaluation of reported illnesses.

NOTE: Counseling and evaluation of reported illnesses is not dependent on the employee's electing to have baseline HBV and HIV serological testing.

d. Information Provided to the Healthcare Professional. The healthcare professional may be an employee of the FAA, an agent of the FAA, or the employee's personal physician.

(1) The healthcare professional responsible for the employee's Hepatitis B vaccination shall be provided a copy of the OSHA bloodborne pathogen rule.

(2) The healthcare worker evaluating an employee after an exposure incident shall be provided the following information.

(a) A copy of the OSHA bloodborne pathogen rule.

(b) A description of the exposed employee's duties as they relate to the exposure incident.

(c) Documentation of the route(s) of exposure and circumstances under which exposure occurred.

(d) Results of the source individual's blood testing, if available.

(e) All medical records relevant to the appropriate treatment of the employee including vaccination status which are maintained in the employer's medical files.

NOTE: As an employer, the FAA does not have a specific right to know the results of the source individual's blood testing, but must ensure that the information is provided to the evaluating healthcare professional.

e. Healthcare Professional's Written Opinion. The employer shall obtain and provide to the employee a copy of the evaluating healthcare professional's written opinion within 15 days of the completion of the evaluation.

(1) 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.

(2) The healthcare professional's written opinion for post-exposure evaluation and follow-up shall be limited to the following information. All other findings or diagnoses shall remain confidential and shall not be included in the written report.

(a) That the employee has been informed of the results of the evaluation; and

(b) 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.

f. Medical Recordkeeping. Medical records required by the OSHA Bloodborne Pathogens rule shall be maintained in accordance with paragraph 9a.

8. INFORMATION AND TRAINING. All employees with occupational exposure shall participate in a training program at no cost to the employees and during working hours.

a. Training shall be provided at the time of initial assignment to a job task where occupational exposure may occur and at least annually thereafter.

b. Employees who have received training within 1 year preceding the effective date of the OSHA standard (March 6, 1992) need to receive additional training only in those provisions that were not included in the earlier training.

c. Annual training for all employees shall be provided within 1 year of their previous training.

d. Additional training shall be provided to employees when changes such as a modification of tasks or procedures or institution of new tasks or procedures affect the employee's occupational exposure. The additional training may be limited to addressing the new exposures created.

e. Training material appropriate in content and vocabulary to educational level, literacy, and language of employees shall be used.

f. The training program shall contain at a minimum the following elements.

(1) An accessible copy of the OSHA bloodborne pathogens rule and an explanation of its contents.

(2) A general explanation of the epidemiology and symptoms of bloodborne diseases and the modes of transmission.

(3) An explanation of the employer's exposure control plan and the means by which the employee can obtain a copy of the written plan.

(4) An explanation of the appropriate methods for recognizing tasks and other activities that may involve exposure to blood and other potentially infectious materials.

(5) An explanation of the use and limitations of methods that will prevent or reduce exposure, including appropriate engineering controls, work practices, and personal protective equipment.

(6) Information on the types, proper use, location, removal, handling, decontamination and disposal of personal protective equipment, and the basis for selection of personal protective equipment.

(7) Information on the hepatitis B vaccine, including information on its efficacy, safety, method of administration, the benefits of being vaccinated, and that the vaccine and vaccination will be offered free of charge.

(8) Information on the appropriate actions to take and persons to contact in an emergency involving blood or other potentially infectious materials.

(9) An explanation of the procedure to follow if an exposure incident occurs, including the method of reporting the incident and the medical follow-up that will be made available.

(10) Information on the post-exposure evaluation and follow-up that the employer is required to provide for the employee following an exposure incident.

(11) An explanation of the signs and labels and/or color coding required by the standard.

(12) An opportunity for interactive questions and answers with the person conducting the training session.

g. The person conducting the training shall be knowledgeable in the subject matter covered by the elements contained in the training program as it relates to the employees' respective workplaces.

9. RECORDKEEPING.

a. Medical Records.

(1) An accurate record shall be established and maintained for each employee with occupational exposure. The record shall be kept in the employee's medical file and shall include:

(a) The name and social security number of the employee.

(b) A copy of the employee's hepatitis B vaccination status including the dates of all the hepatitis B vaccinations and any medical records relative to the employee's ability to receive vaccination as required by paragraph 7b.

(c) A copy of all results of examinations, medical testing, and follow-up procedures as required by paragraph 7c.

(d) A copy of the healthcare professional's written opinion as required by paragraph 7e.

(e) A copy of the information provided to the healthcare professional as required by paragraphs 7d(2)(b) through (d).

(2) Employee medical records required by paragraph 9a shall be kept confidential and shall not be disclosed or reported without the employee's express written consent to any person within or outside the workplace except as required by this order or as may be required by law.

(3) Medical records as specified in paragraph 9a shall be maintained for at least the duration of employment plus 30 years in accordance with General Records Schedule 1, item 21.

b. Training Records.

(1) Training records shall include the following information:

(a) The dates of the training sessions;

(b) The contents or a summary of the training sessions;

(c) The names and qualifications of persons conducting the training; and

(d) The names and job titles of all persons attending the training sessions.

(2) Training records shall be maintained for 3 years from the date on which the training occurred in accordance with General Record Schedule 1, item 29(b).

c. Availability of Records.

(1) All records required to be maintained by paragraph 9 shall be made available upon request for examination and copying to the Assistant Secretary of Labor for Occupational Safety and Health, or designated representative; and to the Director of the National Institute for Occupational Safety and Health, or designated representative.

(2) Training records required by this paragraph shall be provided upon request for examination and copying by employees and employee representatives in accordance with 29 CFR 1910.20.

(3) Employee medical records shall be provided upon request for examination and copying to the subject employee or to anyone having the written consent of the subject employee in accordance with 29 CFR 1910.20.



W. E. Collins, Ph.D.  
Director, Civil Aeromedical Institute

**APPENDIX 1. SAMPLE OF LIST OF JOB CLASSIFICATIONS HAVING  
OCCUPATIONAL EXPOSURE**

<b>CIVIL AEROMEDICAL INSTITUTE EXPOSURE CONTROL PLAN</b>		Page <b>1</b> OF <b>1</b>
		Date: 11/17/93
<b>Subject: JOB CLASSIFICATIONS WHERE ALL WORKERS IN THOSE CLASSIFICATIONS HAVE OCCUPATIONAL EXPOSURE</b>		
<b>JOB SERIES NUMBER</b>	<b>DESCRIPTION</b>	
GS-0610	OCCUPATIONAL HEALTH NURSE	
GS-0644	MEDICAL TECHNOLOGIST	
GS-0645	MEDICAL TECHNICIAN	
GM-1320	SUPERVISORY RESEARCH CHEMIST	
GS-0861	AEROSPACE ENGINEER	
GS-1320	RESEARCH CHEMIST	
WG-3515	LABORATORY SUPPORT WORKER	
GM-0602	MEDICAL OFFICER	
GS-0101	RES HUMAN FACTORS SPECIALIST	
GM-1701	SUP AEROMEDICAL TRAINING OFFICER	
<b>Supersedes List Dated:</b>	<b>Prepared by:</b> <i>Stephen K. Hoel</i> Manager, Environmental Health Branch, AAM-730	<b>Approved by:</b> <i>W. G. Collier</i> Director, CAMI, AAM-3





APPENDIX 4. SAMPLE OF HEPATITIS B VACCINE DECLINATION FORM**HEPATITIS B VACCINE DECLINATION (MANDATORY)**

I understand that due to my occupational exposure to blood or other potentially infectious materials 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.

Signature

John V. Doe

Date

11/17/93

APPENDIX 5. STANDARD OPERATING PROCEDURES1. GENERAL.

a. Universal Precautions, which comprise the procedures listed below, shall be observed to prevent contact with blood or other potentially infectious materials.

b. All human blood and certain human body fluids (see the definition, "other potentially infectious materials," in paragraph 4m of the order) are treated as if known to be infectious for HIV, HBV, and other bloodborne pathogens.

c. Under circumstances in which differentiation between body fluid types is difficult or impossible, all body fluids shall be considered potentially infectious materials.

2. ENGINEERING AND WORK PRACTICE CONTROLS. Engineering and work practice controls shall be used to eliminate or minimize employee exposure. Where occupational exposure remains after institution of these controls, personal protective equipment shall also be used.

a. Engineering Controls.

(1) These are controls that isolate or remove the bloodborne hazard from the workplace, such as sharps disposal containers, self-sheathing needles, or biological safety cabinets.

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

b. Work Practice Controls.

(1) Handwashing facilities shall be made readily accessible to employees.

(a) When provision for handwashing facilities is not feasible, employees will be provided either an appropriate antiseptic hand cleaner in conjunction with clean cloth/paper towels or antiseptic towelettes. When antiseptic hand cleansers are used, hands shall be washed with soap and running water as soon as feasible.

(b) Supervisors shall ensure that employees wash their hands immediately or as soon as feasible after removal of gloves or other personal protective equipment.

(c) Supervisors shall ensure that employees wash 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.

c. Contaminated Needles and Other Contaminated Sharps.

(1) Contaminated sharps are defined as any contaminated objects that can penetrate the skin including, but not limited to, needles, scalpels, broken glass, broken capillary tubes, etc.

(2) Contaminated needles shall not be bent, recapped, or removed unless:

(a) It can be demonstrated that no alternative is feasible or that such action is required by a specific medical procedure; and

(b) Such recapping or needle removal must be accomplished through the use of a mechanical device or a one-handed technique.

(3) Shearing or breaking of contaminated needles is prohibited.

(4) Immediately or as soon as possible after use, contaminated reusable sharps shall be placed in appropriate containers until properly reprocessed. These containers shall be:

(a) Puncture resistant;

(b) Labeled or color-coded in accordance with paragraph 5 of this appendix;

(c) Leakproof on the sides and bottom; and

(d) Stored or processed in a manner that prevents employees to reach by hand into the containers where these sharps have been placed.

d. Personal Conduct.

(1) Eating, drinking, smoking, applying cosmetics or lip balm, and handling contact lenses are prohibited in work areas where there is reasonable likelihood of occupational exposure.

(2) Food and drink shall not be kept in refrigerators, freezers, shelves, cabinets or on countertops or benchtops where blood or other potentially infectious materials are present.

(3) All procedures involving blood or other potentially infectious materials shall be performed in such a manner as to minimize splashing, spraying, spattering, and generation of droplets of these substances.

(4) Mouth pipetting/suctioning of blood or other potentially infectious materials is prohibited.

e. Containers.

(1) Specimens of blood or other potentially infectious materials shall be placed in a container which prevents leakage during collection, handling, processing, storage, transport, or shipping.

(a) The container for storage, transport, or shipping shall be labeled or color-coded in accordance with paragraph 5 of this appendix, except:

1 When a facility utilizes Universal Precautions in the handling of all specimens, the labeling/color-coding of specimens is not necessary provided containers are recognizable as containing specimens.

2 This exception only applies while such specimens/containers remain within the facility. Labeling or color-coding is required when such specimens/containers leave the facility.

(2) If outside contamination of the primary container occurs, the primary container shall be placed within a second container which prevents leakage during handling, processing, storage, transport, or shipping and is appropriately labeled or color-coded.

(3) If the specimen could puncture the primary container, the primary container shall be placed within a secondary container which is puncture-resistant in addition to the above characteristics.

f. Contaminated Equipment. 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 it can be demonstrated that decontamination of such equipment or portions of such equipment is not feasible.

(1) A readily observable label in accordance with paragraph 5 of this appendix shall be attached to the equipment stating which portions remain contaminated.

(2) All affected employees, the servicing representative, and/or the manufacturer, as appropriate, shall be informed prior to handling, servicing, or shipping so that appropriate precautions will be taken.

3. PERSONAL PROTECTIVE EQUIPMENT.

a. Provisions.

(1) When there is occupational exposure, employees shall be provided, at no cost to the employees, appropriate personal protective equipment such as, but not limited to, gloves, gowns, laboratory coats, face shields or masks, eye protection, mouthpieces, resuscitation bags, pocket masks or other ventilation devices.

(2) Personal protective equipment will be considered appropriate only if it does not permit blood or other potentially infectious materials to pass through to or reach the employee's work clothes, undergarments, skin, eyes, mouth, or other mucous membranes under normal conditions of use and for the duration of time when the protective equipment will be used.

(3) General work clothes (e.g., uniforms, pants, shirts or blouses) are not intended to function as protection against a hazard and are not considered to be personal protective equipment.

b. Use. The supervisor shall ensure use of the personal protective equipment by the employee.

c. Accessibility.

(1) The supervisor shall ensure that appropriate personal protective equipment in the appropriate sizes shall be made readily accessible at the worksite or is issued to the employees.

(2) Hypoallergenic gloves, glove liners, powderless gloves, or other similar alternatives shall be readily accessible to employees who are allergic to the gloves normally provided.

d. Cleaning, Laundering, and Disposal. The supervisor shall ensure that cleaning, laundering and disposal of personal protective equipment is provided as required in paragraphs 4 and 7 in this appendix at no cost to the employee.

e. Repair and Replacement.

(1) The supervisor shall ensure that personal protective equipment is repaired or replaced as needed to maintain its effectiveness at no cost to the employee.

(2) If a garment(s) is penetrated by blood or other potentially infectious materials, the garment(s) shall be removed immediately or as soon as feasible.

(3) All personal protective equipment shall be removed prior to leaving the work area.

(4) When personal protective equipment is removed it shall be placed in an appropriately designated area or container for storage, washing, decontamination, or disposal.

f. Gloves.

(1) Gloves shall be worn when it can be reasonably anticipated that the employee may have hand contact with blood, other potentially infectious materials, mucous membranes, and non-intact skin; when performing vascular access procedures; and when handling or touching contaminated items or surfaces.

(2) Disposable (single use) gloves such as surgical or examination gloves, shall be replaced as soon as practical when contaminated or as soon as feasible if they are torn, punctured, or when their ability to function as a barrier is compromised.

(3) Disposable (single use) gloves shall not be washed or decontaminated for reuse.

(4) Utility gloves may be decontaminated for reuse if the integrity of the glove is not compromised. However, they must be discarded if they are cracked, peeling, torn, punctured, or exhibit other signs of deterioration or when their ability to function as a barrier is compromised.

g. Masks, Eye Protection, and Face Shields. Masks in combination with eye protection devices, such as goggles or glasses with solid side shields, or chin-length face shields, shall be worn whenever splashes, spray, spatter, or droplets of blood or other potentially infectious materials may be generated and eye, nose, or mouth contamination can be reasonably expected.

h. Gowns, Aprons, and Other Protective Body Clothing.

(1) 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 indicated.

(2) 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, orthopaedic surgery.

4. HOUSEKEEPING.

a. General.

(1) The worksite shall be maintained in a clean and sanitary condition.

(2) An appropriate written schedule for cleaning and method of decontamination based on the location within the facility, type of surface to be cleaned, type of soil present, and tasks or procedures being performed in the area, will be followed.

b. Cleaning and decontamination. All equipment and environmental and working surfaces shall be cleaned and decontaminated after contact with blood or other potentially infectious materials.

(1) Contaminated work surfaces shall be decontaminated with an Environmental Protection Agency (EPA) approved disinfectant (see Appendix 6):

(a) After the completion of procedures;

(b) Immediately or as soon as feasible when surfaces are overtly contaminated or after any spill of blood or other potentially infectious materials; and

(c) At the end of the work shift if the surface may have become contaminated since the last cleaning.

(2) 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 workshift if they have become contaminated during the shift.

(3) All bins, pails, cans, and similar receptacles intended for reuse which have a reasonable likelihood for becoming contaminated with blood or other potentially infectious materials shall be inspected and decontaminated on a regularly scheduled basis, and cleaned and decontaminated immediately or as soon as feasible upon visible contamination.

(4) Broken glassware which may be contaminated shall not be picked up directly with the hands. It shall be cleaned up with mechanical means such as a brush and dust pan, tongs, or forceps.

(5) 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.

c. Laundry. This section applies to the Toxicology and Accident Research Laboratory, AAM-610, and the Clinical Operations Branch, AAM-720, where contaminated laundry, such as laboratory coats, towels, and bedding, may be reasonably anticipated.

(1) Contaminated laundry shall be handled as little as possible with a minimum of agitation.

(a) Contaminated laundry shall be bagged or containerized at the location where it was used and shall not be sorted or rinsed in the location of use.

(b) Contaminated laundry shall be placed and transported in bags or containers labeled with the BIOHAZARD label or red-bagged (see paragraph 5).

(c) All laundry done in CAMI shall be recognized as potentially infectious and handled utilizing Universal Precautions.

(d) Whenever contaminated laundry is wet and presents a reasonable likelihood of soak-through 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.

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

(3) If CAMI ships contaminated laundry off-site to a second facility for laundering, CAMI shall ensure that the facility utilizes Universal Precautions in the handling of all laundry.

## 5. LABELS AND SIGNS.

### a. Labels.

(1) Warning labels shall be affixed to containers of regulated waste, refrigerators and freezers containing blood or other potentially infectious material; and other containers used to store, transport or ship blood or other potentially infectious materials unless excepted as provided in paragraphs (5), (6), and (7) below.

(2) Labels required by this paragraph shall include the following legend:



BIOHAZARD

(3) These labels shall be fluorescent orange or orange-red or predominantly so, with lettering or symbolism a contrasting color.

(4) Biohazard labels shall be affixed as closely as feasible to the container by string, wire, adhesive, or other method that prevents their loss or unintentional removal.

(5) Red bags or red containers may be substituted for labels.

(6) Containers of blood, blood components, or blood products that are labeled as to their contents and have been released for transfusion or other clinical use are exempted from the labeling requirements.

(7) Individual containers of blood or other potentially infectious materials that are placed in a labeled container during storage, transport, shipment or disposal are exempted from the labeling requirement.

(8) Labels required for contaminated equipment (see paragraph 2f) shall be in accordance with this paragraph and shall also state which portions of the equipment remain contaminated.

(9) Regulated waste that has been decontaminated need not be labeled or color-coded. (See paragraph 7 for additional information.)

b. Signs. Signs are required by the OSHA bloodborne standard at the entrance to work areas in HIV and HBV Research Laboratory and Production Facilities only. For additional information a copy of the OSHA standard may be obtained from the Environmental Health Branch (AAM-730).

## 6. ACCIDENTS AND SPILLS.

### a. Accidents.

(1) Should an injury occur during the handling of potentially infectious materials, the injured employee shall immediately notify his/her supervisor.

(2) The supervisor then shall fill out a FAA Mishap Report, Form 3900-6, indicating the route of exposure and the circumstances under which the exposure incident occurred.

(3) The employee shall take the completed form to the Aeromedical Clinical Branch (AAM-720) to begin the "Post-Exposure Evaluation and Follow-up" process in accordance with paragraph 7c of the order.

(4) AAM-720 shall notify AAM-730, who will investigate the incident to determine if training procedures or the SOP should be improved to reduce or eliminate potential for a recurrence.

### b. Spills.

(1) Spills of blood or potentially infectious materials shall be cleaned up immediately or as soon as feasible.

(2) Cleaning shall be done in accordance with paragraph 4b, taking care to confine the contaminated area to as small a space as possible.

## 7. MEDICAL WASTE HANDLING AND DISPOSAL.

a. Medical Waste. The following medical waste is recognized by OSHA as regulated waste and must be handled and disposed of accordingly:

(1) Liquid or semi-liquid blood or other potentially infectious materials;

(2) Contaminated items that would release blood or other potentially infectious materials in a liquid or semi-liquid if compressed;

(3) Items that are caked with dried blood or other potentially infectious materials and are capable of releasing these materials during handling;

(4) Contaminated sharps; and

(5) Pathological and microbial wastes containing blood or other potentially infectious materials.

b. Contaminated Sharps Discarding and Containment.

(1) Contaminated sharps shall be discarded immediately or as soon as feasible in containers that are:

(a) Closable;

(b) Puncture resistant;

(c) Leakproof on sides and bottom;

(d) Labeled or color-coded in accordance with paragraph 5 of this appendix.

(2) During use, containers for contaminated sharps shall be:

(a) Easily accessible to personnel and located as close as is feasible to the immediate area where sharps are used;

(b) Maintained upright throughout use; and

(c) Replaced routinely and not be allowed to overfill.

(3) When moving containers of contaminated sharps from the area of use, the containers shall be:

(a) Closed immediately prior to removal or replacement to prevent spillage or protrusion of contents during handling, storage, transport, or shipping;

(b) Placed in a secondary container if leakage is possible. The secondary container shall be:

1 Closable;

2 Constructed to contain all contents and prevent leakage during handling, storage, transport, or shipping; and

3 Labeled or color-coded in accordance with paragraph 5 of this appendix.

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

c. Other Regulated Waste Containment.

(1) Regulated waste shall be placed in containers which are:

(a) Closable;

(b) Constructed to contain all contents and prevent leakage of fluids during handling, storage, transport, or shipping;

(c) Labeled or color-coded in accordance with paragraph 5.

(d) Closed prior to removal to prevent spillage or protrusion of contents during handling, storage, transport, or shipping.

(2) If outside contamination of the regulated waste container occurs, it shall be placed in a second container that meets the same requirements as in paragraph 7c(1) above.

d. Disposal. Disposal of all regulated waste in CAMI is carried out by BFI Medical Waste Systems or other approved contractor, and is in accordance with applicable Federal, state, and local regulations.

APPENDIX 6. PROCEDURE FOR DISINFECTANT SELECTION

1. GENERAL.

a. OSHA requires that employees who use commercial disinfectants ensure that the products are registered by the EPA as effective against HIV and HBV.

b. The EPA maintains an Antimicrobial Unit Hot Line which can be accessed to determine if a disinfectant is acceptable. The telephone number is 1-800-447-6349.

c. An in-house prepared disinfectant that is also approved by EPA consists of a 1:10 mixture of bleach (sodium hypochlorite) and water.

2. PROCEDURE.

a. Obtain the EPA Registration Number from the disinfectant's label or from the supplier.

b. Call the Antimicrobial Unit Hot Line Number.

c. Ask if the EPA Registration Number is listed by EPA as effective against both HIV and TB.

Note: There currently is no EPA testing protocol for evaluating a disinfectant's efficacy against HBV, thus OSHA requires the use of a disinfectant that has passed the TB testing protocol. This is because the organism that causes TB is known to be more resistant than HBV, and a biocide that will destroy TB will also destroy HBV.

d. For additional assistance, contact the Environmental Health Branch, AAM-730, X43713.