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DEPARTMENT OF THE NAVY
NAVAL TRAINING CENTER
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GREAT LAKES, ILLINOIS 60088-5000

NTCGLAKESINST 5100.33A
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NTC GREAT LAKES (COMPLEX²) INSTRUCTION 5100.33A

From: Commander, Naval Training Center, Great Lakes

Subj: BLOODBORNE PATHOGENS EXPOSURE CONTROL PLAN

Ref: (a) OPNAVINST 5100.23D

Encl: (1) 29 CFR 1910.1030
(2) Bloodborne Pathogens Exposure Control Plan

1. Purpose. To eliminate or minimize employee exposure to bloodborne pathogens and to implement the Occupational Safety and Health Administration (OSHA) Bloodborne Pathogen Standard at Naval Training Center, Great Lakes per reference (a) and enclosure (1).

2. Cancellation. NTCGLAKESINST 5100.33.

3. Scope. This section applies to all Naval Training Center personnel who may be exposed to potentially infectious materials as a result of their performance of duties. Naval Hospital, Naval Dental Center and Public Works Center shall maintain separate plans unique to their activities.

4. Background.

a. The OSHA Bloodborne Pathogens Standard, enclosure (1), was issued to reduce the occupational transmission of infections caused by microorganisms sometimes found in human blood and certain Other Potentially Infectious Materials (OPIM). Although a variety of harmful microorganisms may be transmitted through contact with infected human blood, Hepatitis B Virus (HBV) and Human Immunodeficiency Virus (HIV) have been shown to be responsible for infecting workers who were exposed to human blood and certain other body fluids containing these viruses. These exposures can occur by direct contact of mucous membranes and non-intact skin with contaminated blood/materials in the course of their work. Occupational transmission of HBV occurs much more often than transmission of HIV. Although HIV is rarely transmitted following occupational exposure incidents, the lethal nature of HIV requires that all possible measures be used to prevent exposure of workers.

b. An Exposure Control Plan, enclosure (2), has been established in order to minimize and, when possible, to prevent the exposure of our employees to disease-causing microorganisms

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transmitted through human blood, OPIM, and as a means of complying with the OSHA Bloodborne Pathogens Standard. All employees who have the potential to incur occupational exposure to Bloodborne Pathogens are included in this program.

c. This plan will be reviewed at least annually, in January, and updated as necessary. This plan is available for review by all employees, their agents or authorized OSHA employees. Employees are encouraged to review the plan any time questions arise.

5. Responsibilities.

a. Commanding Officers, Officers-in-Charge: Ensure compliance with reference (a), enclosures (1) and (2).

b. Safety Manager: Provide oversight and coordination of program responsibilities.

c. Department Heads and Supervisors:

(1) Comply with reference (a) and enclosures (1) and (2).

(2) Ensure employees perform tasks and procedures in a manner to reduce or eliminate occupational exposure to Bloodborne Pathogens. This includes using Universal Precautions, immediately washing hands and any other skin with soap and water, flushing mucous membranes with water following an exposure incident, using appropriate engineering controls, using work practice controls, and using proper personal protective equipment.

(3) Ensure appropriate personal protective equipment is readily accessible.

(4) Ensure all employees with potential occupational exposure to Bloodborne Pathogens are trained on the OSHA standard, enclosure (1), and are familiar with the Exposure Control Plan, enclosure (2). Provide additional training when appropriate or when changes such as modifications of tasks or procedures or institution of new tasks or procedures affect the employee's potential occupational exposure.

(5) Ensure the worksite is maintained in a clean and sanitary condition and that work areas and equipment are decontaminated.

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d. Employees

- (1) Comply with the Exposure Control Plan, enclosure
- (2).
- (2) Perform tasks and procedures in a manner to reduce or eliminate occupational exposure to Bloodborne Pathogens. Treat all human blood and OPIM as if known to be infectious for HBV, HIV, and other Bloodborne Pathogens.
- (3) Use proper hand washing, appropriate engineering controls, work practice controls, and proper procedures should and exposure incident occur.
- (4) Do not eat, drink, smoke, apply cosmetics or lip balm, or handle contact lenses in work areas where there is a likelihood of exposure to Bloodborne Pathogens.
- (5) Attend scheduled training sessions.



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Chief of Staff, Operations

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§1910.1030 Bloodborne Pathogens.

[1910.1030 added by 56 FR 64175, December 6, 1991; corrected by 57 FR 29206, July 1, 1992; amended by 61 FR 5508, Feb. 13, 1996]

(a) *Scope and Application.* This section applies to all occupational exposure to blood or other potentially infectious materials as defined by paragraph (b) of this section.

(b) *Definitions.* For purposes of this section, the following shall apply:

Assistant Secretary means the Assistant Secretary of Labor for Occupational Safety and Health, or designated representative.

Blood means human blood, human blood components, and products made from human blood.

Bloodborne Pathogens means pathogenic microorganisms that are present in human blood and can cause disease in humans. These pathogens include, but are not limited to, hepatitis B virus (HBV) and human immunodeficiency virus (HIV).

Clinical Laboratory means a workplace where diagnostic or other screening procedures are performed on blood or other potentially infectious materials.

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

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

Contaminated Sharps means 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.

Decontamination means 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.

Director means the Director of the National Institute for Occupational Safety and Health, U.S. Department of Health and Human Services, or designated representative.

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

Exposure Incident means 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.

Handwashing Facilities means a facility providing an adequate supply of running potable water, soap and single use towels or hot air drying machines.

Licensed Healthcare Professional is a person whose legally permitted scope of practice allows him or her to independently perform the activities required by paragraph (f) Hepatitis B Vaccination and Post-exposure Evaluation and Follow-up.

HBV means hepatitis B virus.

HIV means human immunodeficiency virus.

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.

Other Potentially Infectious Materials means

(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, 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); and

(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.

Parenteral means piercing mucous membranes or the skin barrier through such events as needles, human bites, cuts, and abrasions.

Personal Protective Equipment is 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.

Production Facility means a facility engaged in industrial-scale, large-volume or high concentration production of HIV or HBV.

Regulated Waste means 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 state 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 microbiological wastes containing blood or other potentially infectious materials.

Research Laboratory means a laboratory producing or using research-laboratory-scale amounts of HIV or HBV. Research laboratories may produce high concentrations of HIV or HBV but not in the volume found in production facilities.

Source Individual means 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; residents of hospices and nursing homes; human remains; and individuals who donate or sell blood or blood components.

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

Universal Precautions is 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.

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

(c) *Exposure control*— (1) *Exposure Control Plan.* (i) Each employer having an employee(s) with occupational exposure as defined by paragraph (b) of this section shall establish a written Exposure Control Plan designed to eliminate or minimize employee exposure.

(ii) The Exposure Control Plan shall contain at least the following elements:

(A) The exposure determination required by paragraph (c)(2).

(B) The schedule and method of implementation for paragraphs (d) Methods of Compliance, (e) HIV and HBV Research Laboratories and Production Facilities.

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(f) Hepatitis B Vaccination and Post-Exposure Evaluation and Follow-up, (g) Communication of Hazards to Employees, and (h) Recordkeeping, of this standard, and

(C) The procedure for the evaluation of circumstances surrounding exposure incidents as required by paragraph (D)(3)(i) of this standard.

(iii) Each employer shall ensure that a copy of the Exposure Control Plan is accessible to employees in accordance with 29 CFR 1910.20(e).

(iv) The Exposure Control Plan shall be reviewed and updated at least annually and whenever necessary to reflect new or modified tasks and procedures which affect occupational exposure and to reflect new or revised employee positions with occupational exposure.

(v) The Exposure Control Plan shall be made available to the Assistant Secretary and the Director upon request for examination and copying.

(2) *Exposure determination.* (i) Each employer who has an employee(s) with occupational exposure as defined by paragraph (b) of this section shall prepare an exposure determination. This exposure determination shall contain the following:

(A) A list of all job classifications in which all employees in those job classifications have occupational exposure;

(B) A list of job classifications in which some employees have occupational exposure, and

(C) A list of all tasks and procedures or groups of closely related task and procedures in which occupational exposure occurs and that are performed by employees in job classifications listed in accordance with the provisions of paragraph (c)(2)(i)(B) of this standard.

(ii) This exposure determination shall be made without regard to the use of personal protective equipment.

(d) *Methods of compliance—*(1) *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.

(2) *Engineering and work practice controls.* (i) 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.

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

(iii) Employers shall provide handwashing facilities which are readily accessible to employees.

(iv) When provision of handwashing facilities is not feasible, the employer shall provide either an appropriate antiseptic hand cleanser in conjunction with clean cloth/paper towels or antiseptic towelettes. When antiseptic hand cleansers or towelettes are used, hands shall be washed with soap and running water as soon as feasible.

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

(vi) Employers 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.

(vii) Contaminated needles and other contaminated sharps shall not be bent, recapped, or removed except as noted in paragraphs (d)(2)(vii)(A) and (d)(2)(vii)(B) below. Shearing or breaking of contaminated needles is prohibited.

(A) Contaminated needles and other contaminated sharps shall not be bent, recapped or removed unless the employer can demonstrate that no alternative is feasible or that such action is required by a specific medical or dental procedure.

[1910.1030(d)(2)(vii)(A) corrected by 57 FR 29206, July 1, 1992]

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

[1910.1030(d)(2)(vii)(B) corrected by 57 FR 29206, July 1, 1992]

(viii) 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 this standard;

(C) Leakproof on the sides and bottom; and

(D) In accordance with the requirements set forth in paragraph (d)(4)(ii)(E) for reusable sharps.

(ix) Eating, drinking, smoking, applying cosmetics or lip balm, and handling

contact lenses are prohibited in work areas where there is a reasonable likelihood of occupational exposure.

(x) 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.

(xi) 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.

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

(xiii) 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 according to paragraph (g)(1)(i) and closed prior to being stored, transported, or shipped. 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. This exemption only applies while such specimens/containers remain within the facility. Labeling or color-coding in accordance with paragraph (g)(1)(i) is required when such specimens/containers leave the facility.

(B) 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 labeled or color-coded according to the requirements of this standard.

(C) 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.

(xiv) 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 employer can demonstrate that decontamination of such equipment or portions of such equipment is not feasible.

(A) A readily observable label in accordance with paragraph (g)(1)(i)(H) shall be attached to the equipment stating which portions remain contaminated.

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(B) The employer 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.

(3) Personal protective equipment—
 (i) Provision. When there is occupational exposure, the employer shall provide, at no cost to the employee, appropriate personal protective equipment such as, but not limited to; gloves, gowns, laboratory coats, face shields or masks and eye protection, and mouthpieces, resuscitation bags, pocket masks, or other ventilation devices. 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, street clothes, undergarments, skin, eyes, mouth, or other mucous membranes under normal conditions of use and for the duration of time which the protective equipment will be used.

(ii) Use. The employer shall ensure that the employee uses appropriate personal protective equipment unless the employer shows that the employee temporarily and briefly declined to use personal protective equipment 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 health care or public safety services or would have 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.

(iii) Accessibility. The employer shall ensure that appropriate personal protective equipment in the appropriate sizes is readily accessible at the worksite or is issued 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.

(iv) Cleaning, Laundering, and Disposal. The employer shall clean, launder, and dispose of personal protective equipment required by paragraphs (d) and (e) of this standard, at no cost to the employee.

(v) Repair and Replacement. The employer shall repair or replace personal protective equipment as needed to main-

tain its effectiveness, at no cost to the employee.

(vi) 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.

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

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

(ix) Gloves. 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 except as specified in paragraph (d)(3)(ix)(D); and when handling or touching contaminated items or surfaces.

(A) 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.

(B) Disposable (single use) gloves shall not be washed or decontaminated for re-use.

(C) Utility gloves may be decontaminated for re-use 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.

(D) If an employer in a volunteer blood donation center judges that routine gloving for all phlebotomies is not necessary then the employer shall:

(1) Periodically reevaluate this policy;

(2) Make gloves available to all employees who wish to use them for phlebotomy;

(3) Not discourage the use of gloves for phlebotomy; and

(4) Require that gloves be used for phlebotomy in the following circumstances:

(i) When the employee has cuts, scratches, or other breaks in his or her skin;

(ii) When the employee judges that hand contamination with blood may occur, for example, when performing phlebotomy on an uncooperative source individual; and

(iii) When the employee is receiving training in phlebotomy.

(x) 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 anticipated.

(xi) 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.

(xii) 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.* (i) General. Employers shall ensure that the worksite is maintained in a clean and sanitary condition. The employer shall determine and implement an appropriate written schedule for cleaning and method of decontamination based upon the location within the facility, type of surface to be cleaned, type of soil present, and tasks or procedures being performed in the area.

(ii) All equipment and environmental and working surfaces shall be cleaned and decontaminated after contact with blood or other potentially infectious materials.

(A) 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.

(B) 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 may have become contaminated during the shift.

(C) All bins, pails, cans, and similar receptacles intended for reuse which have a reasonable likelihood for becoming con-

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taminated 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.

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

(E) 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.

(iii) Regulated Waste.

(A) Contaminated Sharps Discarding and Containment. (1) Contaminated sharps shall be discarded immediately or as soon as feasible in containers that are:

(i) Closable;

(ii) Puncture resistant;

(iii) Leakproof on sides and bottom; and

(iv) Labeled or color-coded in accordance with paragraph (g)(1)(i) of this standard.

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

(i) 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);

(ii) Maintained upright throughout use; and

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

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

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

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

(A) Closable;

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

(C) Labeled or color-coded according to paragraph (g)(1)(i) of this standard.

(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.

(B) Other Regulated Waste Containment. (1) Regulated waste shall be placed in containers which are:

(i) Closable;

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

(iii) Labeled or color-coded in accordance with paragraph (g)(1)(i) [of] this standard; and

(iv) 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. The second container shall be:

(i) Closable;

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

(iii) Labeled or color-coded in accordance with paragraph (g)(1)(i) of this standard; and

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

(C) Disposal of all regulated waste shall be in accordance with applicable regulations of the United States, States and Territories, and political subdivisions of States and Territories.

(iv) Laundry.

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

(2) Contaminated laundry shall be placed and transported in bags or containers labeled or color-coded in accordance with paragraph (g)(1)(i) of this standard. When a facility utilizes Universal Precautions in the handling of all soiled laundry, alternative labeling or color-coding is sufficient if it permits all employees to recognize the containers as requiring compliance with Universal Precautions.

(3) 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.

(B) The employer shall ensure that employees who have contact with contaminated laundry wear protective gloves and other appropriate personal protective equipment.

(C) When a facility ships contaminated laundry off-site to a second facility which does not utilize Universal Precautions in the handling of all laundry, the facility generating the contaminated laundry must place such laundry in bags or containers which are labeled or color-coded in accordance with paragraph (g)(1)(i).

(e) *HIV and HBV Research Laboratories and Production Facilities.* (1) This paragraph 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.

(2) Research laboratories and production facilities shall meet the following criteria:

(i) Standard microbiological practices. All regulated waste shall either be incinerated or decontaminated by a method such as autoclaving known to effectively destroy bloodborne pathogens.

(ii) Special practices.

(A) Laboratory doors shall be kept closed when work involving HIV or HBV is in progress.

(B) Contaminated materials that are to be decontaminated at a site away from the work area shall be placed in a durable, leakproof, labeled or color-coded container that is closed before being removed from the work area.

(C) 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.

(D) 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. The hazard warning sign shall comply with paragraph (g)(1)(ii) of this standard.

(E) 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.

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(F) 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.

(G) 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.

(H) 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 bloodborne pathogens.

(I) 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.

(J) 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.

(K) 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.

(L) A spill or accident that results in an exposure incident shall be immediately reported to the laboratory director or other responsible person.

(M) 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.

(iii) Containment equipment.

(A) 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.

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

(3) HIV and HBV research laboratories shall meet the following criteria:

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

(ii) An autoclave for decontamination of regulated waste shall be available.

(4) HIV and HBV production facilities shall meet the following criteria:

(i) 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.

(ii) 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.

(iii) 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.

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

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

(vi) 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).

(5) *Training Requirements.* Additional training requirements for employees in HIV and HBV research laboratories and HIV and HBV production facilities are specified in paragraph (g)(2)(ix).

(f) *Hepatitis B vaccination and post-exposure evaluation and follow-up—(1) General.* (i) The employer shall make available the hepatitis B vaccine and vaccination series to all employees who have occupational exposure, and post-exposure evaluation and follow-up to all employees who have had an exposure incident.

(ii) The employer shall ensure that all medical evaluations and procedures including the hepatitis B vaccine and vaccination series and post-exposure evaluation and follow-up, including prophylaxis, are:

(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 health-care professional; and

(D) Provided according to recommendations of the U.S. Public Health Service current at the time these evaluations and procedures take place, except as specified by this paragraph (f).

(iii) The employer shall ensure that all laboratory tests are conducted by an accredited laboratory at no cost to the employee.

(2) *Hepatitis B Vaccination.* (i) Hepatitis B vaccination shall be made available after the employee has received the training required in paragraph (g)(2)(vii)(I) 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.

(ii) The employer shall not make participation in a prescreening program a prerequisite for receiving hepatitis B vaccination.

(iii) 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 employer shall make available hepatitis B vaccination at that time.

(iv) The employer shall assure that employees who decline to accept hepatitis B

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vaccination offered by the employer sign the statement in appendix A.

(v) 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 section (f)(1)(ii).

(3) *Post-exposure Evaluation and Follow-up.* Following a report of an exposure incident, the employer shall make immediately available to the exposed employee a confidential medical evaluation and follow-up, including at least the following elements:

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

(ii) Identification and documentation of the source individual, unless the employer can establish 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, the employer shall 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.

(iii) Collection and testing of blood for HBV and HIV serological status:

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

(B) 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.

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

(v) Counseling; and

(vi) Evaluation of reported illnesses.

(4) *Information Provided to the Healthcare Professional.* (i) The employer shall ensure that the healthcare professional responsible for the employee's Hepatitis B vaccination is provided a copy of this regulation.

(ii) The employer shall ensure that the healthcare professional evaluating an employee after an exposure incident is provided the following information:

(A) A copy of this regulation;

(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; and

(E) All medical records relevant to the appropriate treatment of the employee including vaccination status which are the employer's responsibility to maintain.

(5) *Healthcare Professional's Written Opinion.* The employer 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.

(i) 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.

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

(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.

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

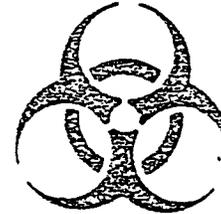
(6) *Medical recordkeeping.* Medical records required by this standard shall be maintained in accordance with paragraph (h)(1) of this section.

(g) *Communication of hazards to employees—(1) Labels and signs.* (i) Labels.

(A) 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, except as provided in paragraph (g)(1)(i)(E), (F) and (G).

(B) Labels required by this section shall include the following legend:



BIOHAZARD

BIOHAZARD

[1910.1030(g)(1)(i)(B) corrected by 57 FR 29206, July 1, 1992]

(C) These labels shall be fluorescent orange or orange-red or predominantly so, with lettering and symbols in a contrasting color.

[1910.1030(g)(1)(i)(C) corrected by 57 FR 29206, July 1, 1992]

(D) Labels shall be affixed as close as feasible to the container by string, wire, adhesive, or other method that prevents their loss or unintentional removal.

[1910.1030(g)(1)(i)(D) corrected by 57 FR 29206, July 1, 1992]

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

(F) 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 of paragraph (g).

(G) 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.

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

(I) Regulated waste that has been decontaminated need not be labeled or color-coded.

(ii) Signs. (A) The employer shall post signs at the entrance to work areas specified in paragraph (e), HIV and HBV Research Laboratory and Production Facilities, which shall bear the following legend:

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BIOHAZARD

BIOHAZARD

(Name of the Infectious Agent)

(Special requirements for entering the area)

(Name, telephone number of the laboratory director or other responsible person.)

[1910.1030(g)(1)(ii)(A) corrected by 57 FR 29206, July 1, 1992]

(B) These signs shall be fluorescent orange-red or predominantly so, with lettering and symbols in a contrasting color.

[1910.1030(g)(1)(ii)(B) corrected by 57 FR 29206, July 1, 1992]

(2) Information and Training.

(i) Employers shall ensure that all employees with occupational exposure participate in a training program which must be provided at no cost to the employee and during working hours.

(ii) Training shall be provided as follows:

(A) At the time of initial assignment to tasks where occupational exposure may take place:

(B) Within 90 days after the effective date of the standard; and

(C) At least annually thereafter.

(iii) For employees who have received training on bloodborne pathogens in the year preceding the effective date of the standard, only training with respect to the provisions of the standard which were not included need be provided.

(iv) Annual training for all employees shall be provided within one year of their previous training.

(v) Employers shall provide additional training when changes such as 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.

(vi) Material appropriate in content and vocabulary to educational level, literacy, and language of employees shall be used.

(vii) The training program shall contain at a minimum the following elements:

(A) An accessible copy of the regulatory text of this standard and an explanation of its contents;

[1910.1030(g)(2)(vii)(A) corrected by 57 FR 29206, July 1, 1992]

(B) A general explanation of the epidemiology and symptoms of bloodborne diseases;

(C) An explanation of the modes of transmission of bloodborne pathogens;

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

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

(F) 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;

(G) Information on the types, proper use, location, removal, handling, decontamination and disposal of personal protective equipment;

(H) An explanation of the basis for selection of personal protective equipment;

(I) 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;

(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 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;

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

(M) An explanation of the signs and labels and/or color coding required by paragraph (g)(1); and

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

(viii) 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 workplace that the training will address.

(ix) 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.

(A) The employer shall assure that employees demonstrate proficiency in standard microbiological practices and techniques and in practices and operations specific to the facility before being allowed to work with HIV or HBV.

(B) The employer shall assure that employees have prior experience in the handling of human pathogens or tissue cultures before working with HIV or HBV.

(C) The employer 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. The employer shall assure that employees participate in work activities involving infectious agents only after proficiency has been demonstrated.

(h) *Recordkeeping*— (1) *Medical Records.* (i) The employer shall establish and maintain an accurate record for each employee with occupational exposure, in accordance with 29 CFR 1910.20.

(ii) This record 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 (f)(2);

(C) A copy of all results of examinations, medical testing, and follow-up procedures as required by paragraph (f)(3);

(D) The employer's copy of the healthcare professional's written opinion as required by paragraph (f)(5); and

(E) A copy of the information provided to the healthcare professional as required by paragraphs (f)(4)(ii)(B)(C) and (D).

(iii) *Confidentiality.* The employer shall ensure that employee medical records required by paragraph (h)(1) are:

(A) Kept confidential; and

(B) Not disclosed or reported without the employee's express written consent to any person within or outside the work-

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place except as required by this section or as may be required by law.

[1910.1030(h)(1)(iii)(B) corrected by 57 FR 29206, July 1, 1992]

(iv) The employer shall maintain the records required by paragraph (h) for at least the duration of employment plus 30 years in accordance with 29 CFR 1910.20.

(2) *Training Records.* (i) *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.

(ii) Training records shall be maintained for 3 years from the date on which the training occurred.

(3) *Availability.* (i) The employer shall ensure that all records required to be maintained by this section shall be made available upon request to the Assistant Secretary and the Director for examination and copying.

(ii) Employee training records required by this paragraph shall be provided upon request for examination and copying to employees, to employee representatives, to the Director, and to the Assistant Secretary.

[1910.1030(h)(3)(ii) corrected by 57 FR 29206, July 1, 1992]

(iii) Employee medical records required by this paragraph shall be provided upon request for examination and copying to the subject employee, to anyone having written consent of the subject employee, to the Director, and to the Assistant Secretary in accordance with 29 CFR 1910.20.

(4) *Transfer of Records.* (i) The employer shall comply with the requirements involving transfer of records set forth in 29 CFR 1910.20(h).

(ii) If the employer ceases to do business and there is no successor employer to receive and retain the records for the prescribed period, the employer shall notify the Director, at least three months prior to their disposal and transmit them to the Director, if required by the Director to do so, within that three month period.

(i) *Dates—(1) Effective Date.* The standard shall become effective on March 6, 1992.

(2) The Exposure Control Plan required by paragraph (c) of this section shall be completed on or before May 5, 1992.

[1910.1030(i)(2) corrected by 57 FR 29206, July 1, 1992]

(3) Paragraph (g)(2) Information and Training and (h) Recordkeeping shall take effect on or before June 4, 1992.

(4) Paragraphs (d)(2) Engineering and Work Practice Controls, (d)(3) Personal Protective Equipment, (d)(4) Housekeeping, (e) HIV and HBV Research Laboratories and Production Facilities, (f) Hepatitis B Vaccination and Post-Exposure Evaluation and Follow-up, and (g)(i) Labels and Signs, shall take effect July 6, 1992.

Appendix A to Section 1910.1030—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.

[1910.1030 OMB number added by 57 FR 12717, April 13, 1992; removed by 61 FR 5508, Feb. 13, 1996]

BLOODBORNE PATHOGEN EXPOSURE CONTROL PLAN

1. Purpose. This Exposure Control Plan (ECP) is implemented to meet the letter and intent of reference (a) and enclosure (1). This ECP is the NTC policy to prevent or reduce the risk of personnel occupationally contracting Hepatitis B Virus (HBV), Human Immunodeficiency Virus (HIV), and other bloodborne diseases.

This ECP sets forth procedures, engineering controls, personal protective equipment, work practices and other methods designed to protect employees.

2. Applicability. Affected personnel are encouraged to study all provisions of the ECP. Any questions or comments should be directed to the command Occupational Safety and Health (OSH) Manager. The input and involvement of all affected personnel is needed to ensure this ECP continues to provide an adequate level of workplace safety. This ECP will be subject to at least annual review and revision, as needed.

3. Definitions. See appendix (a).

4. Exposure Determination.

a. Identification of the hazard is the first step in preventing the spread of Bloodborne Pathogens. The pathogens may be transmitted through contact with blood or Other Potentially-Infectious Materials (OPIM). OPIM are currently listed as semen, vaginal secretions, cerebrospinal fluid, synovial fluid, pleural fluid, pericardial fluid, peritoneal fluid, amniotic fluid, saliva in dental procedures, and any body fluids containing visible blood. Any fluids where it is difficult or impossible to determine what body fluid is present shall also be considered OPIM. Unfixed tissue or an organ from a living or dead human and all HIV and HBV containing solutions or media or tissue from experimentally-infected animals are considered OPIM. OPIM does not apply to feces, nasal secretions, sputum, sweat, tears, urine, and vomitus unless they contain visible blood.

b. All personnel for whom it is possible to reasonably anticipate occupational exposure to blood or OPIM are fully covered under the Bloodborne Pathogens Standard. Personnel trained in first aid, including cardiopulmonary resuscitation (CPR), and who are designated to render first aid are also fully covered under the Bloodborne Pathogens Standard. The requirement for first aid and CPR training alone does not dictate the need to include individuals into programs designed to meet the Bloodborne

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Pathogens Standard's requirements. Personnel who perform "Good Samaritan" acts that result in potential exposure shall receive the same prompt medical evaluations and follow-up that covered employees receive.

c. Universal precautions will be observed in order to prevent contact with blood or OPIM. All blood and OPIM will be considered infectious regardless of the perceived status of the source individual.

d. For the following job classifications it is reasonable to anticipate occupational exposure to Bloodborne Pathogens while performing certain jobs or tasks in this facility. Appendix (b) provides a summary of job exposures and standard requirements.

<u>JOB TITLE</u>	<u>ACTION</u>
FireFighter	Emergency Response
Police	Law Enforcement/Emergency Response
LifeGuards	CPR/First Aid
All Personnel	Contact with Blood or OPIM*

*Any person who contacts another's blood or OPIM shall report to Occupational Medicine at Branch Clinic 237 for evaluation. Training will be covered during initial base indoctrination.

5. Engineering Control. All potentially contaminated materials will be bagged and turned over to medical personnel.

6. Required Work Practices (General).

a. Affected personnel shall wash their hands immediately or as soon as possible after removal of gloves or other personal protective equipment and after hand contact with blood or OPIM.

b. All personal protective equipment shall be removed immediately upon leaving the work area or as soon as possible if overtly contaminated, then bagged and turned over to medical personnel for storage, disposal or decontamination. If decontamination is deemed to be beyond the capability of workcenter personnel, consultation shall be obtained from the Naval Hospital Infection Control Officer at ext. 5652.

c. Crime scene materials will be controlled per legal requirements in liaison with the Naval Hospital Infection Control Officer at ext. 5652.

d. The Centers for Disease Control and Prevention has determined that routine laundry practices are adequate to

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decontaminate clothing that has been soiled with blood or OPIM. Water heated to 140-160°F kills viruses. Therefore, hot water and detergent are sufficient to decontaminate laundry. No more than one part of bleach per ten (10) parts water is necessary. Standard dry cleaning chemicals also provide adequate decontamination.

e. Eating, drinking, smoking, applying cosmetics or lip balm and handling contact lenses are prohibited in work areas where there is a potential for occupational exposure.

f. All procedures involving blood or OPIM will be done in a manner which minimizes splashing, spraying, and atomizing of these substances.

g. If conditions are such that hand washing facilities are not available, antiseptic hand cleaners are to be used. Because this is an interim measure, employees are to wash hands at the first available opportunity.

h. Individuals who suspect or know they have received mucous membrane exposure shall irrigate the membrane for 15 minutes with water or saline solution.

7. Personal Protective Equipment (PPE).

a. Where there is potential for occupational exposure, affected personnel will be provided and required to use personal protective equipment including, but not limited to, gloves, glasses with side shields, face shields, CPR mouthpieces, or fire fighter turn out gear. When necessary, hypoallergenic, powderless or other alternative gloving shall be provided.

b. Supplies may be obtained through worksite supervisors.

c. Single-use (disposable) gloves may not be decontaminated or washed for re-use.

d. Prior to leaving the site of contamination, personal protective equipment shall be removed, bagged and turned in to medical personnel or decontaminated, if within the capability of the workcenter. Personnel are not permitted to carry any type of personal protective equipment home for cleaning or other use.

e. Personal protective equipment shall be considered "appropriate" only if it does not permit blood or OPIM to pass through or contact the clothing, skin, mouth, or mucous membranes.

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f. Listed below are types of personal protective equipment available for use and circumstances under which it shall be used:

<u>ITEM</u>	<u>PROCEDURE</u>
CPR Mouth Pieces	CPR
Latex Gloves	Handling Blood or OPIM/Emergency response
Goggles and Face Shields	Handling Blood or OPIM/Emergency response
FireFighter Turnout Suits	Emergency Response
SCBA's	Emergency Response

g. Decontamination of reusable personal protective equipment shall be accomplished by utilizing a cleaning solution of one (1) part household bleach to ten (10) parts water.

h. CPR Instructors shall follow the procedures in appendix (c) to minimize the risk of exposure during CPR.

8. Housekeeping.

a. Work Surfaces. Work surfaces shall be decontaminated with a cleaning solution of one (1) part household bleach to ten (10) parts water after surfaces are overtly contaminated or immediately after any spill of blood or OPIM.

b. Equipment. Equipment which may become contaminated with blood or OPIM will be decontaminated as necessary in the same manner as PPE.

c. Glassware. Broken glassware which may be contaminated shall not be picked up directly with the hands, instead a mechanical means such as a brush and dust pan, tongs, etc. shall be used. Decontamination procedures would then apply to the cleaning of tools.

9. Communication of Hazards to Personnel.

a. If a BIOHAZARD SIGN or label as shown in appendix (d) is encountered, this sign or label indicates bloodborne pathogens are stored or produced in the area.

b. Labels and signs will bear the legend described in appendix (c). They shall be fluorescent orange or orange-red or predominantly so, with lettering or symbols in a contrasting color.

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c. Red bags or red containers may be substituted for labels on containers of infectious waste. The supervisor is responsible for ensuring biohazardous labels are acknowledged and precautions are followed.

10. General Disposal Procedures.

a. All material contaminated with blood or OPIM shall be disposed of as potentially infectious medical waste in containers or plastic bags that are colored red or marked with the biohazard label. Both the symbol and the word BIOHAZARD on labels and signs shall be readable at a minimum distance of five (5) feet or a greater distance if warranted by the hazard. All wording shall be understandable to all employees who may be exposed to the hazard.

(1) Labels shall include the biohazard symbol and the word "BIOHAZARD." They shall be fluorescent orange or orange-red with lettering or symbols in a contrasting color.

(2) Labels shall be fixed as close and securely to the container as feasible by string, wire, adhesive, or other methods that prevents their loss or unintentional removal.

(3) Individual containers that are placed in a larger labeled container need not be labeled.

(4) Labels for contaminated equipment shall also state which portions of the equipment remain contaminated.

b. All personnel handling contaminated material shall wear gloves and additional protective equipment if the potential for exposure exists. This applies to laundry personnel as well as disposal personnel.

11. Information and Training.

a. All personnel with occupational exposure shall participate in Exposure Control training prior to their initial assignment and at least annually thereafter.

b. At the end of each training session, personnel will acknowledge their participation in the program by signing the training form, appendix (e).

c. ~~Personnel shall receive training and information in the following areas:~~ A copy of 29 CFR 1910.1030 and Chapter 28 of reference (a) with an explanation of their contents

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- (1) A copy of 29 CFR 1910.1030 and an explanation of its contents;
- (2) A general explanation of the epidemiology and symptoms of bloodborne diseases;
- (3) An explanation of modes of transmission of bloodborne pathogens;
- (4) An explanation of the Exposure Control Plan and where you may obtain a copy;
- (5) An explanation of the appropriate methods for recognizing tasks and procedures that may involve exposure to blood or OPIM;
- (6) An explanation of the use and limitations of practice that will prevent or reduce exposure, including appropriate engineering controls, work practices, and personal protective equipment;
- (7) Information on personal protective equipment which shall address types available, proper use, location, removal, handling, decontamination and/or disposal;
- (8) An explanation of the basis for selection of personal protective equipment;
- (9) Information on the hepatitis B Vaccine, including information on its safety, and the benefits of being vaccinated;
- (10) Information on the appropriate actions to take and persons to contact in the event of an emergency;
- (11) Procedures to follow if an exposure incident occurs, including method of reporting the incident;
- (12) Information on the medical follow-up that will be made available and on medical counseling provided to exposed personnel;
- (13) An explanation of signs, labels, and/or color coding; and
- (14) A question and answer session with the trainer.

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12. Medical Surveillance.

a. General Information.

(1) Any individual who may be exposed to potentially infectious materials shall be offered at no cost, a vaccination for Hepatitis B, unless a previous vaccination or antibody testing reveals immunity. The Hepatitis B vaccine is an effective means of protecting personnel from acquiring HBV. It has been proven to be approximately 90 percent effective.

(2) If the vaccination is declined, a waiver form shall be signed and entered into the person's medical record. The individual shall be provided vaccination at a later date if he/she so desires it. An example declination is provided in appendix (f). When local forms are used, the wording of the terms of declination paragraph shall not be changed.

(3) Hepatitis B vaccine shall be offered within 10 days to all covered personnel when occupational exposure to bloodborne pathogens can be reasonably anticipated. The health care professional designated to provide the vaccine shall:

(a) Explain the time schedule for the second and third vaccinations. Temporary employees shall receive as many Hepatitis B vaccine injections as time permits.

(b) Record the vaccination in the person's medical record.

13. Post Exposure Procedures.

a. Should an exposure occur to blood or OPIM, a post-exposure evaluation shall be provided as described herein.

b. Following a report of an exposure incident, a confidential medical evaluation and follow-up shall be conducted, including:

(1) Documentation of the route(s) of exposure, HBV and HIV antibody status of the source individual's blood (if known), and the circumstances under which the exposure occurred.

(2) If the source individual can be determined and permission obtained, the source individual's blood will be collected and tested to determine the presence of HIV and HBV infection.

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(3) Collection of blood from the exposed employee as soon as possible after the exposure incident for determination of HIV/HBV status. Actually, antibody or antigen testing of the blood or serum sample may be done at that time or at a later date, if requested by the exposed individual. Samples shall be preserved for at least 90 days.

(4) Follow-up of the exposed individual including antibody or antigen testing, counseling, illness reporting, and safe and effective post-exposure prophylaxis, according to standard recommendations for medical practices.

14. Health Care Professional's Report.

a. The attending health care professional shall provide a written opinion to the individual's command concerning the following:

(1) The health care professional's recommended limitations upon the exposed individual's ability to receive the Hepatitis B vaccination.

(2) A statement that personnel have been informed of the results of the medical evaluation and have been told about any medical conditions resulting from exposure to blood or OPIM which require further evaluation or treatment.

(3) Specific findings or diagnoses which are related to the individual's ability to receive the HBV vaccination. Any other findings and diagnoses shall remain confidential.

15. Report to Exposed Individual. For each evaluation under this section, the exposed individual shall be provided a copy of the attending health care professional's written opinion within 15 days of the completion of the evaluation.

16. Recordkeeping.

a. Medical Records. Medical records shall be kept for the length of the worker's employment plus 50 years in accordance with 29 CFR 1910.1030 and SECNAVINST 5212.5C. Records shall be maintained at the designated medical treatment facility supporting the command or activity or transferred to the archives according to current regulation.

b. Training Record.

(1) Training records shall be kept for 3 years.

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(2) Training records will be forwarded to the OSH
Manager for compliance monitoring of the program.

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DEFINITIONS

a. **Amniotic Fluid.** Fluid from the innermost membrane of the sac enclosing the embryo.

b. **Biohazard Label.** A label affixed to containers of regulated waste, refrigerator/freezers and other containers used to store, transport or ship blood and other potentially infectious materials. The label must be fluorescent orange-red in color with the biohazard symbol and the word "Biohazard" on the lower part of the label.

c. **Blood.** Human blood, human blood components, and products made from human blood.

d. **Bloodborne Pathogens.** Pathogenic microorganisms that are present in human blood and can cause disease in humans. These pathogens include, but are not limited to, Hepatitis B Virus (HBV) and Human Immunodeficiency Virus (HIV).

e. **Cerebrospinal Fluid.** The clear liquid surrounding the brain and spinal cord and filling the cavities of the brain.

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

g. **Contaminated Laundry.** Laundry which has been soiled with blood or other potentially-infectious materials.

h. **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.

i. **Employee.** An individual employed in a health care, industrial or other facility or operation who may be exposed to bloodborne pathogens in the course of their assignments.

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

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

l. **HBV.** Hepatitis B Virus. The disease can produce a mild to chronic infection, liver damage such as cirrhosis, liver cancer, or death due to liver failure.

m. **HIV.** Human Immunodeficiency Virus, the precursor to the Acquired Immunodeficiency Syndrome (AIDS). AIDS results in the breakdown of the immune system, so the body does not have the ability to fight off other diseases. Currently no vaccination exists to prevent infection of HIV, and there is no known cure.

n. **Licensed Health Care Professional.** A person whose legally permitted scope of practice allows him or her to independently perform the activities required for "Hepatitis B Vaccination and Post-exposure Evaluation and Follow-up" of OSHA's Bloodborne Pathogens Standard.

o. **Medical Consultation.** A consultation which takes place between an employee and a licensed medical professional for the purpose of determining the employee's medical condition resulting from exposure to blood or other potentially infectious materials, as well as any further evaluation or treatment that is required.

p. **Occupational Exposure.** 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.

q. **Other Potentially Infectious Materials (OPIM).**

(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, 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) An 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.

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r. Percutaneous. Piercing mucous membrane or the skin barrier through such events as needle sticks, human bites, cuts, and abrasions.

s. Pericardial Fluid. Fluid from the membranous sac surrounding the heart and the roots of the great blood vessels.

t. Peritoneal Fluid. Fluid from the transparent serous membrane lining the abdominal cavity.

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

v. Pleural Fluid. Fluid from the thin serous membrane that covers the lungs.

w. 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 state 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 microbiological wastes containing blood or other potentially infectious materials.

x. Source Individual. An 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 developmentally disabled, trauma victims, clients of drug and alcohol treatment facilities, residents of hospices and nursing homes, human remains, and individuals who donate or sell blood or blood components.

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

z. Synovial Fluid. Clear albuminous lubricating fluid secreted by the membranes of joint cavities, tendon sheaths, etc.

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aa. **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.

bb. **Work Practice Controls**. Controls that reduce the likelihood of exposure by altering the manner in which a task is performed (e.g., prohibiting recapping of needles by a two-handed technique).

Matrix Summary of Job Exposures and Their Bloodborne
Pathogens Standard Requirements

Elements to the Bloodborne Pathogens Standard	Job Exposure				
	No Exposure	Good Samaritan	Designated First Aider	Full-time Health Care Provider	Others with Occupational Exposure
Exposure Control Plan			X	X	X
Hepatitis B Vaccination		X ¹	X	X	X
Post-Exposure Follow-up		X	X	X	X
Initial Training		X ²	X	X	X
Annual Training			X	X	X
Personal Protective Equipment		X ³	X	X	X
Universal Precautions				X	
Extended Records Retention		X	X	X	X
<p>Note: Activities may reduce the number of employees at risk by reducing the number of employees required/designated by their job to provide first aid.</p> <p>¹ Yes if post-exposure medical follow-up determines the need for either HBV vaccine or booster shots.</p> <p>² Should be part of initial orientation training.</p> <p>³ Personal protective kits should be available in facilities where risk of occupational injury is significant.</p>					
<p>Definitions:</p> <p>No Exposure - Personnel who are not designated to provide first aid, nor anticipated to be exposed to blood or OPIM.</p> <p>Good Samaritans - Personnel who are not designated to provide first aid, but are exposed to blood or OPIM while voluntarily aiding another person.</p> <p>Designated First Aider - Personnel who are designated to provide first aid.</p> <p>Full-time Health Care Provider - Personnel with continuous occupational exposure to blood or OPIM.</p> <p>Others with Occupational Exposure - Personnel not designated to be in direct patient contact, but who can anticipate occupational exposure in the performance of their job duties such as, laundry personnel handling contaminated laundry, blood lab technicians, and medical waste handlers, etc.</p>					

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Guidelines to Prevent or Minimize the Risk
of Exposure to Bloodborne Pathogens During
Cardiopulmonary Resuscitation (CPR) and CPR
Training

1. CPR Training. To prevent or minimize the risk of transmission of bloodborne pathogens during CPR training the below requirements shall be followed:
 - a. The manufacturer's recommendations and provisions for sanitary practices for the training manikin shall be followed.
 - b. Students shall be told in advance that the training sessions will involve close physical contact with fellow students.
 - c. Students or instructors shall not actively participate in training sessions (hands-on training with manikins) if they have dermatologic lesions on hands or in oral or circumoral areas, if they have upper-respiratory-tract infections, if they have HIV, or if the student or instructor has reason to believe that he or she has been exposed to or is in the active stage of any infectious process.
 - d. If more than one CPR manikin is used in a particular training class, students shall be assigned in pairs, whenever possible, with each pair having contact with only one manikin. This would lessen the possibility of contamination of several manikins by one individual and, therefore, limit possible exposure of other class members.
 - e. All persons responsible for CPR training shall be thoroughly familiar with hygienic concepts (e.g., through handwashing prior to manikin contact, not eating during class to avoid contaminating manikins with food particles, etc.) as well as the procedures for cleaning and maintaining manikins and accessories (e.g., face shields). Manikins shall be inspected routinely for signs of physical deterioration, such as cracks or tears in plastic surfaces, which make thorough cleaning difficult or impossible. The clothes and hair of manikins shall be washed monthly or whenever visibly soiled.
 - f. During the training of two-rescuer CPR, there is no opportunity to disinfect the manikin between students when the "switching procedure" is practiced. In order to limit the potential for disease transmission during this exercise, the second student taking over ventilation on the manikin shall simulate ventilation instead of blowing into the manikin. This

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requirement is consistent with the current training recommendations of the American Red Cross and the American Heart Association.

g. Training in the "obstructed airway procedure" involves the student using his or her finger to sweep foreign matter out of the manikin's mouth. This action could contaminate the student's finger with exhaled moisture and saliva from previous students in the same class and/or contaminate the manikin with material from the student's finger. When practicing this procedure, the finger sweep should either be simulated or done on a manikin whose airway was decontaminated before the procedure and will be decontaminated after the procedure.

h. At the end of each class, the procedures listed below shall be performed as soon as possible to avoid drying of contamination on manikin surfaces. Personnel conducting the manikin disassembly and decontamination shall wear protective latex gloves during these procedures and wash their hands after finishing.

(1) Disassemble the manikin as directed by the manufacturer.

(2) Thoroughly wash all external and internal surfaces (also reusable protective face shields) with warm soapy water and brushes.

(3) Rinse all surfaces with fresh water.

(4) Wet all surfaces with a sodium hypochlorite solution having at least 500 ppm of free available chlorine [e.g., one cup (approximately 60 mL) liquid household bleach (approximately 5 percent sodium hypochlorite) per gallon (approximately 4 liters) of tap water] for 10 minutes. This solution shall be made fresh at each class and discarded after each use.

(5) Rinse with fresh water and immediately dry all external and internal surfaces; rinsing with alcohol will aid drying of internal surfaces, and this drying will prevent the survival and growth of bacterial or fungal pathogens if the manikins are stored for periods longer than the day of cleaning.

i. Each time a different student uses the manikin in a training class, the individual protective face shield, if used, shall be changed. Between students or after the instructor demonstrates a procedure such as clearing any obstruction from the airway, the manikin face and inside the mouth shall be wiped

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vigorously with clean absorbent material (e.g., 4" by 4" gauze pad), wet with either the hypochlorite solution described in subparagraph h. (4) above or with 70 percent alcohol (isopropanol or ethanol). The surfaces should remain wet for at least 30 seconds before they are wiped dry with a second piece of clean absorbent material.

NOTE: Although highly bactericidal, alcohols are not considered to be broad-spectrum agents, and use of alcohol here is recommended primarily as an aid in mechanical cleaning; also, in a short contact period alcohols may not be effective against bacteria or other pathogens. Nonetheless, in the context of vigorous cleaning with alcohol and absorbent materials, little viable microbial contamination of any kind is likely after the cleaning procedure.

j. Those personnel responsible for the use and maintenance of CPR manikins shall not rely totally on the mere presence of a disinfectant to protect them and their students from cross-infection during training programs. Emphasis shall be placed on the necessity of thorough physical cleaning (scrubbing and wiping) as the first step in an effective decontamination protocol. Microbial contamination is easily removed from smooth, nonporous surfaces by using disposable cleaning cloths moistened with a detergent solution, and there is no evidence that a soaking procedure alone in any liquid is as effective as the same procedure accompanied by vigorous scrubbing.

k. With specific regard to concerns about potential for hepatitis B and HIV transmission in CPR training, it has recently been shown that the hepatitis B virus is not as resistant to disinfectant chemicals as it was once thought to be. Current recommendations for strategies dealing with the HIV contamination are the same as those for viral hepatitis B.

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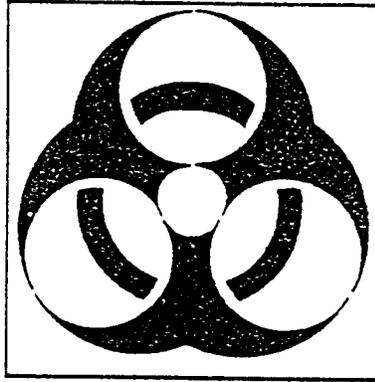
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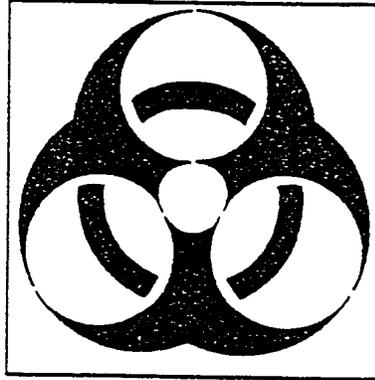
BIOHAZARD Label and BIOHAZARD Sign

1. BIOHAZARD Label:



BIOHAZARD

2. BIOHAZARD Sign:



BIOHAZARD

BIOHAZARD

- Name of the Infectious Agent
- Special Requirements for Entering the Area
- Name, Telephone Number of the Laboratory Director or Other Responsible Person

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AUG 25 1998

Bloodborne Pathogens Training

On _____, I _____ attended naval training on Bloodborne Pathogens. Topics covered in this training included:

1. Copy of the bloodborne pathogens standard, 29 CFR 1910.1030, the Exposure Control Plan, and an explanation of their content.
2. General explanation of the epidemiology and symptoms of bloodborne pathogens.
3. Explanation of modes of transmission of bloodborne pathogens.
4. Explanation of the exposure control plan and the means to obtain a copy.
5. Recognition of appropriate tasks/jobs involving exposure to bloodborne pathogens.
6. Explanation of the use and limitations of methods to reduce or eliminate exposure risks.
7. Information on proper use and location of personal protective equipment.
8. Explanation of basis for selection of personal protective equipment.
9. Information on hepatitis B vaccine, safety, benefits, administration.
10. Appropriate actions and points of contact in emergencies involving bloodborne pathogens.
11. Procedures following an exposure incident - reporting and medical follow-up.
12. Post exposure information.
13. Explanation of the signs and labels required.
14. Opportunity for interactive questions and answers with the person administering the training.

Trainer signature

Trainee signature

SSN (last 4)

Trainer qualifications: _____.

Appendix (e)

Enclosure (1)

MAY 27 1998

Example Hepatitis B Vaccine Declination

Date: _____

Employee Name: _____

Employee ID#: _____

* 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 me. However, I decline Hepatitis B vaccination at this time. I understand that by declining the 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.

Employee Signature: _____

Date: _____

Medical Corps Representative Signature: _____

Date: _____

* The wording of this paragraph shall not be changed per 29 CFR 1910.1030, the OSHA Standard for Occupational Exposure to Bloodborne Pathogens.

Note:

Information may be overprinted on an SF-600, Chronological Record of Medical Care, and placed in the individual's health record.

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