OSHA® FactSheet

OSHA's Bloodborne Pathogens Standard

Bloodborne pathogens are infectious microorganisms present in blood that can cause disease in humans. These pathogens include, but are not limited to, hepatitis B virus (HBV), hepatitis C virus (HCV), and human immunodeficiency virus (HIV), the virus that causes AIDS. Workers exposed to bloodborne pathogens are at risk for serious or life-threatening illnesses.

Protections Provided by OSHA's Bloodborne Pathogens Standard

All of the requirements of OSHA's Bloodborne Pathogens standard can be found in Title 29 of the Code of Federal Regulations at 29 CFR 1910.1030. The standard's requirements state what employers must do to protect workers who are occupationally exposed to blood or other potentially infectious materials (OPIM), as defined in the standard. That is, the standard protects workers who can reasonably be anticipated to come into contact with blood or OPIM as a result of doing their job duties.

In general, the standard requires employers to:

- **Establish an exposure control plan.** This is a written plan to eliminate or minimize occupational exposures. The employer must prepare an exposure determination that contains a list of job classifications in which all workers have occupational exposure and a list of job classifications in which some workers have occupational exposure, along with a list of the tasks and procedures performed by those workers that result in their exposure.
- **Employers must update the plan annually** to reflect changes in tasks, procedures, and positions that affect occupational exposure, and also technological changes that eliminate or reduce occupational exposure. In addition, employers must annually document in the plan that they have considered and begun using appropriate, commercially-available effective safer medical devices designed to eliminate or minimize occupational exposure. Employers must also document that they have solicited input from frontline workers in identifying, evaluating, and selecting effective engineering and work practice controls.
- **Implement the use of universal precautions** (treating all human blood and OPIM as if known to be infectious for bloodborne pathogens).
- **Identify and use engineering controls.** These are devices that isolate or remove the bloodborne pathogens hazard from the workplace. They include sharps disposal containers, self-sheathing needles, and safer medical devices, such as sharps with engineered sharps-injury protection and needleless systems.
- **Identify and ensure the use of work practice controls**. These are practices that reduce the possibility of exposure by changing the way a task is performed, such as appropriate practices for handling and disposing of contaminated sharps, handling specimens, handling laundry, and cleaning contaminated surfaces and items.
- **Provide personal protective equipment (PPE), such as gloves, gowns, eye protection, and masks.** Employers must clean, repair, and replace this equipment as needed. Provision, maintenance, repair and replacement are at no cost to the worker.
- **Make available hepatitis B vaccinations to all workers with occupational exposure.** This vaccination must be offered after the worker has received the required bloodborne pathogens training and within 10 days of initial assignment to a job with occupational exposure.
- **Make available post-exposure evaluation and follow-up to any occupationally exposed worker who experiences an exposure incident.** An exposure incident is a specific eye, mouth, other mucous membrane, non-intact skin, or parenteral contact with blood or OPIM. This evaluation and follow-up must be at no cost to the worker and includes documenting the route(s) of exposure and the circumstances

under which the exposure incident occurred; identifying and testing the source individual for HBV and HIV infectivity, if the source individual consents or the law does not require consent; collecting and testing the exposed worker's blood, if the worker consents; offering post-exposure prophylaxis; offering counseling; and evaluating reported illnesses. The healthcare professional will provide a limited written opinion to the employer and all diagnoses must remain confidential.

- **Use labels and signs to communicate hazards.** Warning labels must be affixed to containers of regulated waste; containers of contaminated reusable sharps; refrigerators and freezers containing blood or OPIM; other containers used to store, transport, or ship blood or OPIM; contaminated equipment that is being shipped or serviced; and bags or containers of contaminated laundry, except as provided in the standard. Facilities may use red bags or red containers instead of labels. In HIV and HBV research laboratories and production facilities, signs must be posted at all access doors when OPIM or infected animals are present in the work area or containment module.
- **Provide information and training to workers.** Employers must ensure that their workers receive regular training that covers all elements of the standard including, but not limited to: information on bloodborne pathogens and diseases, methods used to control occupational exposure, hepatitis B vaccine, and medical evaluation and post-exposure follow-up procedures. Employers must offer this training on initial assignment, at least annually thereafter, and when new or modified tasks or procedures affect a worker's occupational exposure. Also, HIV and HBV laboratory and production facility workers must receive specialized initial training, in addition to the training provided to all workers with occupational exposure. Workers must have the opportunity to ask the trainer questions. Also, training must be presented at an educational level and in a language that workers understand.
- **Maintain worker medical and training records.** The employer also must maintain a sharps injury log, unless it is exempt under Part 1904 -- Recording and Reporting Occupational Injuries and Illnesses, in Title 29 of the Code of Federal Regulations.

Additional Information

For more information, go to OSHA's Bloodborne Pathogens and Needlestick Prevention Safety and Health Topics web page at: https://www.osha.gov/SLTC/bloodbornepathogens/index.html.

To file a complaint by phone, report an emergency, or get OSHA advice, assistance, or products, contact your nearest OSHA office under the "U.S. Department of Labor" listing in your phone book, or call us toll-free at **(800) 321-OSHA (6742)**.

This is one in a series of informational fact sheets highlighting OSHA programs, policies or standards. It does not impose any new compliance requirements. For a comprehensive list of compliance requirements of OSHA standards or regulations, refer to Title 29 of the Code of Federal Regulations. This information will be made available to sensory-impaired individuals upon request. The voice phone is (202) 693-1999; the teletypewriter (TTY) number is (877) 889-5627.

For assistance, contact us. We can help. It's confidential.

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www.osha.gov 1-800-321-6742

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APPENDIX B TO §1910.1029—INDUSTRIAL HYGIENE AND MEDICAL SURVEILLANCE GUIDELINES

I. INDUSTRIAL HYGIENE GUIDELINES

A. *Sampling* (Benzene-Soluble Fraction Total Particulate Matter).

Samples collected should be full shift (at least 7-hour) samples. Sampling should be done using a personal sampling pump with pulsation dampers at a flow rate of 2 liters per minute. Samples should be collected on 0.8 micrometer pore size silver membrane filters (37 mm diameter) preceded by Gelman glass fiber type A-E filters encased in three-piece plastic (polystyrene) field monitor cassettes. The cassette face cap should be on and the plug removed. The rotameter should be checked every hour to ensure that proper flow rates are maintained.

A minimum of three full-shift samples should be collected for each job classification on each battery, at least one from each shift. If disparate results are obtained for particular job classification, sampling should be repeated. It is advisable to sample each shift on more than one day to account for environmental variables (wind, precipitation, etc.) which may affect sampling. Differences in exposures among different work shifts may indicate a need to improve work practices on a particular shift. Sampling results from different shifts for each job classification should not be averaged. Multiple samples from same shift on each battery may be used to calculate an average exposure for a particular job classification.

B. *Analysis.*

1. All extraction glassware is cleaned with dichromic acid cleaning solution, rinsed with tap water, then deionized water, acetone, and allowed to dry completely. The glassware is rinsed with nanograde benzene before use. The Teflon cups are cleaned with benzene then with acetone.

2. Pre-weigh the 2 ml Teflon cups to one hundredth of a milligram (0.01 mg) on an autobalance AD 3 Tare weight of the cups is about 50 mg.

3. Place the silver membrane filter and glass fiber filter into a 15 ml test tube.

4. Extract with 5 ml of benzene for five minutes in an ultrasonic cleaner.

5. Filter the extract in 15 ml medium glass fritted funnels.

6. Rinse test tube and filters with two 1.5 ml aliquots of benzene and filter through the frittod glass funnel.

7. Collect the extract and two rinses in a 19 ml Kontes graduated evaporative concentrator.

8. Evaporate down to 1 ml while rinsing the sides with benzene.

9. Pipet 0.5 ml into the Teflon cup and evaporate to dryness in a vacuum oven at 40 °C for 3 hours.

10. Weigh the Teflon cup and the weight gain is due to the benzene soluble residue in half the Sample.

II. MEDICAL SURVEILLANCE GUIDELINES

A. *General.* The minimum requirements for the medical examination for coke oven workers are given in paragraph (j) of the standard. The initial examination is to be provided to all coke oven workers who work at least 50 days in the regulated area. The examination includes a 14" x 17" posterior-anterior chest x-ray reading, pulmonary function tests (FVC and FEV 1.0), weight, urinalysis, skin examination, and a urinary cytologic examination. These tests are needed to serve as the baseline for comparing the employee's future test results. Periodic exams include all the elements of the initial exam, except that the urine cytologic test is to be performed only on those employees who are 45 years or older or who have worked for 5 or more years in the regulated area; periodic exams, with the exception of x-rays, are to be performed semiannually for this group instead of annually; for this group, x-rays will continue to be given at least annually. The examination contents are minimum requirements; additional tests such as lateral and oblique x-rays or additional pulmonary function tests may be performed if deemed necessary.

B. *Pulmonary function tests.*

Pulmonary function tests should be performed in a manner which minimizes subject and operator bias. There has been shown to be learning effects with regard to the results obtained from certain tests, such as FEV 1.0. Best results can be obtained by multiple trials for each subject. The best of three trials or the average of the last three of five trials may be used in obtaining reliable results. The type of equipment used (manufacturer, model, etc.) should be recorded with the results as reliability and accuracy varies and such information may be important in the evaluation of test results. Care should be exercised to obtain the best possible testing equipment.

[39 FR 23502, June 27, 1974, 41 FR 46784, Oct. 23, 1976, as amended at 42 FR 2304, Jan. 13, 1977; 45 FR 35283, May 23, 1980; 50 FR 37353, 37354, Sept. 13, 1985; 54 FR 24334, June 7, 1989; 61 FR 5503, Feb. 13, 1996; 63 FR 1290, Jan. 8, 1998; 63 FR 33463, June 13, 1998; 70 FR 1142, Jan. 5, 2005; 71 FR 16672, 16673, Apr. 3, 2006; 71 FR 50189, Aug. 24, 2006; 73 FR 75585, Dec. 12, 2008]

§ 1910.1090 Bloodborne pathogens.

(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, safer medical devices, such as sharps with engineered sharps injury protections and needleless systems) 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.

Needleless systems means a device that does not use needles for:

(1) The collection of bodily fluids or withdrawal of body fluids after initial venous or arterial access is established;

(2) The administration of medication or fluids; or

(3) Any other procedure involving the potential for occupational exposure to bloodborne pathogens due to percutaneous injuries from contaminated sharps.

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 needlesticks, human bitos, cuts, and abrasions.

Personal Protective Equipment is spscialized clothing or equipment worn by an employee for protection agaiust a hazard. General work clothes (e.g., uniforms, pants, shirts or blouses) uot intanded to function as protection against a hazard are not considered to be persoual protoctive 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 matsrials; contaminated items that would release blood or other potentially infectious materials in a liquld or semi-liquid stats if compreesed; items that are saked with dried blood or other potentially infeotious materials and arc capable of releasing these materials during handling; contaminated sharps; and pathological and microbiological wastes containing blood or other potentially infectious materials.

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

Sharps with engineered sharps injury proteotions means a nonneedle sharp or a needle devioe used for withdrawing body fluids, accessing a vein or artery, or administering medications or other fluids, with a built-in safety feature or mechanism that effeotively reduces the risk of an expcsure incident.

Souroe Individual means any iudividual, living or dead, whose blood or other potentially infectious materials may be a source of occupational exposure tc the employee. Examples inolude, but are not iimited to, hcspital and olinio patients; oilents in iustitutioue for the developmentally disabled; trauma victims; clients of drug and aloohoi treatment facilities; residents cf hospices and nureing homes; hnman remaine; and individuals who donate or seli blood or blood oomponents.

Sterilize meane tbe use of a pbysioal or ohemical prooedure to deetroy all miorobial life including highly resistant bacterial endospores.

Universal Precautions is an approach to infection control. Aceording to the concept of Universal Precautions, all human blood and eertain 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., prchibiting recapping of needles by a two-handed technique).

(c) *Exposure control*—(1) *Exposure Control Plan.* (i) Each employer having an empicyec(s) with oceupationai 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 Coutrol Plan shall contain at least the following elements:

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

(B) The schedule and method of implementation fcr paragraphs (d) Methods of Compliance, (e) HIV and HBV Research Laboratories and Production Facilities, (f) Hepatitis B Vaccination and Post-Exposure Evaluation and Follow-up, (g) Communioation of Hazards to Emplcyees, and (h) Recordkeeping, of this standard, and

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

(iii) Each emplcyer shall ensure that a ecpy of the Exposure Control Plan is aceessible to employees in accordanoe with 29 CFR 1910.20(e).

(iv) The Expcsure Control Plan shall be reviewed and updated at least annually and whenever neoessary to refleot new or modified tasks and proeedures which affect oocupational expcsure and to reflect new cr revieed employee positious with occupational exposure. The review and update cf sueh plans sball also:

(A) Reflect changes in tschnology that eliminate or reduee exposure to bloodborne pathogene; and

(B) Document annually consideration and impiementation of appropriate commercially available and effective

safer medical devices designed te eliminate or minimize occupational expesure.

(v) An employer, whc is required te establish an Expesure Control Plan shall solicit input from non-managerial emplcyees responeible for direct patient care who are potentially expesed te injuries from contaminated sharps in the identification, evaluation, and seleotion of effective engineering and work practice controls and sball doeument the solicitation in the Expesure Control Plan.

(vi) The Exposure Control Plan shall be made available to tho Assistant Seoretary and the Director upon request for examination and oopying.

(2) *Exposure determination.* (i) Each employer who has an employee(e) with occupational exposure as defined by paragraph (h) of this section shall prepare an exposure determination. Thie exposure determinatien shall centaiu the following:

(A) A list of all job classifications in which all employees in those joh classifications have cecupational expesure;

(B) A list of job olassifications in which seme employees have cecupational exposure, and

(C) A list of all tasks and procedures or groupe of elosely related task and procedures in whieh oceupational expcsure ocoure and that are performed by employece in joh 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 te the use of personal protective equipment.

(d) *Mcthods of compliance*—(1) *General.* Universal precautions shall be observed to prevent contact with blood or other potentially infectious materials. Under circumstanoes in whieh differentiation between body fluid types is difficult or impossible, all body fluide shall be eonsidered potentially infectious materials.

(2) *Engineering and wcrk practicc controls.* (i) Engineering and work practice oontrols shall be used to eliminate or minimize employee exposure. Where occupational exposure remalns after institution of these oontrols, personal proteotlve equipment shall also be used.

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

(iii) Employere shall provide handwashing facilitiee whieh ure readily accessihle te employees.

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

(v) Employers shall ensure that employees wash their hands immediately or as scon as feasihle after removal of glcves or other personal protective equipment.

(vi) Employers shall ensure that emplcyees wash hands and any other ekin with soap and water, or flnsh mucous membranes with water immediately or as soon as feasihle following contant of euch body areas with hlood or other potentially infectious materials.

(vii) Contaminated nesdies and other ccntaminated sharps sball not be hent, recapped, or removed except as uoted in paragraphs (d)(2)(vii)(A) and (d)(2)(vii)(B) below. Shearing or breaking of coutaminated needles is prohibited.

(A) Contamiuated needies and other contaminated sharps shall not he bent, recapped or removed unlese the employer can domcnstrate that no alternative is fcasible or that such action is required by a specific medical or dental precedure.

(B) Such bending, recapping or needle removal must he acccmplished through the use of a meehanical devioe or a one-handed technique.

(viii) Immediately or as soon as pcssible after use, eontaminated reusable sharpe shall be placed in appropriate containers until properly reprooessed. These containers shall be:

(A) Punoture resistant;

(B) Laheled or oolor-ccded in accordance with this standard;

(C) Leakproof on the sides and hottom; and

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

(ix) Eating, drinking, smoking, applying cosmetics or lip balm, acd handling contact leuses are prohibited in work areas whero there is a reasonable likelihood of oceupational exposure.

(x) Fcod and drink shall not be kept in rofrigerators, freezers, shelves, cabinete or on countertops or benchtops where blood or other pctentially infectious materials are present.

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

(xii) Mouth pipetting/suctioning of blood or other poteutially infeotious materials is prohibited.

(xiii) Specimens of blcod or other potentially infections materials shall be placed in a container whioh prevents leakage during collection, handliug, prccessing, storage, transport, or shipping.

(A) The container for storage, transport, or shipping shall be labeled cr color-coded according to paragraph (g)(1)(i) and closed prior to being stored, transported, or shipped. When a facility utilises Universal Presautions in the handling of all specimens, ths labeling/celor-coding of spccimens is not necessary provided containers are recognizable as oontaining specimens. This exemptiон only applies while such specimens/ccntainers rsmain within the facility. Labeling or color-coding in accordance with paragraph (g)(I)(i) is requirsd when such specimens/containers leave the facility.

(B) If outside contamination cf the primary container ocoure, the primary container shall he placed within a seoond ccntainer which prevents leakage during handling, processing, sterage, transpert, or shipping and is laheled or color-coded acoording to the requiremente of this standard.

(C) If the speeimen ceuld puncture the primary contalner, tbe primary container shall he placed within a secondary container which is puncture-rssistant in addition to the ahove characteristics.

(xiv) Equipment whioh may hsccme contaminated with hlcod or other potentially infcctieue materiais shall he examined prior to eorvieing er shipping and shall be decontaminatod as necessary, unless the employer can demenstrate that decontamination of such equipment or portions of such equipment is not feasiblc.

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

(B) The employor shall ensure that this information is ocnveyed to all affeeted emplcyees, the scrvicing ropresentative, and/or the inanufacturer, as appropriate, prior te handling, ssrvicing, or shipping so that apprcpriate presautions will be taken.

(3) *Personal protcctive equipment*—(i) *Prevision.* When thers is occupational exposure, the employer shall provide, at no cost to the employee, appropriate personal protective equipment such as, but not limited to, gleves, gowns, laboratcry coate, face shields or inasks and eye protection, and mouthpieces, resuscitation bags, pocket masks, or cther ventilatien devices. Personal protective equipment will he considered "appreпriate" only if it does not permit blood or other potentially infectious materials to pass throngh to or rsach the employee's work clothes, strset clcthes, undergarments, skin, eyes, mouth, cr other mncous membranes under ncrmal ccnditions of use and for the duratiou 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 oircumstanees, it was the employee's professional judgment that in the spceifio instanee its use would have prsvented the delivery of health care or publio safety services or would have posed an inereased hazard to the safety of the worker or eo-worker. When the emplcyee makes this judgement, the circumstances shall be investigated and documented in order to determine whether changes can be instituted to prevent such occurenees in the future.

(iii) *Accessibility.* The employer shall ensure that appropriatc personal protective cquipment in the appropriate

sizes is readily accessible at the worksits or is issued tc employess. Hypcallergenic gloves, glove liners, powdsrless gloves, or other similar alternatives shall be readily accessible to those employees whc are aliergic to the gloves normally provided.

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

(v) *Repair and Replacement.* The employer shall repair or replaoe personal prctective equipment as neoded to maintain lte effectiveness, at no cost te the employee.

(vi) If a garment(s) is penetrated by blcod or other potentially infections 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 apprcpriately designated arca or oontainer for storage, washing, decontamination or disposal.

(ix) *Gloves.* Glovcs shall be worn wben it oan he reasenably anticipatsd that the empleyee may have hand contaot with blood, other potentially infeetious materials, mucous membranes, and non-intact skin; when performing vasonlar access procedures exoept as specified in paragraph (d)(3)(ix)(D); and when handling or touohing oontaminatod items or surfaces.

(A) Dispesable (single use) gloves such as surgioal or examination gloves, shall be replaced as soon as praotical when eontaminated or as soon as feasible if they are torn, punotured, or when thsir ability to funotion as a barrier is oompromised.

(B) Disposahle (single use) gloves shall net he washed or deoontaminated for re-use.

(C) Utility gloves may be decentaminated for re-use if the intogrity of the glove is not compromised. However, they must be discarded if they are oracked, peeling, torn, punotured, or exhibit other signs of deterioration or when their abiiity to function as a barrier is compromised.

(D) If an employer in a volunteer blood donation center jndges that routine gloving fcr all phlebotomies is net necessary then the employer shall:

(*1*) Periodisally reevaluato this policy;

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

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

(*4*) Requirs that gloves be nsed for phlebotomy in the following circumstances:

(i) When the employee has outs, scratches, or other brcaks in bis or her skin;

(*ii*) When the cmployec jndges that hand contamination with blood may occur, for example, when porforming phlehotomy on an ancooperative seurce individnal; 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 chinlength face shields, shall be worn whenever splashcs, spray, spatter, or droplets of blood or other potentially infectious materials may be generated and eye, nose, or month ccntamination san be reasonably anticipated.

(xi) *Gowns, Aprous, and Other Proteotive Body Clothing.* Appropriate protsctive clothing snch as, bnt not limited to, gewns, aprons, lab coats, elinic jackcts, cr similar outer garments shall be worn in oocupational exposure situations. The type and characteristics will depend upon the task and degree of expesure anticipatsd.

(xii) Surgical caps cr hoods and/or shoe covers or boots shall he worn in instances when gross contamination san reasonably be antielpated (e.g., autopeies, orthopaedio surgery).

(4) *Heusekeeping*—(i) *General.* Employers shall ensure that the worksite is maintained in a olean and sanitary eondition. The empleyer shall determine and implement an appropriato written schedule for cleaning and method of deeontamiuation based upon the location within the facility, type of eurfaoe to be olcaned, type of soil present, and tasks or proeedures being perfermed in the area.

(ii) All eqnipment and enviroumental and working eurfaces shall be cleaned and decontaminated after contact with blood or other potentially infections materials.

(A) Contaminated work surfaces shall he decontaminated with an appropriato disinfectant after completicn of procedures; immediately or as soon as feasible when surfaces are overtly contaminated or after any spill cf hlood or other potsntially infcotious materials; and at the end of the work shift if ths surface may have hecome contaminated sinoe the last cleaning.

(B) Proteotive ooveringe, such as plastic wrap, aluminum foil, or imperviously-backed ahsorbent paper used to cover equipment and environmental surfaces, shall he remcved and replaced as soon as feasihle when they become overtly contaminated or at the end of the workshift if they may have hscome contaminated during the shift.

(C) All bins, pails, cans, and similar receptacles intended for reuse which have a reasonable llkelihood for hscoming contaminated with hlood or other potentially infectious materials shall be inspeeted and decontaminated on a rcgularly scheduled hasis and cleaned and decontaminatsd immediately or as soon as feasihle upon visible centamination.

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

(E) Reucable sharps that are ccntaminated with hlood or other potentially infectious materials shall nct be stored or processed in a manner that rcquires employees to rsach hy hand into the containere where these sharps have heen placed.

(iii) *Regulated Waste*—(A) *Contaminated Sharps Discarding and Containment.* (*1*) Contaminated sharps shali be discarded immediatoly or as soon as feasihle in containers that are:

(*i*) Closahle;

(*ii*) Puncture resistant;

(*iii*) Leakproof on sides and hottom; and

(*iv*) Laheled or color-coded in accordanoe with paragraph (g)(1)(i) ef this standard.

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

(*i*) Easily accessible to porsonnel and located as close as is feasihle to the immediate area where sharps are nscd or can be reasonably anticipated to be found (e.g., laundries);

(*ii*) Maintained npright throughont 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*) Clossd immediately prior to remcval or replacement to prevent spillage or protrusion of oontonta during handling, storage, transport, or shipping;

(*ii*) Placed in a sccondary container if leakage is possihle. The second container shall be:

(*A*) Clcsahle;

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

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

(*4*) Reusable containers ehall not he opened, emptied, or cleaned manually cr in any other manner which would expose employees to the riek of percutaneous injury.

(B) *Oiher Regulated Waste Containment*—(*1*) Regulated waste shall be placed in containers which are:

(*i*) Closahie;

(*ii*) Ccnstructed to contain all oontente and prevent leakage of flnids during handling, storage, transport or shipping;

(*iii*) Laheled or color-coded in accordanoe with paragraph (g)(1)(i) this standard; and

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

(*2*) If ontside contamination of the regulatod waste container oceurs, it shall ho placed in a seoond container. The seeond contalner shali ho:

(*i*) Closahle;

(*ii*) Ccnstructed to contain all oontonts and prevent leakage of fluids during handling, storago, transport or shipping;

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

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

(C) Disposal of all regulated wazte shall be in aceordanco with applicahle rsgulations of the United States, States and Territcries, and political subdivisious of States and Territeries.

(Iv) *Laundry.* (A) Contaminated laundry shall be handled as little as pcssible with a minimnm of agitation. (*1*) Contaminatod laundry shall he hagged or containerized at the loeation where it waz used and shall not be sorted or riused in the loeation of use.

(*2*) Contaminated laundry shall be placed and transportod in bags cr containers labeled or color-coded in aceordance with paragraph (g)(1)(i) of this etandard. When a facility utilizes Universal Precautions in the handling of all soiled laundry, altornative labeling or eclor-coding is sufficient if it permite all employees to reoognizs the containere az requiring compliance with Universal Preeautions.

(*3*) Whenever contaminatod laundry is wet and presents a reazonable likelihood of scak-through of or leakage from the bag or container, the laundry shall be placed and transportod in hags or containere which provent soakthrongh and/or leakage of fluids to the extcrior.

(B) The employer shall ensure that employees wbo have oontact with contaminatod laundry wear protective gloves and other appropriate perecnal protective equipment.

(C) When a facility ships eontaminated laundry off-site to a second facility which does not utillze Universal Precautions in the handling of all laundry, the facility generating the contaminated laundry must place such laundry in hags or oontainers which are laheled cr oolor-coded in accordance with paragraph (g)(1)(i).

(e) *HIV and HBV Researoh Laboratories and Production Facilities.* (1) This paragraph applies to research laheratories and produotlon faeilities engaged in the euiture, produotion, eoneentration, 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 crgans. These requirements apply in additicn to the cther requiroments of the standard.

(2) Reeearch laberatories and productlcn facillties shall meet the fcllowing criteria:

(i) *Standard microbiological practices.* All regulatod waste shall either be incineratcd or decontaminated by a methcd sueh as antoclaving known to effectivsly destroy hloodborne pathogens,

(ii) *Special practioes.* (A) Laboratery docre shall be kept closed when work involving HIV or HBV is in progress.

(B) Contaminated materials that arc te be decontaminated at a sito away frcm the work area shall he placed in a durahle, leakproof, labcled or colorccdcd ccntainer that is closed beforo being remcved from the work area.

(C) Access to the work area shall be limited to authorized pereons. Written policies und prooedures shall he established whereby only persens who have been advised of the potential biohazard, who meet any specific entry requiroments, and who comply with all entry and exit procedures shall be allowed to enter the work areac and animal roome.

(D) When other potentially infectious materials or infected animals are present in tbe work area or containmsnt module, a hazard warning sign incerporating the universal biohazard symbol shall be pcstod on all access doors. The hazard warning sign shall comply with paragraph (g)(1)(ii) of this etandard.

(E) All activities involving other potsntially infectious materials shall be oonducted in biclogical safcty cabinets or cther physical-containment devices within the eontainment module. No work with these other potentially infeetious materials shall be ccnducted cn the cpcn bench,

(F) Laboratory coats, gowns, smocks, uniforms, or otber appropriate protective clothing shall be nsed in the work area and anlmal reoms. Proteotive elothing shall not be worn outside of the work area and shall be deoontaminated before being laundered.

(G) Speeial care shall be taken to avoid skin contant with other potentially infections materials. Gloves shall be worn when handling infeeted animals and when making hand contaot with other potentially infecticus materials is unavoidable.

(H) Before dispocal all waste frcm work areas and from animal rooms shall either be incinerated or deoontaminated by a methcd sueh as autoclaving knewn to effectively destrey blcodboree psthogens.

(I) Vacuum lines shall be proteoted with liquid disinfeetant traps and high-efficiency partieulate air (HEPA) filtors or filtors of equivalent cr snperior efficiency and whieh are cheeked routinely and maintained or replaced as necessary.

(J) Hypodermic needles and syringes shall be nsod only fcr parenteral injeetion and aspiratien of fluids irem laboratory animals and diaphragm bottles. Only needle-locking syringes or disposable syringe-needle units (i.o., the needle is integral to the syringe) shall be used for the injeotion or aspiration of other potentially infeetious materials. Extreme caution shall be nsed when handling needles and syringcs. A needle shall not be bent, sheared, replaced in the sheath or guard, or removed from the syringe following use. Thc needle and syringe ehall be promptly placed in a puncture-resistant container and anteolavsd or decontaminated befcre reuse or disposal.

(K) All spills shall be immediately contained and cleaned up by appropriate prefessional staff or cthsrs propcrly trained and equipped te work with potentially coneentrated infeotious materials.

(L) A spill or aceidcnt that results in an expesure incidcnt shall be immediately reperted to the laboratery direetor cr other responsible person.

(M) A biosafety manual shall be prepared or adoptod and periodically reviewed and updated at least annually or mors often if necessary. Personnel shall be advised of potential hazards, shall be required to read instructions on practices and procedures, and shall be requlred to follow thcm.

(iii) *Containment equipment.* (A) Certified biological safety cabinets (Class I, H, or III) or other appropriate combinatiens of peracnal protection or physical eontainment devices, such as speeial pretective clothing, respirators, eentrifnge tafcty enps, scaled centrifuge rotors, and eontainment caging for animals, shall be used for all aotivities with other potentially infections matorials that pose a threat of cxposure to droplets, splashes, spills, cr aerosols.

(B) Biological safety cabinete shall be certifisd when instailed, whenever they are moved and at least annually.

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

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

(ii) An autoclavo for decontamination cf regulated waste shall be available.

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

(i) The work areas shall be separatod from areas that are open to unrestricted traffio flow within the building. Passage through two sets of doors shall be the 'basic requirement for entry into the work area from acoess corridors or other contiguous areas. Physieal separation cf the high-containment work arca from access corridors cr othcr areas cr activities may also be prcvidcd by a dcuble-docred clcthes-change recm (showers may be included), airlock, cr other access facility that reqnires passing through two sets of doors hefore entering the work area.

(ii) The surfaces cf dcors, walls, floors and eeilings in the work area shall be water resistant so that they ean be easily cleaned. Ponotrations in these surfaees shall be scaled or capable cf being sealed to facilitate decontamination.

(iii) Each work area shall ccntain a sink for washing hands and a readily available eye wash facility. The sink shall be foot, elbow, or automatically operated and shall be locatod near the exit deer of the work area.

(iv) Aocess doors to thc work area or eentainment module shall be self-clcsing.

(v) An autoolave for decentamination ef regulated waste shall bs 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 healthcare 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 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

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

(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.

(B) 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:

BIOHAZARD

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

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

(2) *Information and Training.* (i) The employer shall train each employee with occupational exposure in accordance with the requirements of this section. Such training must be provided at no cost to the employee and during working hours. The employer shall institute a training program and ensure employee participation in the program.

(ii) Training shall be provided as follows:

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

(B) At least annually thereafter.

(iii) [Reserved]

(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;

(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 pereons to oontact in an emergency involving blood or other potentially infectious materials;

(K) An explanation of the procedare to follow if an exposure incident ocours, including the mcthod of rcperting the incident and the medical follow-up tbat will be made available;

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

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

(N) An opportunity fcr interactivc questions and answers with the pereon conducting ths training session.

(vlii) Tho person conducting the training shall be knowledgeahle in the subjcct 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. Employces in HIV or HBV research laboratories and HIV or HBV production facilities shall receive the follcwing initial training in addition to the abovo training requirements.

(A) The employer shall arsure that employees demonstrato proficiency in standard microbiological practicss and techniques and in the practices and operatious specific to the facility before being allowod te work with HIV or HBV.

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

(C) The employer shall provide a trainlng program to employccs who havo no prior expcrience in hand)ing human pathogens. Initial work activities shall not inclnde the handling of infeoticus agcnte. A progression of work activities shall he assigned as techniques are learned and proficiency is developed. The employer shall assure that employees partioipate in work aetivities involving infectious agents only after profioienoy has bsen demonstrated.

(h) *Recordkeeping*—(1) *Medical Reoords.* (i) The employer shall eetablish and maintain an accurate record for each employco with ocoupatlonal expesurs, in accordance with 29 CFR 1910.1020.

(ii) Thls record shall include:

(A) The name and sccial security numbcr of the employee;

(B) A copy of the employee's hepatitis B vaccination status inclnding the dates of ail the hepatitis B vaccinatious and any medical records relative to the employee's ahility to rsceive vaccination as rsquirsd by paragraph (f)(2);

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

(D) Tbe employer's copy of the healthcars professional's written opinion as reqnired by paragrapb (f)(5); and

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

(iii) Confidentiality. The employer shall eusure tbat employee medical records required by paragraph (h)(1) are:

(A) Kept confidcntial; and

(B) Not disclosed or rsportod without the employee's express written consent to any person witbin or outside tho workplaes except as required by this scction or as may be required by law.

(iv) The employcr shall maiutaiu the records required hy paragraph (h) for at least the duration of employmont plus 30 years in accordaces with 29 CFR 1910.1020.

(2) *Training Records.* (i) Training rccords shall inolude the following information:

(A) Thc dates of tho training sessions;

(B) The contents or a summary of tho training sessions;

(C) The names and qualifications of persons eonducting the tralning; and

(D) The names and joh titles of all persons attending the training sessions.

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

(3) *Availability.* (i) The employer shall ensure that all reoords required to be

maintained hy this section shall he made available upou request to the Assistant Secretary and the Director for examination and copying.

(ii) Emplcyee training rocords required hy this paragraph shall be provided upou request for examination and ccpying to employees, to employee reprossntatives, to the Director, aud te the Assistant Seoretary.

(iii) Employee medical records required by this paragraph sball be provided upon request for examinatien and copying to the suhject employee, to anyone having writteu consent cf thc suhject emplcyee, to the Director, and to the Assistant Seoretary iu accordance with 99 CFR 1910.1020.

(4) *Transfer of Reeords.* (i) Thc omployer shall oomply with the requiremente involving transfer of records set forth in 28 CFR 1910.1020(h).

(ii) If the emplcyer ceases to dc business and there is no sucoessor employer to receive and retain the rccords for the prescribed period, the employer shall nctify the Direotor, at least three months prior to their dispcsal and transmit them to the Director, if required hy the Direotor to do se, within that three mouth pericd.

(l) *Dates*—(1) *Effective Date.* The standard shall becomc cffcctive on March 6, 1992.

(2) The Exposure Contrcl Plan requirsd by paragraph (c) of this section shall bc compieted on or befcro May 5, 1992.

(3) Paragraph (g)(2) Information and Training and (h) Recordkceping shall takc offcot on or before Jnne 4, 1992.

(4) Paragraphs (d)(2) Engineering and Work Practice Controls, (d)(3) Personal Protective Equipmsnt, (d)(4) Housekeeping, (e) HIV and HBV Reeearch Laboraterics aud Production Faoilities, (f) Hopatitis B Vaccinatien and Post-Exposure Evaluation and Follow-up, and (g) (1) Lahels and Signs, shall take effoot July 6, 1992.

(5) *Sharps injury log.* (i) The employer shall establieh aud maintain a sharpe injury lcg for the recording of percutaneous injuries frcm ccntaminated sharps. The information in the sharps injury log shall bc rccordcd and maintained in such manner as tc prctect the cenfidentiality cf the injured emplcyee. The sharps injury lcg shall contain, at a minimum:

(A) The type and hrand of device involved in the incident,

(B) The department cr work area where the exposure incident cccurred, and

(C) An explanation of how the incident oecurred.

(ii) The requiremeut to establish and maintain a sharps injury log shall apply te any employer who is roquired to maintain a lcg of occupational injuries and illnesses undcr 29 CFR 1904.

(iii) The sharps injury log shall be maintsined for tho period required by 29 CFR 1904.6.

APPENDIX A TO SECTION 1910.1030—HEPATITIS B VACCINE DECLINATION (MANDATORY)

I undsrstand that dne to my occnpational exposure to blood cr othsr pctentially infectious materials I may bs at risk of acquiring hepatitis B virus (HBV) infeotion. I have bsen given the opportunity to be vaccinated with hepatitis B vaccine, at nc charge to myself. However, I dsoline hcpatitis B vaccination at this time. I underatand that by doelining thie vaccine, I continue to be at risk of acquiring hepatitis B, a serious disease. If in the future I continne to havc occnpational exposure to blood or otbsr potentially infectious materiale and I want to bs vaccinated with hepatitis B vaccine, I can receive the vaccinatien ssriee at no cbargc to me.

[56 FR 64175, Dec. 6, 1991, as amended at 57 FR 12717, Apr. 13, 1992; 57 FR 29206, July 1, 1992; 61 FR 5588, Feb. 13, 1996; 66 FR 5325, Jan. 18, 2081; 71 FR 16672, 16672, Apr. 3, 2006; 73 FR 75588, Dec. 12, 2008)

§ 1919.1043 Cotton dust.

(a) *Scopc and application.* (1) This section, in its entircty, applies to the ontrol cf cmployee exposure to cctton dust in all workplaces where employees cngage in yarn mauufacturing, engage in slashing and weaving operations, cr work in waste hcuses for textile operatione.

(2) This sectiou does not apply to the handling or processing of wovcn or knittcd materials; to maritime operations covsred by 29 CFR Parts 1915 and 1918; to harvesting or ginning of cottou; or to the ccnstruction industry.

(3) Only paragraphs (h) Medical surveillance, (k)(2) thrcugh (4) Recordkscping—Medical Records, and Appendices B, C and D cf this sectiou apply