

## **Section 35**

### ***Bloodborne Pathogens***

#### **35.1 Scope**

This section establishes the safety requirements, guidelines, and precautions for personnel who may come in to contact with human blood products and possible occupational exposure to bloodborne pathogens (BBP).

#### **35.2 General Requirements**

The Occupational Safety and Health Administration (OSHA) 1910.1030, *Bloodborne Pathogens* regulates occupational exposure to blood, body fluids, or other potentially infectious materials (OPIM).

#### **35.3 Responsibilities**

##### **35.3.1 Area Office Managers**

**35.3.1.1** Shall designate, in writing, the program coordinator (PC) for BBP.

##### **35.3.2 Program Coordinators and Local Safety Professionals**

**35.3.2.1** Shall be trained in BBP to fulfill the requirements of this section.

**35.3.2.2** Shall identify job classifications and tasks with risk of occupational exposure to blood, body fluids, or OPIM.

**35.3.2.3** Shall initially develop and annually review and update the Exposure Control Plan (ECP).

**35.3.2.4** Shall coordinate initial training for tasks with occupational exposure, annually thereafter, and when changes in tasks or procedures occur.

**35.3.2.5** Shall verify biohazard waste containers meet applicable requirements and coordinate the pick-up and disposal of all regulated waste.

**35.3.2.6** Shall regularly schedule reviews of existing engineering controls for adequacy and investigate new engineering controls as necessary.

**35.3.2.7** Shall submit all required medical documentation (per paragraph 35.4.3.1) for retention in the exposed employees' personnel file.

**35.3.2.8** Shall provide employees with potential or confirmed exposure to BBP guidance to obtain necessary vaccinations and exposure follow up.

- 35.3.2.9** Shall provide first-line supervisors with recommendations for selection and purchase of BBP kits, Personal Protective Equipment (PPE), and supplies for all workers who are occupationally exposed.

### **35.3.3 First-Line Supervisors**

- 35.3.3.1** Shall ensure all affected employees complete required training (paragraph 35.4).
- 35.3.3.2** Shall provide PPE to employees and provide training on the use of required PPE.
- 35.3.3.3** Shall ensure employees follow the ECP.
- 35.3.3.4** Shall immediately notify the PC when an employee has contact with blood, body fluids, or OPIM.
- 35.3.3.5** Shall restock BBP kits as needed.
- 35.3.3.6** Shall enter all BBP exposures into the Safety Management Information System (SMIS).
- 35.3.3.7** Shall review BBP exposure reports from their employees in SMIS.
- 35.3.3.8** Shall ensure clean and sanitary worksites per the ECP.

### **35.3.4 Employees**

- 35.3.4.1** Shall complete BBP training prior to participating in tasks which have or may have occupational exposure.
- 35.3.4.2** Shall wear PPE required by the ECP for occupational exposure tasks or procedures.
- 35.3.4.3** Shall immediately notify the first-line supervisor of contact with blood, body fluids, or OPIM.
- 35.3.4.4** Shall complete exposure incident documentation after contact with blood, body fluids, or OPIM (paragraph 35.7.6).
- 35.3.4.5** Shall enter all BBP exposures in SMIS.

## **35.4 Training Requirements**

### **35.4.1 Initial**

- 35.4.1.1 Employees with Occupational Exposure.** Initial training for employees with occupational exposure must include the following:
- OSHA 1910.1030 bloodborne pathogen standard,
  - bloodborne diseases and their transmissions (a general discussion),
  - ECP,

- engineering and work practice controls,
- PPE,
- Hepatitis B virus (HBV) and vaccination,
- Hepatitis C virus (HCV),
- response to emergencies involving blood,
- how to handle exposure incidents,
- proper handling and disposal methods of infectious waste,
- post-exposure evaluation and follow-up program, and
- biohazard labels and waste containers.

### **35.4.2 Refresher/Recertification**

Employees with occupational exposure must complete annual refresher training and when changes contribute to the employee's occupational exposure, such as administrative or work practice controls and/or modification of tasks or procedures.

### **35.4.3 Recordkeeping**

**35.4.3.1 Medical Records.** The PC or local safety professional shall submit any medical record documentation to the official Department of the Interior (Department) personnel repository and retain all incident exposure records for the duration of employment plus 30 years after separation. The PC or local safety professional shall also submit records of HBV vaccination status (including dates), declination forms, results of any examinations, a copy of the health care professional's written opinion, and a copy of information provided to the health care professionals.

**35.4.3.2 Training Records.** Reclamation training records shall be kept in the DOI official repository. Training records must include dates, contents of the training program or a summary, trainer's name and qualifications, and the names and job titles of all people attending.

**35.4.3.3 Sharps Injury Log.** The PC or local safety professional must maintain a sharps injury log for percutaneous injuries from contaminated sharps and record incidents in the log in such a manner as to protect the confidentiality of the injured employee. The log must contain the type and brand of device, the department or work area where the exposure incident occurred, and an explanation of how the incident occurred. First-line supervisors must report sharps injuries in the SMIS.

**35.4.3.4 Safety Management Information System Reporting.** First-line supervisors must report BBP exposures and sharps injuries in the SMIS. If the exposure is infectious, the first-line supervisor must report through the SMIS injury reporting process. If the exposure is unknown, then the first-line supervisor must report using the SMIS exposure module.

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## **35.5 Hazard Identification, Assessment, and Safety Measures**

### **35.5.1 Exposure Determination**

The PC shall complete an exposure determination, which includes lists of all job classifications and specific tasks and procedures with confirmed and possible occupational exposure. The PC must make an exposure determination without regard to PPE.

### **35.5.2 Exposure Control Plan**

The PC shall develop and implement an ECP for employees with confirmed and possible occupational exposure. The plan must be accessible to all affected employees. The ECP must include:

- exposure determination based on the tasks, procedures, and job classifications,
- schedule and methods of compliance (universal precautions, work practices, and/or engineering controls),
- procedures for cleanup of contaminated areas and materials,
- procedures for evaluating circumstances surrounding exposure incidents,
- HBV vaccination, post-exposure, and follow-up evaluations,
- communication of hazards to employees, and
- recordkeeping.

The PC shall review and update the plan at least annually to reflect changes in technology which reduce or eliminate exposure to BBP. Updates must include consideration and implementation of commercially available and safer medical devices designed to eliminate or minimize occupational exposure.

## **35.6 Personal Protective Equipment**

First-line supervisors shall provide PPE to employees and train them on the use of required PPE to eliminate or minimize the risk of infectious material entering employees' bodies. PPE must prohibit blood, body fluids, and OPIM from contacting non-intact skin, eyes, mouth, or other mucous membranes or respiratory system under normal conditions of use.

### **35.6.1 Gloves**

Employees shall wear hand protection (e.g., disposable (single use) gloves) whenever contact with blood, body fluids, or OPIM is possible.

### **35.6.2 Masks, Eye Protection, and Face Shields**

Employees shall use a combination of masks, eye protection, and face shields whenever splashes, spray, or droplets of infectious materials can occur.

### **35.6.3 Gowns, Aprons, and Other Protective Clothing**

Employees shall wear gowns, aprons, and other protective clothing when splashing of blood, body fluids, or OPIM fluids is possible.

#### **35.6.4 Resuscitation Equipment**

Employees shall use cardiopulmonary resuscitation mouthpieces, pocket masks, resuscitation bags, or other ventilation equipment to eliminate direct mouth-to-mouth contact.

#### **35.6.5 Contamination**

Employees shall not wear PPE if it has lost its effectiveness for protecting employees from BBP hazards. First-line supervisors must replace PPE at no cost to the employee. Employees shall remove all potentially contaminated PPE prior to leaving the work area or accident/incident site and place it in a biohazard waste container for disposal or decontamination.

### **35.7 Safe Practices**

#### **35.7.1 Universal Precautions**

All employees must use universal precautions when any contact with blood, body fluids, or OPIM is possible. All employees must treat human blood, body fluids, and OPIM as if they are infectious for HBV, HCV, human immuno-deficiency virus (HIV), and other BBPs. Employees must consider all body fluids infectious in situations where it is difficult or impossible to differentiate between types. Employees shall use the following methods to eliminate and reduce risk for transmission of BBP:

- wash hands frequently and use disposable garments,
- select gloves for the hazards of a specific job,
- avoid spray or splash of body fluids, and
- label and package contaminated wastes properly.

#### **35.7.2 Handling Contaminated Sharps**

Users shall immediately discard contaminated sharps in a closable, puncture-resistant, leakproof, and properly labeled container. Contaminated sharps containers must be easily accessible, upright, and near sharps use locations. Employees handling contaminated sharps must not press down, smash, step on, or otherwise compress any regulated waste containers.

#### **35.7.3 Cleanup of Contaminated Areas**

Employees shall use engineering controls and PPE when disinfecting contaminated areas. Clean up methods must prevent physical injury from direct handling of broken glass, needles, or other sharps. Employees must not bend, recap, or remove contaminated

needles and sharps. Employees are prohibited from shearing or breaking of contaminated needles or sharps. Employees must dispose of sharps and infectious waste in a puncture-resistant container for disposal. Only approved contractors may dispose of regulated waste in accordance with Federal and local regulations. Employees must use Environmental Protection Agency-registered disinfectants for HIV and HBV contaminated surfaces.

#### **35.7.4 Methods of Compliance**

Universal precautions and engineering controls aid in eliminating or minimizing BBP exposure.

- 35.7.4.1 Engineering Controls and Work Practices.** Engineering controls are the primary means of eliminating or minimizing employee exposure, isolating, or removing BBP hazards from the work environment.
- 35.7.4.2 Housekeeping.** In the ECP, the PC shall include a schedule and method for cleaning and decontamination based on the location within the facility, surfaces, waste to clean, and tasks or procedures performed in that location. First-line supervisors shall ensure clean and sanitary worksites per the ECP.
- 35.7.4.3 Specific Requirements for Contaminated Work Surfaces.** If an incident occurs, employees must block off access to the area until the decontamination is complete. Immediately, or as soon as feasible, employees must clean and decontaminate work surfaces when blood, body fluids, or OPIM is present. Employees must dispose of all contaminated cleaning materials and PPE in biohazard waste containers.
- 35.7.4.4 Laundry.** Employees shall remove and dispose of contaminated clothing as soon as possible. Employees shall clean contaminated fire-rated and arc-rated clothing following manufacturer's instructions. If these instructions are not available, consult the local safety professional for guidance.
- 35.7.4.5 Regulated Wastes/Medical Wastes.** Employees must separate regulated and medical wastes from other wastes at the point of origin and dispose of according to Federal, state, and local regulations. Examples of regulated wastes include used needles, disposable resuscitators, used bandages, and contaminated PPE.
- 35.7.4.6 Biohazard Waste Containers and Labels.** The PC or local safety professional shall verify biohazard waste containers and labels meet the specific requirements of OSHA 1910.1030(d)(4)(iii). Labels will be fluorescent orange or orange red with lettering and symbols in a contrasting color. Red bags or containers are acceptable

substitutes for labels. Warning labels shall be present on regulated waste containers. Labels shall meet the specific requirements of OSHA 1910.1030(g)(1)(i).

### **35.7.5 Exposure Incident Documentation**

Employees shall report all exposure incidents involving the presence of blood, body fluids, or OPIM to their first-line supervisor and local safety professional as soon as possible. The first-line supervisor must record the incident in the SMIS.

**35.7.5.1 Potential Exposure.** The local safety professional must make the HBV vaccination series available as soon as possible, but not later than 24 hours after an exposure incident, to all unvaccinated workers that assist in situations with blood, body fluids, or OPIM regardless of whether a specific exposure incident occurred.

**35.7.5.2 No Cost to the Employee.** The PC or local safety professional must make all medical evaluations and procedures including the HBV vaccine, vaccination series, prophylaxis, and post-exposure evaluations and follow-ups available at a reasonable time and place; performed by, or under the supervision of, a licensed physician or other licensed health care professional; and at no cost to the employee.

**35.7.5.3 Follow-up.** Following a potential exposure incident, the local safety professional shall coordinate a confidential medical evaluation and follow-up.

**35.7.5.3.1 Source Individual.** The local safety professional must obtain consent to test the source individual's blood as soon as feasible to determine HBV, HCV, and HIV infectivity. If the local safety professional is unable to obtain consent, Reclamation shall establish that legally required consent cannot be obtained.

**35.7.5.3.2 Results.** The local safety professional must inform the exposed employee about disclosure laws and regulations concerning the identity and infectious status of the source individual and provide the results of the source individual's testing to the exposed employee. If the employee consents to baseline blood collection, but does not consent to HIV testing, the local safety professional shall ensure the sample is preserved for at least 90 days. The employee has the right to change consent within the 90-day time frame of HIV testing.

### **35.7.6 HBV Vaccination and Post-Exposure Evaluation Follow-up**

The PC or local safety professional shall ensure the HBV vaccination series is available to employees with occupational exposure and to employees who have had an exposure incident. The PC or local safety professional will also ensure post-exposure evaluations and follow-ups are made available.

**35.7.6.1 HBV Vaccination.** Reclamation provides the vaccination at no cost to employees with occupational exposure within 10 working days of initial assignment. If the

employee initially declines the vaccination, they can later decide to accept the vaccination. Any employee who declines the vaccination must sign a declination form, which human resources will retain in the employee's medical file. OSHA 1910.1030, Appendix A, *Hepatitis B Vaccine Declination (Mandatory)* contains the declination form. Reclamation also provides all boosters at no cost to the employee.

### 35.7.6.2 Post-exposure Evaluation and Follow-up.

Following an exposure incident, the local safety professional shall immediately make a confidential medical evaluation available to the exposed employee and shall carry out the following process.

- Document the route of exposure and circumstances under which the exposure occurred.
- Identify and document the source individual, unless the employer can establish that identification is infeasible or prohibited by law.
- Test the source individual's blood as soon as feasible to determine HBV and HIV infectivity if the local safety professional is able to obtain consent. If unable to obtain consent, the local safety professional shall establish that legally required consent cannot be obtained. When the source individual's blood is available, it shall be tested, and the results documented.
- When the source individual already has a known infection with HBV or HIV, the local safety professional need not repeat the test.
- The local safety professional will make the results of the source individual's testing available to the exposed employee and shall inform the employee of applicable laws and regulations concerning disclosure of the identity and infectious status of the source.
- Reclamation shall offer counseling at no cost to the employee.

## 35.8 Definitions

<b>Contaminated</b>	The presence or the reasonably anticipated presence of blood or other potentially infectious materials on an item or surface.
<b>Engineering Controls</b>	Measures taken to isolate or remove the bloodborne pathogens hazard from the workplace (e.g., sharps disposal containers, self-sheathing needles, safer medical devices such as sharps with engineered sharps injury protections and needleless systems).
<b>Exposure Incident</b>	Specific eye, mouth, other mucous membrane, non-intact skin, or parenteral contact with blood or other potentially infectious materials during the performance of an employee's duties.
<b>Blood</b>	Human blood, human blood components, and products made from human blood.
<b>Bloodborne Pathogens (BBP)</b>	Pathogenic microorganisms present in human blood which cause disease in humans (e.g., HIV, Hepatitis B).



<b>Hepatitis</b>	A bloodborne viral disease that has an incubation period of two weeks to five months, depending on the type. Hepatitis results in inflammation of the liver in varying severity. Hepatitis is transmitted through fecal contamination or ingested material, skin penetration by infected objects (needles), injection of contaminated blood or blood by-products, and contamination of mucous membranes (eyes, mouth). There are three types of Hepatitis – A, B, and C. Hepatitis A (HAV) is excreted in the feces and is generally introduced to the body via the oral route. Hepatitis B (HBV) is contained in the blood and other body fluids. It is transmitted by exposure to blood or body fluids through the mucous membranes, non-intact skin, and directly into the blood stream (parenteral route). Hepatitis C (HCV) is also contained in blood but is mainly transmitted through a blood transfusion.
<b>Human Immuno-deficiency Virus (HIV)</b>	A virus that attacks cells which help the body fight infection, making a person more vulnerable to other infections and diseases.
<b>Medical/Infectious Wastes</b>	All waste emanating from human or animal tissues, blood or blood products, or fluids. This includes used first aid bandages, syringes, needles, sharps, material used in spill cleanup, and contaminated PPE or clothing.
<b>Occupational Exposure</b>	Any reasonably anticipated skin, eye, mucous membrane, or parenteral contact with blood or other potentially infectious materials which may result from the performance of an employee's duties.
<b>Other Potentially Infectious Materials (OPIM)</b>	Includes synovial fluid, cerebrospinal fluid, pleural fluid, pericardial fluid, peritoneal fluid, amniotic fluid, semen, vaginal secretions, saliva in dental procedures, any body fluids visibly contaminated with blood such as saliva or vomit, and all body fluids in situations where it is difficult or impossible to differentiate between body fluids such as in an emergency response.
<b>Parenteral Contact</b>	Piercing of mucous membranes or the skin barrier through such events as needlesticks, human bites, cuts, or abrasions.
<b>Pathogen</b>	A bacterium, virus, or other microorganism that can cause disease.
<b>Percutaneous</b>	Made, done, or effected through the skin.
<b>Personal Protective Equipment (PPE)</b>	Specialized clothing or equipment worn by an employee for protection against a hazard. General work clothes (e.g., uniforms, pants, shirts, blouses) not intended to function as protection against a hazard are not PPE.
<b>Regulated Waste</b>	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.
<b>Contaminated Sharps</b>	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.
<b>Sharps Injury</b>	Any injury caused by a sharp, including, but not limited to, cuts, abrasions, or needlesticks.
<b>Source Individual</b>	Any individual, living or dead, whose blood or other potentially infectious materials may be a source of occupational exposure to the employee.
<b>Universal Precautions</b>	Practice of treating all human blood and certain body fluids as if known to be infectious for HIV, HBV, HCV, and other bloodborne pathogens.
<b>Work Practice Controls</b>	A reduction in the likelihood of exposure by altering the way a task is performed (e.g., wearing gloves and/or other PPE).

### 35.9 References

Occupational Safety and Health Administration (OSHA). 29 CFR, 1910.1030, Bloodborne Pathogens. <https://www.osha.gov/laws-regs/regulations/standardnumber/1910/1910.1030>

Occupational Safety and Health Administration (OSHA). <https://www.osha.gov/laws-regs/standardinterpretations/1999-03-25>

Occupational Safety and Health Administration (OSHA). 1910 Subpart Z toxic and Hazardous Substances, 1910.1030 App A *Hepatitis B Vaccine Declination (Mandatory)*. <https://www.osha.gov/laws-regs/regulations/standardnumber/1910/1910.1030AppA>

Occupational Safety and Health Administration (OSHA). Frequently Asked Questions: Bloodborne Pathogens. <https://www.osha.gov/html/faq-bbp.html>