ASU Bloodborne Pathogens Exposure Control Plan

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I. Purpose

Arizona State University is committed to reducing the risks to individuals who may be exposed to bloodborne pathogens. ASU developed the **Bloodborne Pathogens Exposure Control Plan** to meet the Occupational Safety and Health Administration Bloodborne Pathogens Standard requirements — codified in 29 CFR § 1910.1030 — and to address ASU's concern for personal safety.

The OSHA Bloodborne Pathogens Standard requires that specific safety issues be addressed in the **ASU Bloodborne Pathogens Exposure Control Plan**, including the following topics:

- Communication of hazards to employees and students
- Employee and student exposure situations
- Methods of compliance — e.g., engineering controls, work practices and personal protective equipment used to minimize exposures
- Procedures for hepatitis B vaccinations, post-exposure vaccinations and follow-up
- Recordkeeping practices

The specific methods instituted to implement each of these topics are described in the designated section of this document. The **ASU Bloodborne Pathogens Exposure Control Plan** is reviewed annually by Environmental Health and Safety and Employee Health. It was last approved in December 2024.

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II. Bloodborne pathogens

The **ASU Bloodborne Pathogens Exposure Control Plan** was developed to protect against potential exposure to bloodborne pathogens. According to OSHA, bloodborne pathogens are microorganisms in human blood that can cause human disease. These pathogens include, but are not limited to, **Hepatitis B Virus** — HBV — and **Human Immunodeficiency Virus** — HIV. Below is a brief overview of each:

- **Hepatitis B** viral infection is caused by HBV and was formerly known as "serum hepatitis." Of all bloodborne diseases, HBV poses the greatest risk for infection among health care providers and laboratory researchers because it can be easily transmitted through needlesticks and other types of percutaneous exposures. The virus causes inflammation of the liver and can lead to serious and occasionally fatal diseases. **After exposure**, an unvaccinated person should be offered treatment with HB immune globulin and HBV vaccination. An effective vaccine for HBV is available and should be provided to personnel who may be exposed before starting work.

- **Acquired Immunodeficiency Syndrome** — AIDS — is a disease caused by HIV, a retrovirus that suppresses the immune system, leaving the infected individual vulnerable to infections and cancers. These infections become increasingly severe and eventually lead to death. No cure for HIV currently exists. Protease inhibitors are available, although their efficacy is debated within the medical community. Protease-inhibiting drugs are now part of the treatment process and seem to hold some promise, according to some medical experts.

In addition to HIV and HBV, other viruses, bacteria and parasites may be present in blood, human body fluids or tissues. **A few of these agents include:**

Disease	Causative agent
Babesiosis	*Babesia microti*
Brucellosis	*Brucella* species
Creutzfeldt-Jakob Disease or CJD	Prion
Leptospirosis	*Leptospira interrogans*
Malaria	*Plasmodium* species
Relapsing Fever	*Borrelia duttoni, Borrelia hermsii, Borrelia parkerii, Borrelia recurrentis*
SIV Infection	Simian Immunodeficiency Virus
Syphilis	*Treponema pallidum*
T-cell Leukemia	Human T-lymphotropic virus Type 1
Viral Encephalitis	Arboviruses
Viral Hemorrhagic Fevers	Ebola, Marburg, Lassa fever viruses
Viral Meningitis	Arenaviruses — e.g., Lymphocytic Choriomeningitis Virus

Note: The bacterial and parasitic diseases listed above are treatable with antibiotics or other therapy. No specific, effective treatments for the viral diseases are listed in the above table.

Bloodborne pathogens may also include the following sources of **potentially infectious materials of human origin:**

- Amniotic fluid
- Body fluids visibly contaminated with blood or unknown body fluids
- Cerebrospinal fluid — CSF
- Pericardial fluids
- Peritoneal fluids
- Pleural fluid
- Saliva contaminated with blood
- Semen
- Synovial fluid
- Vaginal secretions

Certain infectious materials handled by university personnel are regulated under the OSHA Bloodborne Pathogens Standard. **These materials should be handled in the same manner as human blood or body fluids:**

- Animals that have been experimentally infected with HIV or HBV
- Blood and tissues from experimental animals infected with HIV or HBV
- Cell lines or tissue cultures containing HIV or HBV
- Culture media or other solutions that contain HIV or HBV
- Human T-lymphocyte cultures
- Primary human cell and tissue cultures

Bloodborne pathogens may be transmitted if human blood or **Other Potentially Infectious Material** — **OPIM** — comes into contact with your blood or body fluids. Exposures often occur through needlesticks, direct contact with materials on non-intact skin or splashes to the eyes, mouth and nose.

The OSHA Bloodborne Pathogens Standard **covers individuals with a reasonable chance** of encountering human blood, body fluids or OPIM while performing their regular job duties.

III. Overview

The **ASU Bloodborne Pathogens Exposure Control Plan** is designed to allow for timely and accurate identification, control and monitoring of bloodborne hazards in the laboratory environment, as well as evaluation — including exposure. This document forms the basis for the effective management of biological hazards in general, specifically pathogens known to be carried in blood or OPIM as defined by the OSHA Bloodborne Pathogens Standard.

The ASU President is the chief administrative officer responsible for implementing the **ASU Bloodborne Pathogens Exposure Control Plan** at all facilities under campus control. Environmental Health and Safety monitors compliance with the **ASU Bloodborne Pathogens Exposure Control Plan**.

The Biological Safety Officer — **BSO** — works closely with campus administrators to develop any additional policies and practices needed to support the effective implementation of the **ASU Bloodborne Pathogens Exposure Control Plan**, as well as review, revise or update the plan as needed. Hazards will be identified in a coordinated effort with campus administration — e.g., deans, directors, chairs and supervisors. Individuals will be trained and vaccinated when needed. Records will be kept to qualify the individuals for periodic retraining.

Individual departments and units are responsible for ensuring that the **ASU Bloodborne Pathogens Exposure Control Plan** provisions and the OSHA Bloodborne Pathogens Standard mandates are carried out. Departments and units that have been identified as potentially having personnel with potential exposure to blood or OPIM include, but are not limited to:

- ASU Family
- ASU Police Department
- Biodesign Institute
- College of Health Solutions
- College of Integrative Sciences and Arts
- College of Liberal Arts and Sciences
- College of Technology and Innovation
- Department of Animal Care and Technology
- Edson College of Nursing and Health Innovation
- Educational Outreach and Student Services
- Environmental Health and Safety
- Facilities Management
- Health Services

- Ira A. Fulton Schools of Engineering
- Knowledge Enterprise
- Mail Services
- Mary Lou Fulton Teachers College
- New College of Interdisciplinary Arts and Sciences
- Residential Life
- School of Earth and Space Exploration
- School of Human Evolution and Social Change
- School of Mathematical and Natural Sciences
- School of Molecular Sciences
- Sun Devil Athletics

Some of the job tasks or procedures performed by individuals that present potential exposures to bloodborne pathogens include, but are not limited to, the following:

- Handling human blood, components or products
- Handling human-derived materials that may be contaminated with blood
- Handling unfixed human organs or tissues
- Culturing primary human cells or cultures known to contain HIV or HBV
- Handling OPIM — e.g., semen, vaginal secretions, cerebrospinal fluid, synovial fluid, pleural fluid, pericardial fluid, peritoneal fluid, amniotic fluid, saliva contaminated with blood, any bodily fluid visibly contaminated with blood, unfixed human tissue or organs, animals and tissues of animals known to be infected with HIV or HBV and all other body fluids in situations where it is difficult or impossible to differentiate between body fluids.
- Cleaning up spills of human blood or human-derived materials that may be contaminated with blood
- Perform first aid or emergency response as part of their job duties
- Working with or handling sharps contaminated with human blood, components or products

IV. Universal Precautions

Universal Precautions assume that all blood, body fluids — e.g., semen, vaginal secretions, cerebrospinal fluid, synovial fluid, pleural fluid, pericardial fluid, peritoneal fluid, amniotic fluid and saliva in dental procedures, tissues and OPIM — are infectious for HIV or HBV and other bloodborne diseases. Because no test method can offer complete assurance for the absence of all bloodborne pathogens, **Universal Precautions must always be observed when handling blood and other potentially infectious materials collected from any source.**

All university personnel must observe Universal Precautions to prevent contact with blood and OPIM. **When differentiation between body fluid types is difficult or impossible, all body fluids will be considered potentially infectious.**

The only exception to using Universal Precautions is in rare instances, such as unexpected medical emergencies, where employees may be unable to put on appropriate **personal protective equipment** or **PPE** — see Section XI. In those situations where the provider of health care or public safety services must afford judgment, the employees must not ignore the underlying concept of Universal Precautions, nor should they decline to use PPE simply because it is impractical. Only under unexpected, extraordinary circumstances will employees be allowed not to use PPE.

An example would be if an employee feels that such equipment would prevent the proper delivery of health care or public safety services, or create a greater hazard to their safety if they used such equipment. The exemption provided in the standard does not apply to the general concept of Universal Precautions but only to the use of PPE under rare and relatively limited circumstances.

V. Responsibilities

A. ASU Environmental Health and Safety

The responsibilities of **EHS** include, but are not limited to, the following:

- Designate the Biological Safety Officer as the individual to oversee the **ASU Bloodborne Pathogens Exposure Control Plan**.
- Develop, implement and evaluate the **ASU Bloodborne Pathogens Exposure Control Plan** for the university.
- Assist departments with hazard assessments to determine jobs or tasks where exposure to blood or OPIM is possible.
- Promote practices, procedures and methods that conform to Universal Precautions.
- Ensure employees and students with potential exposure to bloodborne pathogens observe Universal Precautions.
- In conjunction with the affected department, determine applicable engineering controls, safe work practices, housekeeping methods and personal protective equipment to prevent blood and OPIM exposure to campus community members.
- Provide guidance and technical assistance to laboratories engaged in HIV or HBV research.
- Assist departments in identifying employees and students who have potential exposure to bloodborne pathogens.
- Provide direction on approved medical facilities that provide confidential post-exposure evaluation and follow-up.
- Create training opportunities as deemed necessary and appropriate.
- Maintain training records relative to the **ASU Bloodborne Pathogens Exposure Control Plan**.
- Provide biohazard labels to the requesting department.
- Coordinate the proper management and disposal of regulated waste. Each department must procure disposal bags and containers.
- Assist departments in communicating the **ASU Bloodborne Pathogens Exposure Control Plan** to third-party vendors that perform tasks on campus that potentially involve exposure control issues.
- Assist departments with Bloodborne Pathogens and exposure control issues upon request.

- Conduct periodic inspections of ASU facilities to ensure compliance with the **ASU Bloodborne Pathogens Exposure Control Plan**.
- Serve as the university liaison to regulatory authorities.
- Provide a means for suggestions, complaints and concerns regarding **the ASU Bloodborne Pathogens Exposure Control Plan**.
- Review and update the **ASU Bloodborne Pathogens Exposure Control Plan** at least annually or as changes occur.

B. ASU Employee Health

The responsibilities of **ASU Employee Health** include, but are not limited to, the following:

- Assist in developing and implementing the **ASU Bloodborne Pathogens Exposure Control Plan**.
- Assist in identifying and documenting personnel with possible exposure to bloodborne pathogens and the associated tasks and responsibilities of those positions, including providing this information to EHS.
- Make available the hepatitis B vaccination to personnel identified through exposure determination to have potential exposure to bloodborne pathogens.
- Make available a hepatitis B antibody titer analysis to employees identified through exposure determination.
- Perform confidential medical evaluation and follow up immediately when available to an exposed employee following an exposure incident.
- Coordinate with EHS in the development of bloodborne pathogens training materials.
- Maintain confidential medical records for exposure incidents per OSHA mandates.
- Maintain all medical records for the duration of employment plus thirty years.
- Maintain declination statements, including vaccination declinations.
- Comply with all applicable requirements established in the OSHA Bloodborne Pathogens Standard and the **ASU Bloodborne Pathogens Exposure Control Plan**.

C. Human Resources

The responsibilities of **Human Resources** include, but are not limited to, the following:

- Assist in developing and implementing the **ASU Bloodborne Pathogens Exposure Control Plan**.

- Help identify and document personnel with possible exposure to bloodborne pathogens and the associated tasks and responsibilities of those positions, and provide this information to ASU Employee Health.

- Ensure job descriptions include bloodborne pathogens requirements if the position involves activities covered by the OSHA Bloodborne Pathogens Standard.

- Comply with all applicable requirements established in the OSHA Bloodborne Pathogens Standard and the **ASU Bloodborne Pathogens Exposure Control Plan**.

D. Supervisors

Supervisors, including Principal Investigators, are key in successfully developing, implementing and monitoring the **ASU Bloodborne Pathogens Exposure Control Plan**. Supervisors support and respect each employee's right to a safe working environment. The responsibilities of each supervisor include, but are not limited to, the following:

- Ensure all personnel complete Bloodborne Pathogens training and the hepatitis B consent/declination form within 10 working days of hire for personnel covered by the Bloodborne Pathogens Program.

- Provide all affected personnel access to the **ASU Bloodborne Pathogens Exposure Control Plan**.

- Identify and document personnel with potential exposure to bloodborne pathogens and the associated tasks and responsibilities of those positions, and provide this information to EHS.

- Ensure employees and students understand and execute Universal Precautions when exposed to bloodborne pathogens.

- Promote practices, procedures and methods that conform to Universal Precautions.

- Design and implement engineering controls and institute work-practice control procedures to eliminate or minimize potential exposure to blood and OPIM.

- Provide appropriate PPE to employees and students with potential exposure to bloodborne pathogens.

- Maintain a clean and sanitary workplace environment.

- Develop and implement cleaning schedules appropriate for the activities and facilities involved.

- Comply with additional criteria established for HIV and HBV laboratories.

- Make confidential medical evaluation and follow up immediately available to an exposed individual following an exposure incident.

- Report exposure incidents to the BSO and EHS.

- Report needlestick incidents immediately to the BSO and EHS. ASU Employee Health
- maintains the needlestick log for ASU.

- Coordinate and ensure all employees complete the annual training required by the **ASU Bloodborne Pathogens Exposure Control Plan**.

- Contact EHS for instructions on accessing the online Biosafety and Bloodborne Pathogens training modules.

- Confirm that employees and students receive training and retraining as required. Records of online training are maintained via ASU's training platforms.

- Affix appropriate labels to containers of regulated waste, refrigerators, freezers and other equipment containing blood or OPIM, as well as other containers of blood or potentially infectious materials.

- Post the universal biohazard symbol and appropriate Biological Safety Level at the entrance of HIV and HBV research laboratories. Contact the BSO to determine the appropriate Biosafety Level.

- Ensure waste is labeled and disposed of properly.

- Identify the use of blood, products made from human blood, plasma, products made from plasma or OPIM when applying for a new protocol through the Institutional Biosafety Committee — IBC.

- Provide all supplies, PPE and vaccinations necessary for compliance with the **ASU Bloodborne Pathogens Exposure Control Plan** at no cost to the employee.

- Comply with all applicable requirements established in the OSHA Bloodborne Pathogens Standard and conduct periodic surveillance of activities within their respective areas to ensure compliance with the **ASU Bloodborne Pathogens Exposure Control Plan**.

E. Employees and students

All employees and students have a fundamental right to a workplace free of recognized hazards that may cause injury or illness. Concerning bloodborne pathogens, individuals have the right to information and training for controlling exposures to bloodborne pathogens, the availability of vaccination for hepatitis B and post-exposure consultation and medical care.
Responsibilities of employees and students include, but are not limited to, the following:

- Read, understand and comply with the **ASU Bloodborne Pathogens Exposure Control Plan** requirements.

- Notify a supervisor and EHS if job tasks and responsibilities present occupational exposure concerns that have not been previously identified.
- Before work begins, alert others in the work area of activities that may expose themselves or others to bloodborne pathogens or OPIM.
- Follow Universal Precautions when handling blood or OPIM.
- Follow established work practice controls to eliminate or minimize occupational exposure.
- Be aware of engineering controls in the workplace and the proper use of those controls.
- Be aware of the proper use, limitations and location of PPE.
- Use appropriate PPE to eliminate or minimize exposure.
- Be aware of and observe established housekeeping procedures — e.g., use mechanical devices to clean up broken glass and not bare hands.
- Maintain the work area in a clean and sanitary manner.
- Understand the additional requirements and protection for personnel working with HIV, HBV or OPIM and follow established procedures.
- Complete and submit the hepatitis B vaccination consent/declination form at the time of appointment.
- Immediately report all exposure incidents to your supervisor and EHS.
- Report all suspected exposure incidents.
- Complete the initial and annual biosafety and bloodborne pathogens training.
- Ensure that labels are appropriately affixed to containers of regulated waste, refrigerators, freezers and other equipment containing blood or OPIM, as well as other containers of blood or potentially infectious materials.
- Notify the supervisor to report labeling problems.
- Ensure waste is labeled with the words “Biohazardous Waste” and the universal biohazard symbol. Dispose of waste properly.
- Comply with all applicable requirements established in the OSHA bloodborne pathogens standard and **the ASU Bloodborne Pathogens Exposure Control Plan**.

VI. Employee's rights

Arizona State University employees have the right to an occupational setting free of recognized hazards that may cause injury or illness. Employees have additional rights specific to the **ASU Bloodborne Pathogens Exposure Control Plan**, including:

- The right to information and training for controlling exposures to bloodborne pathogens — section IX
- Hepatitis B vaccination — section IX
- Post-exposure medical care and consultation — section XVII

The **ASU Bloodborne Pathogens Exposure Control Plan** helps grant these rights to **Arizona State University** employees.

VII. Exposure determination

ASU has performed an exposure determination to identify employees, students and visitors who are **most likely at risk of exposure to bloodborne pathogens**. This determination was made without regard to the use of PPE and regardless of the frequency of exposure.

Job classifications in which **all university employees in the specific job classification** have occupational exposure under 29 CFR § 1910.1030 include the following:

- Animal Biosafety Officer
- Athletic Trainer
- Attending Veterinarian
- Biosafety Officer
- Boat Operator
- Chief Medical Technologist
- Clinical Laboratory Nurse
- Clinical Laboratory Technician
- Community Health Nurse
- Department of Animal Care Staff
- Hazardous Materials Handling Staff
- EMS Program Coordinator
- Environmental Compliance Specialist
- Environmental Compliance Technician
- Hazardous Waste Specialist
- Hazardous Waste Supervisor
- Licensed Practical Nurse
- Lifeguard
- Medical Assistant
- Medical Laboratory Technician
- Medical Technologist
- Nursing Assistant
- Nurse Manager
- Nurse Practitioner
- Phlebotomist
- Physician
- Plumber
- Police Aide
- Police Commander
- Police Corporal
- Police Evidence and Property Technician
- Police Lieutenant
- Police Officer
- Police Sergeant
- Radiology Technologist
- Refuse Management Supervisor
- Registered Nurse
- Residence Hall Manager
- Sanitation Equipment Operator
- Security Officer
- Sonographer
- Sustainable Resources Supervisor
- Swimming Pool Attendant
- Team Physician
- Utility Piping Specialist
- Veterinarian
- Vivarium Maintenance Specialist
- Vivarium Staff
- Wellness Care Section Chief

Job classifications in which **some university employees** have occupational exposure under 29 CFR § 1910.1030 include the following:

- Animal Care Manager
- Animal Technician
- Animal Technologist
- Asbestos and Environmental Safety Spec
- Biomed Computation Data Analyst
- Cheer Coach
- Chemical Applicator
- Chemical Hygiene Officer
- Chemical Safety Specialist
- Child Development Intern
- Child Development Manager
- Child Development Professional
- Custodial Services
- Education Outreach Specialist
- EHS Staff
- Environmental Compliance Technician
- Executive Director
- Executive Director, Office of Risk Management
- Facilities Safety Supervisor
- Field Operations Supervisor
- Fire Inspector
- Fire Technician
- Health Educator
- Health Physicist
- Health Sanitarian
- Industrial Hygienist
- Laboratory Coordinator
- Laboratory Director
- Laboratory Manager
- Laboratory Safety Inspector
- Laboratory Supervisor
- Health Sanitarian
- Industrial Hygienist
- Laboratory Coordinator
- Laboratory Director
- Laboratory Operations Coordinator
- Laser Safety Officer
- Manager Biomass Operations
- Pharmacist
- Pharmacy Assistant
- Pharmacy Technician
- Police Chief
- PREP Scholar
- Principle Investigator
- Radiation Control Specialist
- Radiation Control Technician
- Radiation Safety Officer
- Radiology Technologist
- Research Analyst
- Research Laboratory Coordinator
- Research Laboratory Manager
- Research Assistant
- Research Project Manager
- Research Scientist
- Research Specialist
- Research Technician
- Safety Partner
- Safety Specialist
- Safety Technician
- Security Officer
- Security Officer Supervisor
- Senior Research Analyst
- University Fire Marshall
- Veterinary Technician
- Water Safety Instructor
- Water Treatment Maintenance Specialist

Unpaid students may be at risk of exposure to bloodborne pathogens or OPIM during their academic program or other university-sponsored activities. ASU is not required to cover the cost of unpaid students getting a hepatitis B vaccine. However, the department is encouraged to adopt a policy that compels affected students to obtain the vaccine privately and show evidence of this to the department before incurring the risk of exposure.

Employees with questions about their job classification concerning the OSHA Bloodborne Pathogens Standard can contact the ASU Biosafety Team or their Human Resources representative.

VIII. Regulatory matrix

The bloodborne pathogens compliance program responsibility matrix summarizes key provisions of the plan and corresponds those responsibilities with the affected department or unit.

Note: The matrix should only be used as a quick reference.

Responsibility	Supervisors	EHS	Employee Health	Human Resources	Employee or student
Bloodborne Pathogens Exposure Control Plan	Provide all affected personnel with access to the Bloodborne Pathogens Exposure Control Plan.	Designate the Biological Safety Officer as the individual to oversee the Bloodborne Pathogens Exposure Control Plan. Develop, implement and evaluate the Bloodborne Pathogens Exposure Control Plan.	Assist in the development and implementation of the Bloodborne Pathogens Exposure Control Plan.	Assist in the development and implementation of the Bloodborne Pathogens Exposure Control Plan.	Read, understand and comply with the Bloodborne Pathogens Exposure Control Plan requirements.
Exposure determination	Identify and document personnel with potential exposure to bloodborne pathogens and the associated tasks and responsibilities of those positions and provide this information to the BSO and Employee Health.	Assist departments with hazard assessments to determine jobs or tasks where exposure to bloodborne pathogens is possible.	Assist in identifying and documenting personnel with possible exposure to bloodborne pathogens and the associated tasks and responsibilities of those positions.	Assist in identifying and documenting personnel with possible exposure to bloodborne pathogens and the associated tasks and responsibilities of those positions and provide this information to Employee Health.	Notify the supervisor and Employee Health if job tasks and responsibilities present occupational exposure concerns that have not been identified. Before work begins, alert others in the work area of activities that may expose themselves or others to bloodborne pathogens or OPIM.
Universal precautions	Ensure that Universal Precautions are understood and executed by employees and students with possible exposure to bloodborne pathogens. Promote practices, procedures and methods that conform to Universal Precautions.	Promote practices, procedures and methods that conform to Universal Precautions. Ensure employees and students observe Universal Precautions with potential exposure to bloodborne pathogens.			Observe Universal Precautions when handling blood or OPIM.

Responsibility	Supervisors	EHS	Employee Health	Human Resources	Employee or student
Engineering and work practice controls	Design and Implement engineering controls and institute work practice control procedures that will eliminate or minimize potential exposure to blood and OPIM	Provide guidance and technical assistance to departments in designing and selecting appropriate engineering and work practice controls.			Follow established work practice controls to eliminate or minimize occupational exposure. Be aware of engineering controls in the workplace and the proper use of those controls.
Personal protective equipment	Provide appropriate personal protective equipment to personnel with potential exposure to Bloodborne pathogens.	Provide guidance and technical assistance to departments in selecting the most appropriate types and quantities of personal protective equipment.			Be aware of the proper use, limitations and location of available personal protective equipment. Use appropriate personal protective equipment to eliminate or minimize occupational exposure.
Housekeeping	Maintain a clean and sanitary workplace environment. Develop and implement cleaning schedules as appropriate for the activities and facilities involved.	Provide guidance and technical assistance to departments in developing and implementing appropriate housekeeping methods.			Be aware of and observe established housekeeping procedures — e.g., use mechanical devices to clean up broken glass, not bare hands. Maintain a clean and sanitary work area.
HIV and HBV laboratories	Comply with additional criteria established for HIV and HBV laboratories.	Provide guidance and technical assistance to laboratories engaged in HIV or HBV research.			Understand the requirements and protection for personnel working with HIV and HBV and follow established procedures.

Responsibility	Supervisors	EHS	Employee Health	Human Resources	Employee or student
Hepatitis B vaccination and medical testing	Make available the hepatitis B vaccination to employees and students identified through exposure determination to have potential exposure to bloodborne pathogens.	Assist departments in identifying employees and students who have potential exposure to bloodborne pathogens.	Make available the hepatitis B vaccination to employees and students identified through exposure determination to have potential exposure to bloodborne pathogens.		Complete and submit the hepatitis B vaccination form, regardless of whether you accept the vaccine and any additional vaccination forms ASU requests.
Post-exposure evaluation and follow-up	Make available post-exposure evaluation and follow up with those exposed or potentially exposed to bloodborne pathogens. Report all exposure incidents and needlesticks to the BSO and Employee Health. Participate in all follow-up investigations.	Perform follow-up investigations for all incidents and needlesticks with the supervisor and Employee Health.	Make available the hepatitis B vaccination to personnel identified through exposure determination to have potential exposure to bloodborne pathogens. Perform post-exposure medical evaluation and treatment. Maintain ASU needlestick log. Provide direction on approved medical facilities that provide confidential post-exposure evaluation and follow-up.		Immediately — or as soon as feasible — report all exposure or suspected exposure incidents to your supervisor. Participate in all follow-up investigations.
Informing and training	Coordinate annual training required by the Bloodborne Pathogens Exposure Control Plan. Contact EHS for instructions on how to access the online training modules. Ensure all employees complete training within 10 working days of job duties assignment covered under the Bloodborne Pathogens Exposure Control Plan.	Create training opportunities as deemed necessary and appropriate for each affected department.	Coordinate with EHS in the development of bloodborne pathogens training materials.		Attend initial and annual refresher bloodborne pathogens training.
Training records		Compile and retain all training records — for at least three years — relative to the Bloodborne Pathogens Exposure Control Plan.			

Responsibility	Supervisors	EHS	Employee Health	Human Resources	Employee or student
Medical records			Maintain confidential medical records for exposure incidents. Maintain medical records for the duration of employment plus thirty years. Maintain hepatitis B vaccine consent/declination statements.		
Labels and signs	Affix appropriate labels to containers of regulated waste, refrigerators, freezers and equipment containing blood or OPIM, as well as other containers of blood or OPIM. Post the universal biohazard symbol and appropriate biological safety level at the entrance of HIV and HBV research laboratories.	Provide biohazard labels and signage to the requesting department or responsible party.			Ensure labels are appropriately affixed. Notify the supervisor to report labeling problems.
Waste	Ensure waste is labeled and disposed of properly. Disposal bags, containers, etc., must be procured by each department.	Coordinate the proper management and disposal of regulated waste			Ensure waste is labeled and disposed of properly.

Responsibility	Supervisors	EHS	Employee Health	Human Resources	Employee or student
Research compliance	Identify the use of blood, products made from human blood, plasma, products made from plasma or OPIM when applying for a new protocol through the IBC. Provide, at no cost, all supplies, PPE and vaccinations that are necessary for compliance with the Bloodborne Pathogens Exposure Control Plan. Conduct periodic surveillance of activities within their respective areas to ensure compliance with the Bloodborne Pathogens Exposure Control Plan. Comply with all applicable requirements established in the OSHA Bloodborne Pathogens Standard and the Bloodborne Pathogens Exposure Control Plan.	Assist departments in communicating the Bloodborne Pathogens Exposure Control Plan to third-party vendors who perform tasks on campus that potentially implicate exposure control issues. Assist departments with Bloodborne Pathogens and exposure control issues upon request. Conduct periodic inspections to ensure compliance with the Bloodborne Pathogens Exposure Control Plan. Serve as the university liaison to regulatory authorities. Provide a means for suggestions and complaints regarding the ASU Bloodborne Pathogens Exposure Control Plan.	Comply with all applicable requirements established in the OSHA Bloodborne Pathogens Standard and the Bloodborne Pathogens Exposure Control Plan.	Ensure job descriptions include bloodborne pathogens requirements if the position involves activities covered by the OSHA Bloodborne Pathogens Standard.	Comply with all applicable requirements established in the OSHA Bloodborne Pathogens Standard and the Bloodborne Pathogens Exposure Control Plan.

IX. Training

All university employees with potential exposure to blood or OPIM must participate in a **bloodborne pathogens information and training program**, which is provided at no cost to employees and conducted during their regular working hours.

Training will be within 10 days of the initial assignment. Annual training will be provided within one year of the previous training. Additional training will be provided when changes or modifications of tasks or procedures occur or when new tasks or procedures affect an individual's potential for exposure. The additional training will be limited in scope by only addressing the new exposure created.

A. General Bloodborne Pathogens Training

General Bloodborne Pathogens Training will be provided to all individuals whose job classifications have been identified as having a reasonably anticipated occupational exposure to Bloodborne pathogens or OPIM.

Training will include:

- An overview of **ASU Bloodborne Pathogens Exposure Control Plan**
- A general explanation of the epidemiology and symptoms of bloodborne diseases and a review of modes of transmission
- An accessible copy of the current OSHA Bloodborne Pathogens Standard
- An accessible copy of the **ASU Bloodborne Pathogens Exposure Control Plan**
- An explanation of the appropriate methods for recognizing tasks and other activities involving exposure to blood and OPIM
- Training in methods to prevent or reduce exposure, including appropriate engineering controls, work practices, proper use of signs and proper use and limitations of PPE
- Annual refresher training within one year of previous training
- Information on the hepatitis B vaccine is provided at no cost to the employee, including details on its efficacy, safety, method of administration and the benefits of being vaccinated
- Information on proper procedures following an exposure incident, including reporting methods, medical follow-up that will be made available and the post-exposure evaluation and follow-up
- Information on proper procedures following an environmental exposure or spill, including contamination of PPE

B. Task-specific training

Supervisors must provide employees with training and information to ensure they are apprised of the specific hazards in their area of work.

The training requirements include:

- At a minimum, employees shall be informed of the applicable details of the **ASU Bloodborne Pathogens Exposure Control Plan** and the specific hazards of the tasks and procedures that may expose them to bloodborne pathogens and OPIM in their work setting.

- Employers must provide additional training when changes affect the employee's occupational exposure, such as modifying tasks or procedures or instituting new tasks or procedures. The additional training may be limited to addressing the new exposures created.

- Training will be documented, and the supervisor will maintain the records.

C. Training for HIV and HBV research laboratories

Employees in HIV or HBV research laboratories will receive specialized initial training in addition to the established bloodborne pathogens training program. Additional elements of the expanded HIV or HBV training program will include provisions for the supervisor to do the following:

- Verify that employees demonstrate proficiency in standard microbiological practices and techniques and the practices and operations specific to the facility before being allowed to work with HIV or HBV.

- Verify that employees have prior experience in handling human pathogens or tissue cultures before working with HIV or HBV.

- Provide a training program to employees without experience 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 supervisor will ensure that employees participate in work activities involving infectious agents only after demonstrating proficiency.

The supervisor will maintain documentation of the training program's components.

D. Training Records

EHS provides training for bloodborne pathogens and serves as the custodian of all standard training records taken. These training records will be maintained for at least three years from the date the training occurred. All training records required by this standard will be provided upon request for examination and copying to all employees, employee representatives, the Director of the **National Institute for Occupational Safety and Health** — NIOSH — and the Assistant Secretary of the **U.S. Department of Labor** per 29 CFR § 1910.1030.

Training records will include the following information:

- The dates of the training session
- The contents or a summary of the training sessions
- The names and qualifications of the persons conducting the training
- The names and job titles of all persons attending the training sessions

ASU must comply with the requirements involving the transfer of records outlined in 29 CFR § 1910.1030.

Should ASU cease to do business and there is no successor employer to receive or retain the records for the prescribed period, the university will notify the NIOSH Director at least three months before their disposal and transmit them to the NIOSH Director if required by the director to do so, within the three months.

X. Labels and signs

All required labels and signs shall include the international biohazard symbol and the word “biohazard” or “biological hazard.” **The color must be predominantly orange, with the lettering and universal biohazard symbol in a contrasting color.**

Warning labels must be affixed to:

- Centrifuges, biosafety cabinets and equipment used with blood, human cell lines or OPIM
- Containers of biohazardous wastes
- Containers that are used to store, transport or ship blood or OPIM
- Incubators are used for primary cell culture
- Refrigerators and freezers where blood or OPIM are stored

Warning signs must be placed at the entrance to all spaces that contain bloodborne pathogens or OPIM. **The signs must include:**

- The biosafety level for the room — e.g., research with human blood must be conducted at BSL-2 or higher
- The name and telephone number of the principal investigator, laboratory manager or other responsible individual

To maintain consistent labeling throughout the university, EHS will provide all required labels to individual departments upon request. Each department is responsible for purchasing its biohazard bags and containers.

Contaminated equipment scheduled for maintenance or repair will be labeled per institutional policies and procedures after decontamination, and the label must state which portions of the equipment remain contaminated.

XI. Personal protective equipment

Base attire for all individuals entering and working in laboratories or other regulated spaces includes long pants or clothing that covers the ankles and closed-toe shoes, in addition to the required personal protective equipment.

PPE is specialized clothing or equipment worn by an employee for protection against a hazard. It includes, but is not limited to:

- Eye and face protection
- Gloves
- Protective laboratory coats or gowns
- Respiratory protection

Each supervisor must provide the appropriate PPE in the immediate work area so that employees can take the necessary precautions to prevent or reduce exposure to bloodborne pathogens or OPIM.

PPE should be selected only after a hazard determination has been performed and should not be considered unless other means of control have been evaluated, including engineering or substituting less hazardous materials or processes. The supervisor must provide for the cost of obtaining, maintaining, replacing and disposing of PPE. Contact EHS for assistance with PPE selection.

Always wash hands immediately — or as soon as feasible — after removing gloves or other PPE. Never reuse disposable gloves. Remove PPE after it becomes contaminated and before leaving the work area. PPE, including lab coats, should not be worn in public areas like bathrooms, break rooms or general office areas. All disposable PPE should be discarded in red biohazard trash, and all biohazardous waste policies should be followed.

Type of PPE	Safety information
Gloves	Gloves must be worn to protect hands from exposure to bloodborne pathogens or OPIM. Gloves should be changed when contaminated, integrity has been compromised or when otherwise necessary. Double gloving is recommended when working with high concentrations of pathogenic microorganisms. Heavy rubber gloves may be needed when decontaminating equipment or cleaning spills. Utility gloves may be decontaminated and reused, but must be discarded when cracked or torn. Before leaving the laboratory, gloves should be removed and hands should be washed after working with bloodborne pathogens or OPIM has been completed. **Do not wash or reuse disposable gloves.** Dispose of used gloves with other contaminated laboratory waste.
Eye and face protection	Eye and face protection — goggles, safety glasses with temple and side protection or face shield — must be used: 1. For anticipated splashes or sprays of bloodborne pathogens or OPIM 2. When the microorganisms are handled outside the Biological Safety Cabinet — BSC — or physical containment device Personnel who wear contact lenses should always wear eye protection in laboratories. Eye and face protection should be used when handling infected animals outside containment. The institutional policy states that eye protection is required when working with hazardous materials.
Laboratory coats	Protective laboratory coats, gowns, smocks or uniforms must be worn while working with bloodborne pathogens or OPIM. This protective outerwear protects skin surfaces and street clothing from contamination. Disposable water-resistant gowns should be used when working with materials that may splash or splatter. Contaminated protective outerwear should be removed and replaced as soon as possible.
Respiratory protection	Any use of respiratory protection — e.g., N95, half-mask, full-face respirators — requires annual medical clearance, training and fit testing as described in the ASU Respiratory Protection Program. ASU Employee Health performs medical clearance and fit testing.

XII. Work practices

Work practices are methods and procedures that employees follow to protect themselves from exposure. **The following work practices are derived from the OSHA standard:**

A. Handwashing

The number one defense against infection is clean hands. Hands should be washed with soap and running water and dried with single-use towels after removing the gloves and before leaving the work area.

If a sink is unavailable, hands should be cleaned with antiseptic hand cleanser, washed with soap and water and dried with single-use towels as soon as a sink becomes available.

Overly vigorous hand washing is not recommended, as it may cause skin breaks and chapped hands.

B. Sharps and containers

Using syringes, needles, glass Pasteur pipettes and other sharps — e.g., scalpels, razors and suture needles — should be minimized. Used sharps and contaminated broken glassware must be disposed of in sharps containers immediately.

Sharps containers must be labeled with the universal biohazard symbol and puncture-resistant, leak-proof and closable for transport. Containers must be located where sharps can be disposed of immediately after use.

Used needles should not be recapped or removed by hand. If recapping needles is necessary for specific procedures, use forceps, hemostats or a one-handed technique. The BSO must approve all recapping procedures.

Handle reusable sharps properly to reduce the risk of cuts or punctures during decontamination and cleaning. Wear heavy utility gloves and reach into the decontamination pans with tongs to prevent hand injuries.

C. Work area restrictions

Eating, drinking, smoking, applying cosmetics and handling contact lenses are prohibited in areas where blood and OPIM are handled or stored. Food and drinks must not be kept in freezers, refrigerators or other places used to handle or store OPIM.

Areas where blood and OPIM are stored or worked with must be posted with hazard identification, such as the universal biohazard symbol, to ensure all personnel entering the area know the potential hazards. Mouth pipetting practices shall not be allowed.

D. Specimen handling and transport

Specimens and other materials transported between work sites should be placed in a leak-proof secondary container labeled with the universal biohazard symbol. Labels are available through EHS.

Portable “six-pack” coolers are typical for this use. Containers for shipping specimens must meet the U.S. Department of Transportation and United States Postal Service requirements. International shipping may require permits or authorization from the U.S. Department of Agriculture or the Centers for Disease Control and Prevention.

Contact EHS for more information.

E. Contaminated equipment

Equipment used to store or handle blood and OPIM shall be labeled with the universal biohazard symbol. Per institutional policies and procedures, it must be cleaned and decontaminated before being serviced, repaired or transported from the work area.

Any parts of the equipment that cannot be decontaminated should be labeled with the biohazard symbol, and the information communicated to all affected people.

XIII. Housekeeping

Bench tops, counters and all other equipment used to work with blood and OPIM **must be disinfected at the end of the workday, when work surfaces are overtly contaminated or after any spill.** See examples of suitable disinfectants in the table below.

Work surfaces and equipment may be covered to prevent contamination with infectious materials. Protective coverings should be removed and replaced at the end of the work, after a spill or when they are overtly contaminated. Coverings must be discarded as biological waste.

Chemical disinfectants

Disinfectant	Working solution	General use
Bleach — sodium hypochlorite	10%	Disinfects work areas, floors, walls and glassware. It is a good general disinfectant. Disinfects liquid cultures for disposal.
Quaternary Ammonia — commercial grade	10–100 ppm	Disinfects floors, work surfaces and glassware.
Phenolics — commercial grade	2.8–3.0% Active ingredient	Disinfects instruments and work surfaces.
Glutaraldehyde	2–3%	Disinfects instruments, including endoscopic tubes.
Iodophor	75–150 ppm	Disinfects instruments and surfaces, non-corrosive.

Note: Contact EHS for more information about chemical disinfectants. Refer to the Environmental Protection Agency website for approved chemical disinfectants.

XIV. Biological spill kits

Biological spill kits should be available wherever blood or OPIM are used or stored. Its contents include:

- Biohazard bag
- Biohazard spill sign
- Disposable lab coat
- Mini brush and dustpan, or something to scoop spilled materials
- Nitrile gloves — four pairs
- Paper towels or other absorbent material
- Safety glasses
- Spray bottle to make a fresh 10% bleach solution
- Tong or forceps to pick up broken glass

Note: Bleach or other EPA-registered disinfectant must be available in the lab for spill cleanups. A sharps container should be available to dispose of sharps or broken glassware.

XV. Spills

Spills of blood or OPIM must be cleaned up immediately by personnel trained in the hazards associated with bloodborne pathogens and familiar with this plan.

Cleanup should be performed using the following procedures:

1. Any spill that cannot be cleaned up by trained personnel should be immediately reported to **EHS** at **480-965-1823** or the **ASU Police Department** after business hours at **480-965-3456**.

2. Wear proper PPE like gloves, eye protection and specialized clothing like disposable Tyvek™ suits.

3. Use mechanical means, such as tongs or a scoop, to pick up broken glassware or sharps and dispose of them in a sharps container. Sharps must never be handled with bare hands.

4. If possible, isolate the spill and cover it with towels or absorbent pads.

5. Pour a freshly prepared **1:10 solution of bleach and water** — 1 part bleach to 9 parts water — or other EPA-approved disinfectants on the spill, working from the outside inward toward the center of the spill, and **let it stand for 20 minutes**. This allows the disinfectant time to kill present organisms.

6. Report the spill to the supervisor and **EHS Biosafety Team** at **480-965-1823**.

7. Remove the towels and rinse with a mild soap solution.

8. Dispose of waste products in the biohazard waste containers.

9. Remove PPE and wash hands.

XVI. Accidents and injuries

In the event of a needlestick, sharps injury or exposure to human blood or other body fluid, immediately follow these steps:

1. Remove any contaminated clothing and PPE.
2. Encourage mild bleeding.
3. Wash the exposed area with soap and water.
4. If exposed to the nose, mouth or mucous membranes, flush with water.
5. If exposed to the eyes, irrigate with clean water, saline or sterile irrigants.
6. Cover the site with sterile, dry materials.
7. Report the incident to your supervisor.
8. Seek medical treatment and report the incident to your supervisor.
9. Fill out the EHS Incident Report. The form should be filled out within 48 hours of an accident or injury. Privacy and confidentiality procedures will be followed.

It is highly recommended that post-exposure treatment, if indicated, be started as soon as possible. If an exposure occurs, the individual should immediately go to ASU Employee Health. If ASU Employee Health is closed, emergency care may be obtained at the nearest emergency room and reported to ASU Employee Health and EHS the next business day.

In addition, whenever someone is injured or becomes ill from work-related incidents, the **Arizona Department of Administration** requires the following forms to be completed to process workers' compensation claims:

- EHS Incident Report
- Supervisor Incident Report

Supervisors must report all accidents and injuries to EHS. Federal, state and local agencies may also need to be notified depending on the nature of the accident or injury. If the project involves recombinant and synthetic nucleic acid molecules, the IBC will be required to report any significant problems with or violations of the NIH Guidelines for Research with Recombinant or Synthetic Nucleic Acid Molecules and any significant research-related accidents or illnesses to the NIH within 30 days.

For any incidents involving recombinant and synthetic nucleic acid molecules, immediately contact the **BSO** at **480-965-1823**.

XVII. Post-exposure evaluation and follow-up

Following a report of an exposure incident, the employee shall be provided a confidential medical evaluation and follow-up that must include:

- Documentation of the routes of exposure and the circumstances under which the exposure incident occurred.
- Identification and testing of the source individual's blood, if available.
- Collection and testing of the employee's blood.
- Post-exposure prophylaxis when it is medically indicated.
- Evaluation of reported illnesses.
- Counseling.

ASU will provide this evaluation and follow-up through ASU Employee Health or contracted health care providers at no cost to the employee.

A. Documentation of the source individual

The source individual will be identified if feasible unless it is prohibited by state or local law:

- The source individual's blood shall be tested as soon as feasible. After consent is obtained to determine HBV and HIV infectivity, the results will be documented.
- 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.
- 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.

B. Blood collection and testing

The exposed employee's blood must be collected **no later than 10 calendar days** after the exposure incident. Serological testing for HIV and HBV will be performed after consent is obtained. A health care professional's written opinion will be made available **within 15 days** after the completion of the evaluation. Testing must be completed **no later than 30 days** after the exposure incident.

No later than 18 months after the date of the exposure incident, the employee will be retested. If an employee chooses not to complete the testing, that employee may jeopardize the availability of workers' compensation benefits from the Arizona Department of Administration's Risk Management Division.

C. Information provided to the health care provider

The health care professional responsible for the employee's hepatitis B vaccination will receive a copy of the OSHA Bloodborne Pathogens Standard.

The health care professional evaluating an employee after an exposure incident will be **provided with the following information:**

- A copy of the OSHA Bloodborne Pathogens Standard.
- A description of the exposed employee's duties related to the exposure incident.
- Documentation of the routes of exposure and the circumstances under which exposure occurred.
- Results of the source individual's blood testing, if available.

D. Evaluation of incident

The supervisor must immediately investigate the circumstances of the exposure incident in conjunction with EHS. Information regarding the exposure incident and source material should be provided to ASU Employee Health or other healthcare providers. Site-specific procedures should be regularly reevaluated and revised to prevent the recurrence of similar incidents.

EHS is available to assist you with evaluating the following:

- Engineering controls and work practices used at the time of the exposure.
- Describe any devices used — e.g., sharps, centrifuge, blender.
- Materials involved in the incident.
- Protective equipment or clothing worn at the time of the exposure incident.
- A review of the procedures being performed during the incident.
- A review of the employee's training record.

XVIII. Records

A. Medical recordkeeping

ASU Employee Health will establish and maintain an accurate record for each employee with occupational exposure under 29 CFR § 1910.1030.

The record will include:

- A copy of all required examination results, medical testing and follow-up procedures.
- 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.
- A copy of the information provided to the health care professional, if required.
- The name and employee identification number of the employee.

ASU Employee Health will ensure that employee medical records are kept confidential and not disclosed or reported without the employee's express written consent to any person within or outside the workplace except as required by the standard or as may be required by law. ASU Employee Health will maintain the required records for at least the duration of employment plus thirty years under 29 CFR § 1910.1030.

B. Employee records

ASU is required to establish and maintain an accurate record for each employee with occupational exposure under 29 CFR 1910.1020. ASU Employee Health maintains this record and includes:

- The employee's name and number.
- A copy of the employee's hepatitis B vaccination status, including the dates of all the hepatitis B vaccinations and any medical records related to the employee's ability to receive vaccination.
- All medical records related to an exposure incident and follow-up evaluation if the employee is seen at ASU Employee Health. All documentation will be held under strict confidentiality guidelines.

C. Sharps injury log

ASU is required to establish and maintain a sharps injury log to record percutaneous injuries from contaminated sharps per 29 CFR 1910-1030(h)(5). The information in the sharps injury log must be recorded and maintained to protect the injured employee's confidentiality. ASU Employee Health maintains the sharps injury log.

The sharps injury log must contain the following information:

- An explanation of how the incident occurred and the personnel involved.
- The laboratory in which the exposure occurred.
- The type and brand of device involved in the incident.

D. Documentation of updated safe work practices

Any consideration of changes in technology to reduce or eliminate exposure **must be evaluated and documented annually**, including solicitation of input from non-managerial staff.

XIX. Biological waste disposal

This section describes **procedures for properly handling and disposing of biological waste** from ASU research, instructional and clinical laboratories. These procedures are based on state and federal law requirements from:

- Centers for Disease Control and Prevention
- National Institutes of Health
- Occupational Safety and Health Administration

Failure to manage biological waste properly could result in personal injury, disruption to research, fines or criminal prosecution. For purposes of this document, **biological waste is defined as:**

- Animal carcasses, body parts and bedding infected with agents that produce or may produce human infection — A.R.S. § R18-13-1401
- Discarded cultures and stocks generated in the diagnosis, treatment or immunization of a human being or animal or in any research relating to that diagnosis, treatment or immunization, or in the production or testing of biological materials — A.R.S. § R18-13-1401
- Discarded human blood or blood products and materials containing free-flowing blood or blood components — A.R.S. § R18-13-1401
- Discarded human organs and body parts removed during surgery — A.R.S. § R18-13-1401
- Discarded sharps — e.g., hypodermic needles, syringes, glass pipettes, scalpel blades, blood vials, needles attached to tubing, broken and unbroken glassware, slides and coverslips — used in animal or human patient care, medical research or clinical laboratories — A.R.S. § R18-13-1401
- Liquid or semi-liquid blood or OPIM; contaminated items that would release blood or OPIM in a liquid or semi-liquid state if compressed; items that are caked with dried blood or OPIM and can release these materials during handling; contaminated sharps; and pathological and microbiological wastes containing blood or OPIM — 29 CFR 1910.1030
- Transgenic plants or animals, genetically modified organisms or materials containing recombinant or synthetic nucleic acid molecules

All biological waste must be disposed of in a manner that protects employees, contractors, the community and the environment from biological hazards.

A. Solid biological waste disposal

Follow these procedures for solid biological waste disposal:

1. Solid biological waste must be placed immediately into an appropriately labeled working container with the universal biohazard symbol or the word “Biohazardous Waste.” The

working container should be within arm's reach of the work. While actively performing work at the bench top, the working container may be a beaker, tin can, plastic box, hanging red bag or any other leak-proof container that is closed or emptied at the end of the workday.

2. When the working container is **three-fourths — or 75% — full**, the contents should be placed inside a closable, secondary container — e.g., a bag — appropriately labeled with the universal biohazard symbol or the phrase "Biohazardous Waste."

3. The secondary container must be closed when **three-fourths — or 75% — full**. Materials to be decontaminated outside the laboratory should be transported in a durable, leak-proof, closed container.

   Note: To protect employees who handle waste and to reduce odors, ASU recommends that all biological waste be thermally inactivated — e.g., autoclaved. However, this treatment does not satisfy the state's biological waste treatment standard for disposal into regular trash or dumpsters.

4. The bag must then be placed into the biohazardous waste drum. There is a maximum weight limit of 50 pounds in each drum.

5. When a drum is ready for pick-up, submit a hazardous waste pick-up request.

B. Liquid biological waste disposal

Follow these procedures for liquid biological waste disposal:

1. Liquid biological waste must be decontaminated using thermal — e.g., an autoclave — or chemical treatment methods.

2. Materials to be decontaminated outside the laboratory must be transported in a durable, leak-proof, closed container.

3. If EHS has approved the decontaminated liquid biological waste for drain disposal, ensure all criteria for disposal are met before disposal. Email EHS for more information on drain disposal applications.

4. If EHS has not approved the waste for drain disposal, it must be labeled with a hazardous waste tag and treated as chemical waste for pick-up by EHS. Submit a hazardous waste pick-up request.

C. Sharps disposal

Used sharps must be discarded immediately into sharps containers. These containers must be puncture-resistant, and the sides and the bottom must be leak-proof. They must be appropriately labeled with the word "Sharps" and the universal biohazard symbol or color-coded red to warn that the contents are hazardous.

Sharps containers must be closable — i.e., have a lid, flap, door or other means of closing the container — and must be kept upright to keep the sharps and any liquids from spilling out of the container.

During use, containers for used sharps must be 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. Sharps containers must be maintained upright throughout use, replaced routinely and not be allowed to overfill. When moving sharps containers from the area of use, they must be:

- Closed immediately before removal to prevent spillage or protrusion of contents during handling, storage, transport or shipping
- Placed in a secondary container for transporting between locations. The second container must be:
    - Appropriately labeled with the universal biohazard symbol or color-coded.
    - Closable.
    - Constructed to contain all contents and prevent leakage during handling, storage, transport or shipping.

When full, sharps containers may be autoclaved, provided that no hazardous chemicals are present in the container. The sharps container must then be placed into the biohazardous waste drum. Sharps and sharps containers should never be discarded directly into regular trash receptacles.

Contaminated sharps must never be sheared or broken.

Recapping, bending or removing needles is prohibited. However, in rare circumstances, recapping is permissible if it can be demonstrated that no alternative is feasible or that a specific procedure requires such action. The BSO must approve all requests for recapping.

If recapping is necessary, individuals must use either a mechanical device or a one-handed technique. Procedures that describe the recapping process must be written and included in the safety plan.

XX. Definitions

- **ASU:** Arizona State University.
- **Blood:** Human blood, human blood components and products made from human blood.
- **Bloodborne pathogens:** Pathogenic microorganisms in human blood can cause human disease. These pathogens include, but are not limited to, HBV and HIV.
- **Clinical laboratory:** A workplace where diagnostic or other screening procedures are performed on blood or OPIM.
- **Collateral duty exposure:** Exposure to blood or OPIM during first aid activities rendered by an individual whose primary job assignment is not to render first aid or other medical assistance. Typically, individuals with collateral duty exposure to blood or OPIM respond solely to injuries resulting from workplace incidents, generally at the location where the incident occurred.
- **Contaminated:** The presence or the reasonably anticipated presence of blood or OPIM on an item or surface.
- **Contaminated laundry:** Laundry soiled with blood or OPIM or may contain sharps.
- **CPR:** Cardiopulmonary resuscitation. An emergency medical procedure for a victim of cardiac arrest or, in some circumstances, respiratory arrest.
- **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 cannot transmit infectious particles and the surface or item is rendered safe for handling, use or disposal.
- **Designated first aid responder:** An individual trained in first aid and identified by ASU as responsible for rendering medical assistance as part of their job duties. An individual who routinely provides first aid with the knowledge of the department or supervisor is also considered a designated first aid responder, even if giving first aid is not officially in the employee's job description.
- **EHS:** ASU Environmental Health and Safety.
- **Engineering controls:** Controls — e.g., sharps disposal containers, self-sheathing needles, safer medical devices, such as sharps with injury protections and needleless systems — that isolate or remove the bloodborne pathogens hazard from the workplace.
- **Exposure incident:** A specific eye, mouth, other mucous membrane, non-intact skin or parenteral contact with blood or OPIM that results from performing an employee's duties.
- **Handwashing facilities:** Location that provides adequate running potable water, soap and single-use towels or air-drying machines.
- **Licensed health care professional:** A person whose legally permitted scope of practice allows them to perform Hepatitis B Vaccination and Post-exposure Evaluation and Follow-up independently.

- **HBV:** Hepatitis B virus.
- **HIV:** Human immunodeficiency virus.
- **Needleless systems:** 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.
    3. Any other procedure involving the potential for occupational exposure to bloodborne pathogens due to percutaneous injuries from contaminated sharps.
- **Occupational exposure:** Reasonably anticipated skin, eye, mucous membrane or parenteral contact with blood or OPIM that may result from performing an employee's duties.
- **OPIM — Other potentially infectious materials:** This can include:
    1. The following human body fluids:
        a. All body fluids in situations where it is difficult or impossible to differentiate between body fluids
        b. Amniotic fluid
        c. Any bodily fluid that is visibly contaminated with blood
        d. Cerebrospinal fluid
        e. Pericardial fluid
        f. Peritoneal fluid
        g. Pleural fluid
        h. Saliva contaminated with blood
        i. Semen
        j. Synovial fluid
        k. Vaginal secretions
    2. Any unfixed tissue or organ — other than intact skin — from a human, living or dead.
    3. HIV-containing cell or tissue cultures, organ cultures and HIV- or HBV-containing culture mediums or other solutions.

a. This also includes blood, organs or other tissues from experimental animals infected with HIV or HBV.

- **Parenteral:** Piercing mucous membranes or the skin barrier through needlesticks, human bites, cuts and abrasions.

- **Personal protective equipment — PPE:** 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 protect against a hazard are not considered personal protective equipment.

- **Production facility:** A facility engaged in industrial-scale, large-volume or high-concentration of HIV or HBV.

- **Regulated waste:** This includes:

    - Contaminated items that would release blood or OPIM in a liquid or semi-liquid state if compressed.

    - Contaminated sharps.

    - Items caked with dried blood or OPIM that can release these materials during handling.

    - Liquid or semi-liquid blood or OPIM.

    - Pathological and microbiological wastes containing blood or OPIM.

- **Research laboratory:** 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.

- **Sharps:** Any object, clean or contaminated, that can penetrate the skin, including, but not limited to, needles, scalpels, broken glass, broken capillary tubes and exposed ends of dental wires.

- **Source individual:** Any individual, living or dead, whose blood or OPIM may be a source of occupational exposure to the employee. Examples include, but are not limited to:

    - Clients in institutions for the developmentally disabled.

    - Clients of drug and alcohol treatment facilities.

    - Hospital and clinic patients.

    - Human remains.

    - Individuals who donate or sell blood or blood components.

    - Residents of hospices and nursing homes.

    - Trauma victims.

- **Sterilize:** Using a physical or chemical procedure to destroy all microbial life, including highly resistant bacterial endospores.

- **Student:** A registered ASU student participating in academic programs or university-sponsored activities — e.g., athletics — identified by EHS as subject to exposure risk and to the extent that their exposure occurs during such participation.

- **Universal Precautions:** An approach to infection control. According to 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:** Controls that reduce the likelihood of exposure by altering how a task is performed — e.g., prohibiting the recapping of needles by a two-handed technique.