NORTHERN ARIZONA UNIVERSITY

Environmental Health and Safety

Exposure Control Plan

Revised April 2025

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1.0 Introduction

Bloodborne Pathogens are pathogenic microorganisms that are present in human blood or body fluids and can cause disease in humans, including, but not limited to, hepatitis B virus (HBV), hepatitis C virus (HCV), and human immunodeficiency virus (HIV).

On December 6, 1991, the Occupational Safety and Health Administration (OSHA) promulgated the final rule (29 CFR § 1910.1030) for occupational exposure to bloodborne pathogens. The rule, commonly referred to as the Bloodborne Pathogens Standard, was promulgated under the authority of the Occupational Safety and Health Act of 1970 and was designed to eliminate or minimize occupational exposure to HBV, HIV, and other bloodborne pathogens. In addition, Congress passed the Needlestick Safety and Prevention Act that became law on November 6, 2000. To meet the requirements of this act, OSHA has revised its Bloodborne Pathogens Standard.

In accordance with the standard, Environmental Health & Safety (EHS) has developed this Exposure Control Plan (ECP) for employees determined to have and occupational exposure to bloodborne pathogens. An occupational exposure is defined as:

> *"...A reasonably anticipated skin, eye, mucous membrane, or parenteral contact with blood or other potentially infectious materials (OPIM) that may result from the performance of an employee's duties."*

The NAU ECP has been developed to fulfill federal requirements and is designed to eliminate or minimize employee exposure to bloodborne pathogens. It is available online: https://in.nau.edu/environmental-health-and-safety/safety-programs/biological-safety/.

The NAU ECP will be reviewed and updated by EHS Staff at least annually and whenever necessary to reflect new or modified tasks and procedures which affect occupational exposure and to reflect new or revised employee positions with occupational exposure.

It is the responsibility of each Principal Investigator to identify each student, researcher, or employee with the potential for exposure to bloodborne pathogens or other potentially infectious material (OPIM) and keep a current list in the laboratory including tasks and procedures, or groups of closely related tasks and procedures, in which occupational exposure may occur for these individuals.

2.0 Exposure Determination

Per federal requirements, NAU has prepared an Exposure Determination (see Section 16.0) without regard to the use of personal protective equipment. It is the responsibility of each NAU Department to use the Exposure Determination and identify employees who fit the job descriptions. The Exposure Determination is a document which lists the following:

- All NAU job classifications in which *all* employees in those job classifications have occupational exposure;
- A list of job classifications in which *some* employees have occupational exposure, and
- A list of all tasks and procedures or groups of closely related task and procedures in which occupational exposure occurs and that are performed by employees in job classifications at NAU.

Roles and Responsibilities

3.1 Environmental Health & Safety (EHS)

NAU Environmental Health & Safety oversees all matters of biosafety (see EHS contacts in the front of this manual). EHS provides Bloodborne Pathogens Training, and other specialized biosafety trainings for NAU Employees at no cost. Trainings conducted by EHS will be documented and those records will be maintained at EHS for at least 30 years. EHS is also responsible for the development, and periodic review and revision of the NAU ECP and the Exposure Determination. EHS Staff are available for consultation and assistance.

3.2 Individual Departments

All NAU Departments with employees who have an occupational exposure to bloodborne pathogens as determined by the exposure determination are responsible for the following compliance measures:

- Use the NAU Exposure Determination (see Section 16.0) to identify employees with potential exposure to bloodborne pathogens
- Provision of engineering controls (see Section 5.0)
- Provision of hand-washing facilities or interim antiseptic cleansers
- Facilitation of required trainings
- Maintenance of training records at a departmental level
- Provision of required PPE (see Section 6.0)
- Administration of hepatitis B vaccination provisions (see Section 11.0)
- General compliance with aspects of NAU ECP

3.3 NAU Employees

All NAU employees with an occupational exposure to bloodborne pathogens are expected to comply with the practices contained within this ECP.

4.0 Universal Precautions

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

All NAU Employees with occupational exposure to bloodborne pathogens are expected to incorporate the concepts of Universal Precautions in their everyday practices. These practices include the use of Personal Protective Equipment (PPE) such as disposable gloves, goggles and face shields, and proper handling and disposal of instruments, especially scalpels and hypodermic needles. These practices are described more specifically in the following sections.

5.0 Engineering Controls

Engineering Controls are physical items that remove, contain, or eliminate a potential hazard (e.g., Biosafety cabinets, sharps disposal containers, self-sheathing needles, safer medical devices, such as sharps with engineered sharps injury protections and needleless systems) that isolate or remove the bloodborne pathogens hazard from the workplace. Engineering controls must be examined and maintained or replaced on a regular schedule to ensure their effectiveness.

Engineering and work practice (i.e., altering the way a task or procedure is performed) controls are used to eliminate or minimize employee exposure. Where occupational exposure remains after institution of these controls, personal protective equipment must also be used.

5.1 Hand washing

Per the Federal Standard, NAU provides hand washing facilities which are readily accessible to employees with an occupational exposure. NAU departments must ensure that employees wash their hands immediately, or as soon as feasible, after removal of gloves or other personal protective equipment.

For exposures employees must do the following:

- Puncture sites: Wash affected skin with soap and water for 15 minutes.
- Intact skin: Wash affected skin with soap and water for 20 seconds.
- Eyes: Flush eyes for 15 minutes, remove contacts and flush an additional 5 minutes.
- Mucous membranes (nose or mouth): Flush affected area for 15 minutes.
  https://www.cdc.gov/nora/councils/hcsa/stopsticks/whattodo.html

When provision of hand washing facilities is not feasible, NAU departments must provide either an appropriate antiseptic hand cleanser in conjunction with clean cloth/paper towels or antiseptic towelettes. When antiseptic hand cleansers or towelettes are used, hands must be washed with soap and running water as soon as feasible.

5.2 Handling of Contaminated Needles

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

Such bending, recapping or needle removal must be accomplished using a mechanical device or a one-handed technique. Shearing or breaking of contaminated needles is prohibited. This can create an infectious aerosol. Immediately, or as soon as possible after use, contaminated reusable sharps must be placed in appropriate containers until properly decontaminated. These containers must be:

- Puncture resistant
- Labeled or color-coded in accordance with Section 13.0 of this manual
- Leak proof on the sides and bottom
- Permanently closeable once ¾ full

5.3 Needlestick Safety and Prevention

Needlesticks and other percutaneous injuries resulting in exposure to blood or other potentially infectious materials are of concern due to the high frequency of their occurrence and the potential severity of the health effects associated with exposure. The Centers for Disease Control and Prevention has estimated that healthcare workers in hospital settings sustain 385,000 percutaneous injuries involving contaminated sharps annually. When non-hospital healthcare workers are included, the best estimate of the number of percutaneous injuries involving contaminated sharps is significantly increased. When these injuries involve exposure to infectious agents, the affected workers are at risk of contracting disease. Workers may also suffer from adverse side effects of drugs used for post-exposure prophylaxis and from psychological stress due to the threat of infection following an exposure incident.

The definition of "Engineering Controls" has been modified to include examples of safer medical devices, such as sharps with engineered sharps injury protections and needleless systems. This change clarifies that safer medical devices are considered to be engineering controls under the standard. The term "Engineering Controls" includes all control measures that isolate or remove a hazard from the workplace, encompassing not only sharps with engineered sharps injury protections and needleless systems but also other medical devices designed to reduce the risk of percutaneous exposure to bloodborne pathogens. Examples include blunt suture needles and plastic or mylar-wrapped glass capillary tubes, as well as controls that are not medical devices, such as sharps disposal containers and biosafety cabinets. A wide variety of medical devices have been developed to reduce the risk of needlestick and other sharps injuries. These "safer medical devices" replace sharps with non-needle devices or incorporate safety features designed to reduce the likelihood of injury.

Sharps with Engineered Sharps Injury Protections: a non-needle sharp or a needle device used for withdrawing body fluids, accessing a vein or artery, or administering medications or other fluids, with a built-in safety feature or mechanism that effectively reduces the risk of an exposure incident. This term encompasses a broad array of devices that make injury involving a contaminated sharp less likely, and includes, but is not limited to, syringes with a sliding sheath that shields the attached needle after use; needles that retract into a syringe after use; shielded or retracting catheters used to access the bloodstream for intravenous administration of medication or fluids; and intravenous medication delivery systems that administer medication or fluids through a catheter port or connector site using a needle that is housed in a protective covering.

Needleless Systems: a device that does not use needles for the collection of bodily fluids or withdrawal of body fluids after initial venous or arterial access is established; the administration of medication or fluids; or any other procedure involving the potential for occupational exposure to bloodborne pathogens due to percutaneous injuries from contaminated sharps. Needleless systems provide an alternative to needles for the specified procedures, thereby reducing the risk of percutaneous injury involving contaminated sharps (e.g., intravenous medication delivery systems that administer medication or fluids through a catheter port or connector site using a blunt cannula or other non-needle connection, and jet injection systems that deliver subcutaneous or intramuscular injections of liquid medication through the skin without use of a needle).

NAU departments and units must identify, evaluate, and implement appropriate safer medical devices that are commercially available and effective. No one medical device is appropriate in all circumstances of use. For compliance purposes, an "appropriate" safer medical device includes only devices whose use, based on reasonable judgment in individual cases, will not jeopardize patient or employee safety or be medically contraindicated. Although new devices are being continually introduced, OSHA recognizes that a safer device may not be available for every situation. If a safer device is not available in the marketplace, NAU is not required to develop any such device. Furthermore, an "effective" safer medical device is a device that, based on reasonable judgment, will make an exposure incident involving a contaminated sharp less likely to occur in the application in which it is used.

Non-managerial employees **responsible for direct patient care who are potentially exposed to injuries from contaminated sharps** should participate in the identification, evaluation, and selection of effective engineering and work practice controls appropriate to their workplace. Please see the NAU Needlestick Safety & Prevention Program for prevention strategies, evaluation forms, and injury reporting information. Employees must be trained in the proper usage of the engineering and work practice controls.

5.4 Designation of Areas

Eating, drinking, smoking, applying cosmetics or lip balm, and handling contact lenses are strictly prohibited in work areas where there is a reasonable likelihood of occupational exposure to human blood or OPIM.

Food and drink must not be kept in refrigerators, freezers, shelves, cabinets or on countertops or bench tops where blood or other potentially infectious materials are present.

5.5 Best Practices

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

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

Specimens of blood or other potentially infectious materials must be placed in a container which prevents leakage during collection, handling, processing, storage, transport, or shipping. The container must be labeled or color-coded, and closed prior to being stored, transported, or shipped.

If outside contamination of the primary container occurs, the primary container must be placed within a second container which prevents leakage during handling, processing, storage, transport, or shipping and is labeled or color-coded according to the requirements of this standard.

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

5.6 Equipment Decontamination/Release Policy

Equipment which may become contaminated with blood or other potentially infectious materials must be examined prior to servicing or shipping and must be decontaminated as necessary unless the employer can demonstrate that decontamination of such equipment or portions of such equipment is not feasible.

The NAU Equipment Release Form (Appendix C) must be completed prior to requesting maintenance, release for disposal, or sale of any equipment with the potential for biohazard contamination. Once equipment has been decontaminated, the Exposure Release Form must be attached. NAU Maintenance, Moving and Service personnel will not service or move the equipment without this form.

Some materials and pieces of equipment, such as those with porous surfaces cannot be decontaminated. In this event, a readily observable label must be attached to the equipment stating which portions remain contaminated. Proper handling or disposal can be determined at that time.

NAU must ensure that this information is conveyed to all affected employees, the servicing representative, and/or the manufacturer, as appropriate, and prior to handling, servicing, or shipping so that appropriate precautions will be taken.

6.0 Personal Protective Equipment

When there is occupational exposure, NAU Departments must employ engineering controls in order to mitigate the hazard. When a hazard still exists, departments must provide, at no cost to the employee, appropriate personal protective equipment such as, but not limited to:

- gloves (in various materials suitable for human blood or OPIM),
- gowns,
- laboratory coats,
- face shields or masks,
- eye protection (goggles)
- mouthpieces, resuscitation bags, pocket masks, or other ventilation devices.

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

NAU Departments must ensure that employees are trained in the selection and use of the appropriate PPE. Employees must be included in this selection process and must be given a choice of suitable PPE.

In the event that an employee temporarily and briefly declines to use PPE when, under rare and extraordinary circumstances, it was the employee's professional judgment that in the specific instance its use would have prevented the delivery of health care or public safety services or

would have posed an increased hazard to the safety of the worker or co-worker. When the employee makes this judgment, the circumstances must be investigated and documented in order to determine whether changes can be instituted to prevent such occurrences in the future.

6.1 Accessibility

NAU Departments must ensure that appropriate personal protective equipment in the appropriate sizes is readily accessible at the worksite or is issued directly to employees. Hypoallergenic gloves, glove liners, powderless gloves, or other similar alternatives must be readily accessible to those employees who are allergic to the gloves normally provided (e.g., latex).

6.2 Handling of Contaminated PPE

Best practices for management of contaminated garments and other PPE include the following:

- If a garment(s) is penetrated by blood or other potentially infectious materials, the garment(s) must be removed immediately or as soon as feasible.
- All PPE must be removed prior to leaving the work area.
- When PPE is removed it must be placed in an appropriately designated area or container for storage, washing, decontamination or disposal.

NAU Departments are required to clean, launder, or dispose of required PPE at no cost to the employee. Where laundry facilities are not available on site, NAU Departments can establish contracts through commercial laundry services. Those laundry services must be equipped and trained to deal with contaminated clothing that may present bloodborne pathogens exposure. If the laundry service does not employ methods of Universal Precautions, laundry must be properly bagged and labeled to indicate the potential for bloodborne pathogens and/or other infectious substances.

For more information on laundering garments and PPE, see Section 9.0.

6.3 Repair and Replacement

NAU Departments must repair or replace PPE as needed to maintain its effectiveness, at no cost to the employee.

6.4 Gloves

Gloves must be worn when it can be reasonably anticipated that the employee may have hand contact with blood, other potentially infectious materials, mucous membranes, and non-intact skin, and when handling or touching contaminated items or surfaces.

Disposable (single use) gloves such as surgical or examination gloves must be replaced as soon as practical when contaminated or if they are torn, punctured, or when their ability to function as a barrier is compromised. They must not be washed or decontaminated for re-use. Gloves have a relatively short shelf life and must be checked for brittleness, cracks,

discoloration, and other signs of aging. If any of these signs are present, the gloves must be removed from use.

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

6.5 Masks, Eye Protection, and Face Shields

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

6.6 Gowns, Aprons, and Other Protective Body Clothing

Appropriate protective clothing such as, but not limited to, gowns, aprons, lab coats, clinic jackets, or similar outer garments must be worn in occupational exposure situations. The type and characteristics will depend upon the task and degree of exposure anticipated.

Surgical caps or hoods and/or shoe covers or boots must be worn in instances when gross contamination can reasonably be anticipated (e.g., autopsies, orthopedic surgery).

7.0 Housekeeping

NAU worksites must be maintained in a clean and sanitary condition. Where appropriate, NAU Departments must determine and implement a written schedule for cleaning and method of decontamination based upon the location within the facility, type of surface to be cleaned, type of soil present, and tasks or procedures being performed in the area.

All equipment and environmental and working surfaces must be cleaned and decontaminated after contact with blood or other potentially infectious materials.

Contaminated work surfaces must be decontaminated with an appropriate disinfectant:

- after completion of procedures;
- immediately or as soon as feasible when surfaces are overtly contaminated;
- after any spill of blood or other potentially infectious materials;
- and at the end of the work shift if the surface may have become contaminated since the last cleaning.

See Appendix D, Summary and Comparison of Liquid Disinfectants.

Protective coverings, such as plastic wrap, aluminum foil, or imperviously-backed absorbent paper used to cover equipment and environmental surfaces, must be removed and replaced as soon as feasible when they become overtly contaminated or at the end of the work shift if they may have become contaminated during the shift.

All bins, pails, cans, and similar receptacles intended for reuse which have a reasonable likelihood for becoming contaminated with blood or other potentially infectious materials must be inspected and decontaminated on a regularly scheduled basis and cleaned and decontaminated immediately or as soon as feasible upon visible contamination. This schedule must be documented in the site specific standard operating procedure (SOP) for decontamination.

8.0 Regulated Waste

All issues of biohazardous waste are overseen by EHS. See EHS Contacts in the front of this manual. NAU Departments are responsible for purchasing proper waste receptacles and complying with the procedures outlined in the following subsections.

8.1 Contaminated Sharps Discarding and Containment

Reusable sharps that are contaminated with blood or other potentially infectious materials must not be stored or processed in a manner that requires employees to reach by hand into the containers where these sharps have been placed. Contaminated sharps must be discarded immediately or as soon as feasible in containers that are:

- Closable;
- Puncture resistant;
- Leakproof on sides and bottom; and
- Labeled or color-coded (See Section 13.0).

During use, containers for contaminated sharps must be:

- Easily accessible to personnel and located as close as is feasible to the immediate area where sharps are used;
- Maintained upright throughout use; and
- Replaced routinely and not be allowed to overfill (maximum of ¾ full).

When moving containers of contaminated sharps from the area of use, the containers must be:

- Closed immediately prior to removal or replacement to prevent spillage or protrusion of contents during handling, storage, transport, or shipping;
- Placed in a secondary container if leakage is possible or the outside of the container is contaminated.

The secondary container must be:

- Closable;
- Constructed to contain all contents and prevent leakage during handling, storage, transport, or shipping; and
- Labeled or color-coded (See Section 13.0).

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

Broken glassware which may be contaminated must not be picked up directly with the hands. It must be cleaned up using mechanical means, such as a squeegee and dustpan, tongs, or forceps.

8.2 Other Regulated Waste Containment

Regulated waste must be placed in containers which are:

- Closable;
- Constructed to contain all contents and prevent leakage of fluids during handling, storage, transport or shipping;
- Labeled or color-coded (See Section 13.0);
- Closed prior to removal to prevent spillage or protrusion of contents during handling, storage, transport, or shipping.

Disposal of all regulated waste must be in accordance with applicable Federal, State, and local regulations.

9.0 Laundry

Contaminated laundry must be handled as little as possible with minimum agitation. It must also be bagged or containerized at the location where it was used and must not be sorted or rinsed in the location of use.

Contaminated laundry must be placed and transported in bags or containers labeled or color-coded in accordance with Section 13.0 of this manual. When a facility utilizes Universal Precautions in the handling of all soiled laundry, alternative labeling or color-coding is sufficient if it permits all employees to recognize the containers as requiring compliance with Universal Precautions.

Whenever contaminated laundry is wet it must be placed and transported in bags or containers which prevent soak-through and/or leakage of fluids to the exterior.

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

When a facility ships contaminated laundry off-site to a second facility which does not utilize Universal Precautions in the handling of all laundry, the facility generating the contaminated laundry must place such laundry in bags or containers which are labeled or color-coded in accordance Section 13.0 of this manual.

10.0 HIV/HBV Laboratories

This section applies to research laboratories and production facilities engaged in the culture, production, concentration, experimentation, and manipulation of HIV and HBV. It does not apply to clinical or diagnostic laboratories engaged solely in the analysis of blood, tissues, or organs. These requirements apply in addition to the other requirements of the standard. There are currently no HIV/HBV laboratories on NAU Campuses. This section is included for informational purposes.

Research laboratories and production facilities must meet the criteria provided in the following subsections.

10.1 Standard Microbiological Practices

All regulated waste must either be incinerated or decontaminated by a method such as autoclaving known to effectively destroy bloodborne pathogens.

10.2 Special Practices

Laboratory doors must be kept closed when work involving HIV, HBV, or HCV is in progress.

Contaminated materials that are to be decontaminated at a site away from the work area must be placed in a durable, leak-proof, labeled or color-coded container that is closed before being removed from the work area.

Access to the work area must be limited to authorized persons. Written policies and procedures must be established whereby only persons who have been advised of the potential biohazard, who meet any specific entry requirements, and who comply with all entry and exit procedures must be allowed to enter the work areas and animal rooms.

When other potentially infectious materials or infected animals are present in the work area, a hazard warning sign incorporating the universal biohazard symbol must be posted on all access doors. The hazard warning sign must comply with Section 13.0.

All activities involving other potentially infectious materials must be conducted in biological safety cabinets or other physical-containment devices. No work with these potentially infectious materials must be conducted on the open bench.

Laboratory coats, gowns, smocks, uniforms, or other appropriate protective clothing must be used in the work area and animal rooms. Protective clothing must not be worn outside of the work area and must be decontaminated before being laundered.

Special care must be taken to avoid skin contact with potentially infectious materials. Gloves must be worn when handling infected animals and when making hand contact with other potentially infectious materials is unavoidable.

Before disposal all waste from work areas and from animal rooms must either be incinerated or decontaminated by a method such as autoclaving known to effectively destroy bloodborne pathogens.

Vacuum lines must be protected with liquid disinfectant traps and high-efficiency particulate air (HEPA) filters or filters of equivalent or superior efficiency, and which are checked routinely and maintained or replaced as necessary.

Hypodermic needles and syringes must be used only for parenteral injection and aspiration of fluids from laboratory animals and diaphragm bottles. Only needle-locking syringes or disposable syringe-needle units (i.e., the needle is integral to the syringe) must be used for the injection or aspiration of potentially infectious materials. Extreme caution must be used when handling needles and syringes. A needle must not be bent, sheared, replaced in the sheath or guard, or removed from the syringe following use. The needle and syringe must be promptly

placed in a puncture-resistant container and autoclaved or decontaminated before reuse or disposal.
All spills must be immediately contained and cleaned up by appropriate professional staff or others properly trained and equipped to work with potentially concentrated infectious materials.

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

A biosafety manual must be prepared or adopted and periodically reviewed and updated at least annually or more often if necessary. Personnel must be advised of potential hazards, must be required to read instructions on practices and procedures, and must be required to follow them.

10.3 Containment Equipment

Certified biological safety cabinets (Class I, II, or III) or other appropriate combinations of personal protection or physical containment devices, such as special protective clothing, respirators, centrifuge safety cups, sealed centrifuge rotors, and containment caging for animals, must be used for all activities with potentially infectious materials that pose a threat of exposure to droplets, splashes, spills, or aerosols.

Biological safety cabinets must be certified when installed, whenever they are moved and at least annually.

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

HIV, HBV and HCV production facilities must meet the following criteria:

- The work areas must be separated from areas that are open to unrestricted traffic flow within the building. Passage through two sets of doors must be the basic requirement for entry into the work area from access corridors or other contiguous areas. This may be provided by a double-doored clothes-change room (showers may be included), airlock, etc.
- The surfaces of doors, walls, floors and ceilings in the work area must be water resistant so that they can be easily cleaned. Penetrations in these surfaces must be sealed or capable of being sealed to facilitate decontamination.
- Each work area must contain a sink for washing hands and a readily available eye wash facility. The sink must be foot, elbow, or automatically operated and must be located near the exit door of the work area.
- Access doors to the work area or containment module must be self-closing.
- An autoclave for decontamination of regulated waste must be available within or as near as possible to the work area.
- A ducted exhaust-air ventilation system must be provided that creates directional airflow that draws air into the work area through the entry area. The exhaust air must not be recirculated to any other area of the building, must be discharged to the outside, and must be dispersed away from occupied areas and air intakes. The proper direction of the airflow must be verified (i.e., into the work area).

10.4 Training Requirements

Additional training is required for employees in HIV, HBV and HCV research laboratories or production facilities.

11.0 Hepatitis B Vaccination

Per the Federal Standard, NAU must make available the hepatitis B vaccine and vaccination series to all employees who have occupational exposure, and post-exposure evaluation and follow-up to all employees who have had an exposure incident.

NAU must ensure that all medical evaluations and procedures including the hepatitis B vaccine and vaccination series and post-exposure evaluation and follow-up, including prophylaxis, are:

- Made available at no cost to the employee;
- Made available to the employee at a reasonable time and place;
- Performed by or under the supervision of a licensed healthcare professional; and
- Provided according to recommendations of the U.S. Public Health Service current at the time these evaluations and procedures take place.

NAU must ensure that all laboratory tests are conducted by an accredited laboratory at no cost to the employee.

Hepatitis B vaccination must be made available after the employee has received the training described in Section 14 of this manual and within 10 working days of initial assignment to all employees who have occupational exposure unless the employee has previously received the complete hepatitis B vaccination series, antibody testing has revealed that the employee is immune, or the vaccine is contraindicated for medical reasons.

NAU cannot make participation in a prescreening program a prerequisite for receiving hepatitis B vaccination.

If the employee initially declines hepatitis B vaccination but at a later date, while still covered under the standard, decides to accept the vaccination, NAU must make available the hepatitis B vaccination at that time.

If an employee declines to accept hepatitis B vaccination offered by NAU, the employee must sign the statement in Appendix E, Hepatitis B Vaccination Consent or Declination Form.

If a routine booster dose(s) of hepatitis B vaccine is recommended by the U.S. Public Health Service at a future date, such booster dose(s) must be made available.

11.1 Post-exposure Procedure, Evaluation, and Follow-up

In the event of an exposure incident, the affected personnel should follow the instructions outlined in Appendix F (Employee Reporting of Significant Work Exposure to Bodily Fluids Guidance & Forms) and complete all associated forms. A summary of the steps to follow immediately after an exposure incident is available in Appendix G (Occupational Exposure

Procedure Card). It is recommended that this card be carried by all personnel who are reasonably expected as a result of their job duties to come into contact with blood or other potentially infectious materials.

Following a report of an exposure incident, NAU will make immediately available to the exposed employee a confidential medical evaluation and follow-up, including at least the following elements:

- Documentation of the route(s) of exposure, and the circumstances under which the exposure incident occurred;
- Identification and documentation of the source individual, unless the employer can establish that identification is infeasible or prohibited by state or local law;
- The source individual's blood must be tested as soon as feasible and after consent is obtained in order to determine HBV, HCV and HIV infectivity. If consent is not obtained, the employer must establish that legally required consent cannot be obtained. When the source individual's consent is not required by law, the source individual's blood, if available, must be tested and the results documented.

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

Results of the source individual's testing must be made available to the exposed employee, and the employee must be informed of applicable laws and regulations concerning disclosure of the identity and infectious status of the source individual.

11.1.1 Collection and Testing of Blood for HBV, HCV and HIV Serological Status

The exposed employee's blood must be collected as soon as feasible and tested for HBV, HCV and HIV serological status after consent is obtained.

If the employee consents to baseline blood collection, but does not give consent at that time for HIV serologic testing, the sample must be preserved for at least 90 days. If, within 90 days of the exposure incident, the employee elects to have the baseline sample tested, such testing must be done as soon as feasible. Post-exposure prophylaxis will be provided, when medically indicated, as recommended by the U.S. Public Health Service.

Counseling and evaluation of reported illnesses will also be provided.

12.0 Post Exposure Evaluation and Follow Up

12.1 Information Provided to the Healthcare Professional

NAU will ensure that the healthcare professional responsible for the employee's hepatitis B vaccination is provided a copy of the Federal Bloodborne Pathogens Regulation (Appendix A).

NAU will ensure that the healthcare professional evaluating an employee after an exposure incident is provided the following information:

- A description of the exposed employee's duties as they relate to the exposure incident;

- Documentation of the route(s) of exposure and circumstances under which exposure occurred;
- Results of the source individual's blood testing, if available; and
- All medical records relevant to the appropriate treatment of the employee including vaccination status (the employer's responsibility to maintain).

12.2 Healthcare Professional's Written Opinion

NAU will obtain and provide the employee with a copy of the evaluating healthcare professional's written opinion within 15 days of the completion of the evaluation.

The healthcare professional's written opinion for hepatitis B vaccination must be limited to whether hepatitis B vaccination is indicated for an employee, and if the employee has received such vaccination.

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

- That the employee has been informed of the results of the evaluation; and
- That the employee has been told about any medical conditions resulting from exposure to blood or other potentially infectious materials which require further evaluation or treatment.
- All other findings or diagnoses must remain confidential and must not be included in the written report.

12.3 Medical Recordkeeping

Medical records required by this standard must be maintained in accordance with paragraph (h)(1) of the Federal Bloodborne Pathogens Standard (Appendix A).

13.0 Hazard Communication

Labeling and signage with regarding to blood and other potentially infectious materials is strictly regulated. All labeling and signage must comply with the Federal Standard as described in the following subsections.

13.1 Labels

Warning labels must be affixed to containers of regulated waste, refrigerators and freezers containing blood or other potentially infectious material, and other containers used to store, transport or ship blood or other potentially infectious materials. Labels required by this section must include the universal biohazard symbol.

These labels must be red, fluorescent orange or orange-red or predominantly so, with lettering and symbols in a contrasting color. Labels must be affixed as close as feasible to the container by string, wire, adhesive, or other method that prevents their loss or unintentional removal. Red bags or red containers may be substituted for labels.

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

Labels required for contaminated equipment must be in accordance with this section and must also state which portions of the equipment remain contaminated.

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

13.2 Signs

NAU must post signs at the entrance to work areas of HIV and HBV Research Laboratory and Production Facilities, which must bear the universal biohazard symbol.

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

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

14.0 Training

NAU will ensure that all employees with occupational exposure participate in a training program which must be provided at no cost to the employee and during working hours. The EHS staff provides all required bloodborne pathogen and biosafety trainings.

Training must be provided as follows:

- At the time of initial assignment to tasks where occupational exposure may occur;
- At least annually thereafter, within one year of their previous training.

NAU must provide additional training when changes such as modification of tasks or procedures or institution of new tasks or procedures affect the employee's occupational exposure. The additional training may be limited to addressing the new exposures created.

Material appropriate in content and vocabulary to educational level, literacy, and language of employees is used.

The training program contains at a minimum the following elements:

- An accessible copy of the regulatory text of this standard and an explanation of its contents (Appendix A);
- A general explanation of the epidemiology and symptoms of bloodborne diseases;
- An explanation of the modes of transmission of bloodborne pathogens;
- An explanation of NAU's Exposure Control Plan and the means by which the employee can obtain a copy of the written plan;
- An explanation of the appropriate methods for recognizing tasks and other activities that may involve exposure to blood and other potentially infectious materials;
- An explanation of the use and limitations of methods that will prevent or reduce exposure including appropriate engineering controls, work practices, and personal protective equipment;
- Information on the types, proper use, location, removal, handling, decontamination and disposal of personal protective equipment;
- An explanation of the basis for selection of personal protective equipment;
- Information on the hepatitis B vaccine, including information on its efficacy, safety, method of administration, the benefits of being vaccinated, and that the vaccine and vaccination will be offered free of charge;
- Information on the appropriate actions to take and persons to contact in an emergency involving blood or other potentially infectious materials;
- An explanation of the procedure to follow if an exposure incident occurs, including the method of reporting the incident and the medical follow-up that will be made available;
- Information on the post-exposure evaluation and follow-up provided to employees following an exposure incident;
- An explanation of the signs, labels, or color coding required by Section 13;
- An opportunity for interactive questions and answers with the person conducting the training session.

Additional initial training is required for employees in HIV, HBV and HVC laboratories or production facilities.

15.0 Record Keeping

15.1 Medical Records

Proper documentation of medical and training records is an important compliance factor. NAU must establish and maintain an accurate record for each employee with occupational exposure. This record must include:

- The name and NAU ID number of the employee;
- 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 all results of examinations, medical testing, and follow-up procedures;
- The employer's copy of the healthcare professional's written opinion; and
- A copy of the information provided to the healthcare professional.

NAU will maintain confidentiality of all medical records for employees. Records will not be disclosed or reported without the employee's express written consent to any person within or outside the workplace.

NAU will maintain the records required for at least the duration of employment plus 30 years.

15.2 Training Records

Training records must include the following information:

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

Training records will be maintained for 3 years from the date of the training.

15.3 Availability of Records

NAU will ensure that all records required to be maintained by this section must be made available upon request for examination and copying to the subject employee, to anyone having written consent of the subject employee, and to OSHA representatives.

15.4 Sharps injury log

NAU has established and will maintain a sharps injury log for the recording of percutaneous injuries from contaminated sharps. The information in the sharps injury log is recorded and maintained in such manner as to protect the confidentiality of the injured employee. The sharps injury log contains, at a minimum:

- The type and brand of device involved in the incident,
- The department or work area where the exposure incident occurred, and
- An explanation of how the incident occurred.

16.0 EXPOSURE DETERMINATION BYJOB CLASSIFICATION

All tasks or jobs are assigned a category to indicate the degree of anticipated risk of occupational exposure pursuant to 29 CFR § 1920.1030. Unpaid students may have risk of exposure to bloodborne pathogens or OPIM in the course of participating in their academic program or other University-sponsored activity. NAU is not required to cover the cost for unpaid students to have 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 prior to incurring the risk of exposure.

RISK CATEGORIES

CATEGORY I

Tasks that involve exposure to blood, body fluids or tissues. Frequent exposure to blood, other potentially infectious materials/fluids and tissues, toxic substances, ionizing radiation, medical radiation, medical preparations, or other conditions common to the clinic or laboratory environment.

CATEGORY II

Tasks that include no routine exposure to blood, other potentially infectious materials/fluids, and tissues but employment may require performing unplanned category I tasks.

CATEGORY III

Tasks that include no exposure to blood, other potentially infectious materials/fluids and/or tissues, and employment does not require performing category I tasks.

NORTHERN ARIZONA UNIVERSITY
EXPOSURE CONTROL PLAN
EXPOSURE CATEGORIES BY JOB CLASSIFICATION

JOB/TASK CATEGORY	CATEGORY I	CATEGORY II	CATEGORY III
Administration			
Administrator			X
Assistant Administrator			X
Administrative Assistant			X
Campus Health Services			
Lab Director/Manager/Supervisor	X		
Lab Technicians/Assistants	X		
Physicians/Medical Assistants	X		
Office Manager			X
Physical Therapy Staff		X	
Registered Nurses	X		
Receptionist/Cashier			X
Cline Library			
Managers, Office Staff			X
Librarians		X	
Custodial Aides		X	
Clinical Academic Programs			
Athletic Training	X		
Communication Sciences & Disorders	X		
Dental Hygiene	X		

Nursing	X		
Occupational Therapy		X	
Physical Therapy		X	
Physician Assistant	X		
Campus Living Community			
Resident Assistants		X	
Dining Services			
Cook and Food Service Staff			X
Environmental Health & Safety			
Inspectors (Laboratories and Clinics)	X		
Hazardous Waste Management	X		
Engineering & Inspections			X
Fire Life Safety			X
Facility Services			
Building Access Services			X
Carpentry			X
Central Plant Engineers		X	
Custodial Services		X	
Electrical/General Maintenance			X
General Maintenance		X	
HVAC			X
Landscaping			X
Planning/Utility/Construction			X
Plumbing		X	
Health & Learning Center/Wall Aquatic Center			
Director/Manager/Supervisor	X		
Lifeguards	X		
Business Office		X	
Police Department			
Officers	X		
Dispatch/Office staff			X
Research Labs			
Staff Handling Human Derived Materials (Blood Products, Tissue, Cell Culture)	X		
Staff Involved With Invasive Procedures For Human Subjects	X		
Staff Involved With Invasive Procedures For Certain Animal Subjects		X	
Shuttle Services			
Bus drivers		X	
Management, Office Staff			X

Appendix A: Federal Bloodborne Pathogens Standard

- Part Number: 1910
- Part Title: Occupational Safety and Health Standards
- Subpart: Z
- Subpart Title: Toxic and Hazardous Substances
- Standard Number: 1910.1030
- Title: Bloodborne pathogens.

1910.1030(a)
Scope and Application. This section applies to all occupational exposure to blood or other potentially infectious materials as defined by paragraph (b) of this section.
1910.1030(b)
Definitions. For purposes of this section, the following shall apply:

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

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

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

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

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

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

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

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

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

Engineering Controls means controls (e.g., sharps disposal containers, self-sheathing needles, safer medical devices, such as sharps with engineered sharps injury protections and needleless systems) that isolate or remove the bloodborne pathogens hazard from the workplace.

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

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

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

HBV means hepatitis B virus.

HIV means human immunodeficiency virus.

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

(1) The collection of bodily fluids or withdrawal of body fluids after initial venous or arterial access is established; (2) The administration of medication or fluids; or (3) Any other procedure involving the potential for occupational exposure to bloodborne pathogens due to percutaneous injuries from contaminated sharps.

Occupational Exposure means reasonably anticipated skin, eye, mucous membrane, or parenteral contact with blood or other potentially infectious materials that may result from the performance of an employee's duties.

Other Potentially Infectious Materials means (1) The following human body fluids: semen, vaginal secretions, cerebrospinal fluid, synovial fluid, pleural fluid, pericardial fluid, peritoneal fluid, amniotic fluid, saliva in dental procedures, any body fluid that is visibly contaminated with blood, and all body fluids in situations where it is difficult or impossible to differentiate between body fluids; (2) Any unfixed tissue or organ (other than intact skin) from a human (living or dead); and (3) HIV-containing cell or tissue cultures, organ cultures, and HIV- or HBV-containing culture medium or other solutions; and blood, organs, or other tissues from experimental animals infected with HIV or HBV.

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

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

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

Regulated Waste means liquid or semi-liquid blood or other potentially infectious materials; contaminated items that would release blood or other potentially infectious materials in a liquid or semi-liquid state if compressed; items that are caked with dried blood or other

potentially infectious materials and are capable of releasing these materials during handling; contaminated sharps; and pathological and microbiological wastes containing blood or other potentially infectious materials.

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

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

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

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

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

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

1910.1030(c)
Exposure Control --
1910.1030(c)(1)
Exposure Control Plan.
1910.1030(c)(1)(i)
Each employer having an employee(s) with occupational exposure as defined by paragraph (b) of this section shall establish a written Exposure Control Plan designed to eliminate or minimize employee exposure.
1910.1030(c)(1)(ii)
The Exposure Control Plan shall contain at least the following elements:
1910.1030(c)(1)(ii)(A)
The exposure determination required by paragraph (c)(2),
1910.1030(c)(1)(ii)(B)
The schedule and method of implementation for paragraphs (d) Methods of Compliance, (e) HIV and HBV Research Laboratories and Production Facilities, (f) Hepatitis B Vaccination and Post-Exposure Evaluation and Follow-up, (g) Communication of Hazards to Employees, and (h) Recordkeeping, of this standard, and
1910.1030(c)(1)(ii)(C)

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

1910.1030(c)(1)(iii)

Each employer shall ensure that a copy of the Exposure Control Plan is accessible to employees in accordance with 29 CFR 1910.1020(e).

1910.1030(c)(1)(iv)

The Exposure Control Plan shall be reviewed and updated at least annually and whenever necessary to reflect new or modified tasks and procedures which affect occupational exposure and to reflect new or revised employee positions with occupational exposure. The review and update of such plans shall also:

1910.1030(c)(1)(iv)(A)

Reflect changes in technology that eliminate or reduce exposure to bloodborne pathogens; and

1910.1030(c)(1)(iv)(B)

Document annually consideration and implementation of appropriate commercially available and effective safer medical devices designed to eliminate or minimize occupational exposure.

1910.1030(c)(1)(v)

An employer, who is required to establish an Exposure Control Plan shall solicit input from non-managerial employees responsible for direct patient care who are potentially exposed to injuries from contaminated sharps in the identification, evaluation, and selection of effective engineering and work practice controls and shall document the solicitation in the Exposure Control Plan.

1910.1030(c)(1)(vi)

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

1910.1030(c)(2)

Exposure Determination.

1910.1030(c)(2)(i)

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

1910.1030(c)(2)(i)(A)

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

1910.1030(c)(2)(i)(B)

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

1910.1030(c)(2)(i)(C)

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

1910.1030(c)(2)(ii)

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

1910.1030(d)

Methods of Compliance --

1910.1030(d)(1)

General. Universal precautions shall be observed to prevent contact with blood or other potentially infectious materials. Under circumstances in which differentiation between body fluid types is difficult or impossible, all body fluids shall be considered potentially infectious materials.

1910.1030(d)(2)

Engineering and Work Practice Controls.

1910.1030(d)(2)(i)

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

1910.1030(d)(2)(ii)

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

1910.1030(d)(2)(iii)

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

1910.1030(d)(2)(iv)

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

1910.1030(d)(2)(v)

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

1910.1030(d)(2)(vi)

Employers shall ensure that employees wash hands and any other skin with soap and water, or flush mucous membranes with water immediately or as soon as feasible following contact of such body areas with blood or other potentially infectious materials.

1910.1030(d)(2)(vii)

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

1910.1030(d)(2)(vii)(A)

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

1910.1030(d)(2)(vii)(B)

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

1910.1030(d)(2)(viii)

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

1910.1030(d)(2)(viii)(A)

Puncture resistant;

1910.1030(d)(2)(viii)(B)

Labeled or color-coded in accordance with this standard;

1910.1030(d)(2)(viii)(C)

Leakproof on the sides and bottom; and

1910.1030(d)(2)(viii)(D)

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

1910.1030(d)(2)(ix)

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

1910.1030(d)(2)(x)

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

1910.1030(d)(2)(xi)

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

1910.1030(d)(2)(xii)

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

1910.1030(d)(2)(xiii)

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

1910.1030(d)(2)(xiii)(A)

The container for storage, transport, or shipping shall be labeled or color-coded according to paragraph (g)(1)(i) and closed prior to being stored, transported, or shipped. When a facility utilizes Universal Precautions in the handling of all specimens, the labeling/color-coding of specimens is not necessary provided containers are recognizable as containing specimens. This exemption only applies while such specimens/containers remain within the facility. Labeling or color-coding in accordance with paragraph (g)(1)(i) is required when such specimens/containers leave the facility.

1910.1030(d)(2)(xiii)(B)

If outside contamination of the primary container occurs, the primary container shall be placed within a second container which prevents leakage during handling, processing, storage, transport, or shipping and is labeled or color-coded according to the requirements of this standard.

1910.1030(d)(2)(xiii)(C)

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

1910.1030(d)(2)(xiv)

Equipment which may become contaminated with blood or other potentially infectious materials shall be examined prior to servicing or shipping and shall be decontaminated as necessary, unless the employer can demonstrate that decontamination of such equipment or portions of such equipment is not feasible.

1910.1030(d)(2)(xiv)(A)

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

1910.1030(d)(2)(xiv)(B)

The employer shall ensure that this information is conveyed to all affected employees, the servicing representative, and/or the manufacturer, as appropriate, prior to handling, servicing, or shipping so that appropriate precautions will be taken.

1910.1030(d)(3)

Personal Protective Equipment --

1910.1030(d)(3)(i)

Provision. When there is occupational exposure, the employer shall provide, at no cost to the employee, appropriate personal protective equipment such as, but not limited to, gloves, gowns, laboratory coats, face shields or masks and eye protection, and mouthpieces, resuscitation bags, pocket masks, or other ventilation devices. Personal protective equipment will be considered "appropriate" only if it does not permit blood or other potentially infectious materials to pass through to or reach the employee's work clothes, street clothes,

undergarments, skin, eyes, mouth, or other mucous membranes under normal conditions of use and for the duration of time which the protective equipment will be used.

1910.1030(d)(3)(ii)

Use. The employer shall ensure that the employee uses appropriate personal protective equipment unless the employer shows that the employee temporarily and briefly declined to use personal protective equipment when, under rare and extraordinary circumstances, it was the employee's professional judgment that in the specific instance its use would have prevented the delivery of health care or public safety services or would have posed an increased hazard to the safety of the worker or co-worker. When the employee makes this judgment, the circumstances shall be investigated and documented in order to determine whether changes can be instituted to prevent such occurrences in the future.

1910.1030(d)(3)(iii)

Accessibility. The employer shall ensure that appropriate personal protective equipment in the appropriate sizes is readily accessible at the worksite or is issued to employees. Hypoallergenic gloves, glove liners, powderless gloves, or other similar alternatives shall be readily accessible to those employees who are allergic to the gloves normally provided.

1910.1030(d)(3)(iv)

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

1910.1030(d)(3)(v)

Repair and Replacement. The employer shall repair or replace personal protective equipment as needed to maintain its effectiveness, at no cost to the employee.

1910.1030(d)(3)(vi)

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

1910.1030(d)(3)(vii)

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

1910.1030(d)(3)(viii)

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

1910.1030(d)(3)(ix)

Gloves. Gloves shall be worn when it can be reasonably anticipated that the employee may have hand contact with blood, other potentially infectious materials, mucous membranes, and non-intact skin; when performing vascular access procedures except as specified in paragraph (d)(3)(ix)(D); and when handling or touching contaminated items or surfaces.

1910.1030(d)(3)(ix)(A)

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

1910.1030(d)(3)(ix)(B)

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

1910.1030(d)(3)(ix)(C)

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

1910.1030(d)(3)(ix)(D)

If an employer in a volunteer blood donation center judges that routine gloving for all phlebotomies is not necessary then the employer shall:
1910.1030(d)(3)(ix)(D)(1)
Periodically reevaluate this policy;
1910.1030(d)(3)(ix)(D)(2)
Make gloves available to all employees who wish to use them for phlebotomy;
1910.1030(d)(3)(ix)(D)(3)
Not discourage the use of gloves for phlebotomy; and
1910.1030(d)(3)(ix)(D)(4)
Require that gloves be used for phlebotomy in the following circumstances:
1910.1030(d)(3)(ix)(D)(4)(i)
When the employee has cuts, scratches, or other breaks in his or her skin;
1910.1030(d)(3)(ix)(D)(4)(ii)
When the employee judges that hand contamination with blood may occur, for example, when performing phlebotomy on an uncooperative source individual; and
1910.1030(d)(3)(ix)(D)(4)(iii)
When the employee is receiving training in phlebotomy.
1910.1030(d)(3)(x)
Masks, Eye Protection, and Face Shields. Masks in combination with eye protection devices, such as goggles or glasses with solid side shields, or chin-length face shields, shall be worn whenever splashes, spray, spatter, or droplets of blood or other potentially infectious materials may be generated and eye, nose, or mouth contamination can be reasonably anticipated.
1910.1030(d)(3)(xi)
Gowns, Aprons, and Other Protective Body Clothing. Appropriate protective clothing such as, but not limited to, gowns, aprons, lab coats, clinic jackets, or similar outer garments shall be worn in occupational exposure situations. The type and characteristics will depend upon the task and degree of exposure anticipated.
1910.1030(d)(3)(xii)
Surgical caps or hoods and/or shoe covers or boots shall be worn in instances when gross contamination can reasonably be anticipated (e.g., autopsies, orthopaedic surgery).
1910.1030(d)(4)
Housekeeping --
1910.1030(d)(4)(i)
General. Employers shall ensure that the worksite is maintained in a clean and sanitary condition. The employer shall determine and implement an appropriate written schedule for cleaning and method of decontamination based upon the location within the facility, type of surface to be cleaned, type of soil present, and tasks or procedures being performed in the area.
1910.1030(d)(4)(ii)
All equipment and environmental and working surfaces shall be cleaned and decontaminated after contact with blood or other potentially infectious materials.
1910.1030(d)(4)(ii)(A)
Contaminated work surfaces shall be decontaminated with an appropriate disinfectant after completion of procedures; immediately or as soon as feasible when surfaces are overtly contaminated or after any spill of blood or other potentially infectious materials; and at the end of the work shift if the surface may have become contaminated since the last cleaning.
1910.1030(d)(4)(ii)(B)
Protective coverings, such as plastic wrap, aluminum foil, or imperviously-backed absorbent paper used to cover equipment and environmental surfaces, shall be removed and replaced as

soon as feasible when they become overtly contaminated or at the end of the work shift if they may have become contaminated during the shift.

1910.1030(d)(4)(ii)(C)

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

1910.1030(d)(4)(ii)(D)

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

1910.1030(d)(4)(ii)(E)

Reusable sharps that are contaminated with blood or other potentially infectious materials shall not be stored or processed in a manner that requires employees to reach by hand into the containers where these sharps have been placed.

1910.1030(d)(4)(iii)

Regulated Waste --

1910.1030(d)(4)(iii)(A)

Contaminated Sharps Discarding and Containment.

1910.1030(d)(4)(iii)(A)(1)

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

1910.1030(d)(4)(iii)(A)(1)(i)

Closable;

1910.1030(d)(4)(iii)(A)(1)(ii)

Puncture resistant;

1910.1030(d)(4)(iii)(A)(1)(iii)

Leakproof on sides and bottom; and

1910.1030(d)(4)(iii)(A)(1)(iv)

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

1910.1030(d)(4)(iii)(A)(2)

During use, containers for contaminated sharps shall be:

1910.1030(d)(4)(iii)(A)(2)(i)

Easily accessible to personnel and located as close as is feasible to the immediate area where sharps are used or can be reasonably anticipated to be found (e.g., laundries);

1910.1030(d)(4)(iii)(A)(2)(ii)

Maintained upright throughout use; and

1910.1030(d)(4)(iii)(A)(2)(iii)

Replaced routinely and not be allowed to overfill.

1910.1030(d)(4)(iii)(A)(3)

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

1910.1030(d)(4)(iii)(A)(3)(i)

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

1910.1030(d)(4)(iii)(A)(3)(ii)

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

1910.1030(d)(4)(iii)(A)(3)(ii)(A)

Closable;

1910.1030(d)(4)(iii)(A)(3)(ii)(B)

Constructed to contain all contents and prevent leakage during handling, storage, transport, or shipping; and
1910.1030(d)(4)(iii)(A)(3)(ii)(C)
Labeled or color-coded according to paragraph (g)(1)(i) of this standard.
1910.1030(d)(4)(iii)(A)(4)
Reusable containers shall not be opened, emptied, or cleaned manually or in any other manner which would expose employees to the risk of percutaneous injury.
1910.1030(d)(4)(iii)(B)
Other Regulated Waste Containment --
1910.1030(d)(4)(iii)(B)(1)
Regulated waste shall be placed in containers which are:
1910.1030(d)(4)(iii)(B)(1)(i)
Closable;
1910.1030(d)(4)(iii)(B)(1)(ii)
Constructed to contain all contents and prevent leakage of fluids during handling, storage, transport or shipping;
1910.1030(d)(4)(iii)(B)(1)(iii)
Labeled or color-coded in accordance with paragraph (g)(1)(i) this standard; and
1910.1030(d)(4)(iii)(B)(1)(iv)
Closed prior to removal to prevent spillage or protrusion of contents during handling, storage, transport, or shipping.
1910.1030(d)(4)(iii)(B)(2)
If outside contamination of the regulated waste container occurs, it shall be placed in a second container. The second container shall be:
1910.1030(d)(4)(iii)(B)(2)(i)
Closable;
1910.1030(d)(4)(iii)(B)(2)(ii)
Constructed to contain all contents and prevent leakage of fluids during handling, storage, transport or shipping;
1910.1030(d)(4)(iii)(B)(2)(iii)
Labeled or color-coded in accordance with paragraph (g)(1)(i) of this standard; and
1910.1030(d)(4)(iii)(B)(2)(iv)
Closed prior to removal to prevent spillage or protrusion of contents during handling, storage, transport, or shipping.
1910.1030(d)(4)(iii)(C)
Disposal of all regulated waste shall be in accordance with applicable regulations of the United States, States and Territories, and political subdivisions of States and Territories.
1910.1030(d)(4)(iv)
Laundry.
1910.1030(d)(4)(iv)(A)
Contaminated laundry shall be handled as little as possible with a minimum of agitation.
1910.1030(d)(4)(iv)(A)(1)
Contaminated laundry shall be bagged or containerized at the location where it was used and shall not be sorted or rinsed in the location of use.
1910.1030(d)(4)(iv)(A)(2)
Contaminated laundry shall be placed and transported in bags or containers labeled or color-coded in accordance with paragraph (g)(1)(i) of this standard. When a facility utilizes Universal Precautions in the handling of all soiled laundry, alternative labeling or color-coding is

sufficient if it permits all employees to recognize the containers as requiring compliance with Universal Precautions.

1910.1030(d)(4)(iv)(A)(3)

Whenever contaminated laundry is wet and presents a reasonable likelihood of soak-through of or leakage from the bag or container, the laundry shall be placed and transported in bags or containers which prevent soak-through and/or leakage of fluids to the exterior.

1910.1030(d)(4)(iv)(B)

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

1910.1030(d)(4)(iv)(C)

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

1910.1030(e)

HIV and HBV Research Laboratories and Production Facilities.

1910.1030(e)(1)

This paragraph applies to research laboratories and production facilities engaged in the culture, production, concentration, experimentation, and manipulation of HIV and HBV. It does not apply to clinical or diagnostic laboratories engaged solely in the analysis of blood, tissues, or organs. These requirements apply in addition to the other requirements of the standard.

1910.1030(e)(2)

Research laboratories and production facilities shall meet the following criteria:

1910.1030(e)(2)(i)

Standard Microbiological Practices. All regulated waste shall either be incinerated or decontaminated by a method such as autoclaving known to effectively destroy bloodborne pathogens.

1910.1030(e)(2)(ii)

Special Practices.

1910.1030(e)(2)(ii)(A)

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

1910.1030(e)(2)(ii)(B)

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

1910.1030(e)(2)(ii)(C)

Access to the work area shall be limited to authorized persons. Written policies and procedures shall be established whereby only persons who have been advised of the potential biohazard, who meet any specific entry requirements, and who comply with all entry and exit procedures shall be allowed to enter the work areas and animal rooms.

1910.1030(e)(2)(ii)(D)

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

1910.1030(e)(2)(ii)(E)

All activities involving other potentially infectious materials shall be conducted in biological safety cabinets or other physical-containment devices within the containment module. No work with these other potentially infectious materials shall be conducted on the open bench.

1910.1030(e)(2)(ii)(F)
Laboratory coats, gowns, smocks, uniforms, or other appropriate protective clothing shall be used in the work area and animal rooms. Protective clothing shall not be worn outside of the work area and shall be decontaminated before being laundered.
1910.1030(e)(2)(ii)(G)
Special care shall be taken to avoid skin contact with other potentially infectious materials. Gloves shall be worn when handling infected animals and when making hand contact with other potentially infectious materials is unavoidable.
1910.1030(e)(2)(ii)(H)
Before disposal all waste from work areas and from animal rooms shall either be incinerated or decontaminated by a method such as autoclaving known to effectively destroy bloodborne pathogens.
1910.1030(e)(2)(ii)(I)
Vacuum lines shall be protected with liquid disinfectant traps and high-efficiency particulate air (HEPA) filters or filters of equivalent or superior efficiency and which are checked routinely and maintained or replaced as necessary.
1910.1030(e)(2)(ii)(J)
Hypodermic needles and syringes shall be used only for parenteral injection and aspiration of fluids from laboratory animals and diaphragm bottles. Only needle-locking syringes or disposable syringe-needle units (i.e., the needle is integral to the syringe) shall be used for the injection or aspiration of other potentially infectious materials. Extreme caution shall be used when handling needles and syringes. A needle shall not be bent, sheared, replaced in the sheath or guard, or removed from the syringe following use. The needle and syringe shall be promptly placed in a puncture-resistant container and autoclaved or decontaminated before reuse or disposal.
1910.1030(e)(2)(ii)(K)
All spills shall be immediately contained and cleaned up by appropriate professional staff or others properly trained and equipped to work with potentially concentrated infectious materials.
1910.1030(e)(2)(ii)(L)
A spill or accident that results in an exposure incident shall be immediately reported to the laboratory director or other responsible person.
1910.1030(e)(2)(ii)(M)
A biosafety manual shall be prepared or adopted and periodically reviewed and updated at least annually or more often if necessary. Personnel shall be advised of potential hazards, shall be required to read instructions on practices and procedures, and shall be required to follow them.
1910.1030(e)(2)(iii)
Containment Equipment.
1910.1030(e)(2)(iii)(A)
Certified biological safety cabinets (Class I, II, or III) or other appropriate combinations of personal protection or physical containment devices, such as special protective clothing, respirators, centrifuge safety cups, sealed centrifuge rotors, and containment caging for animals, shall be used for all activities with other potentially infectious materials that pose a threat of exposure to droplets, splashes, spills, or aerosols.
1910.1030(e)(2)(iii)(B)
Biological safety cabinets shall be certified when installed, whenever they are moved and at least annually.
1910.1030(e)(3)

HIV and HBV research laboratories shall meet the following criteria:

1910.1030(e)(3)(i)

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

1910.1030(e)(3)(ii)

An autoclave for decontamination of regulated waste shall be available.

1910.1030(e)(4)

HIV and HBV production facilities shall meet the following criteria:

1910.1030(e)(4)(i)

The work areas shall be separated from areas that are open to unrestricted traffic flow within the building. Passage through two sets of doors shall be the basic requirement for entry into the work area from access corridors or other contiguous areas. Physical separation of the high-containment work area from access corridors or other areas or activities may also be provided by a double-doored clothes-change room (showers may be included), airlock, or other access facility that requires passing through two sets of doors before entering the work area.

1910.1030(e)(4)(ii)

The surfaces of doors, walls, floors and ceilings in the work area shall be water resistant so that they can be easily cleaned. Penetrations in these surfaces shall be sealed or capable of being sealed to facilitate decontamination.

1910.1030(e)(4)(iii)

Each work area shall contain a sink for washing hands and a readily available eye wash facility. The sink shall be foot, elbow, or automatically operated and shall be located near the exit door of the work area.

1910.1030(e)(4)(iv)

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

1910.1030(e)(4)(v)

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

1910.1030(e)(4)(vi)

A ducted exhaust-air ventilation system shall be provided. This system shall create directional airflow that draws air into the work area through the entry area. The exhaust air shall not be recirculated to any other area of the building, shall be discharged to the outside, and shall be dispersed away from occupied areas and air intakes. The proper direction of the airflow shall be verified (i.e., into the work area).

1910.1030(e)(5)

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

1910.1030(f)

Hepatitis B Vaccination and Post-exposure Evaluation and Follow-up --

1910.1030(f)(1)

General.

1910.1030(f)(1)(i)

The employer shall make available the hepatitis B vaccine and vaccination series to all employees who have occupational exposure, and post-exposure evaluation and follow-up to all employees who have had an exposure incident.

1910.1030(f)(1)(ii)

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

1910.1030(f)(1)(ii)(A)

Made available at no cost to the employee;

1910.1030(f)(1)(ii)(B)

Made available to the employee at a reasonable time and place;

1910.1030(f)(1)(ii)(C)

Performed by or under the supervision of a licensed physician or by or under the supervision of another licensed healthcare professional; and

1910.1030(f)(1)(ii)(D)

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

1910.1030(f)(1)(iii)

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

1910.1030(f)(2)

Hepatitis B Vaccination.

1910.1030(f)(2)(i)

Hepatitis B vaccination shall be made available after the employee has received the training required in paragraph (g)(2)(vii)(I) and within 10 working days of initial assignment to all employees who have occupational exposure unless the employee has previously received the complete hepatitis B vaccination series, antibody testing has revealed that the employee is immune, or the vaccine is contraindicated for medical reasons.

1910.1030(f)(2)(ii)

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

1910.1030(f)(2)(iii)

If the employee initially declines hepatitis B vaccination but at a later date while still covered under the standard decides to accept the vaccination, the employer shall make available hepatitis B vaccination at that time.

1910.1030(f)(2)(iv)

The employer shall assure that employees who decline to accept hepatitis B vaccination offered by the employer sign the statement in Appendix A.

1910.1030(f)(2)(v)

If a routine booster dose(s) of hepatitis B vaccine is recommended by the U.S. Public Health Service at a future date, such booster dose(s) shall be made available in accordance with section (f)(1)(ii).

1910.1030(f)(3)

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

1910.1030(f)(3)(i)

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

1910.1030(f)(3)(ii)

Identification and documentation of the source individual, unless the employer can establish that identification is infeasible or prohibited by state or local law;

1910.1030(f)(3)(ii)(A)

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

1910.1030(f)(3)(ii)(B)

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

1910.1030(f)(3)(ii)(C)

Results of the source individual's testing shall be made available to the exposed employee, and the employee shall be informed of applicable laws and regulations concerning disclosure of the identity and infectious status of the source individual.

1910.1030(f)(3)(iii)

Collection and testing of blood for HBV and HIV serological status;

1910.1030(f)(3)(iii)(A)

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

1910.1030(f)(3)(iii)(B)

If the employee consents to baseline blood collection, but does not give consent at that time for HIV serologic testing, the sample shall be preserved for at least 90 days. If, within 90 days of the exposure incident, the employee elects to have the baseline sample tested, such testing shall be done as soon as feasible.

1910.1030(f)(3)(iv)

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

1910.1030(f)(3)(v)

Counseling; and

1910.1030(f)(3)(vi)

Evaluation of reported illnesses.

1910.1030(f)(4)

Information Provided to the Healthcare Professional.

1910.1030(f)(4)(i)

The employer shall ensure that the healthcare professional responsible for the employee's Hepatitis B vaccination is provided a copy of this regulation.

1910.1030(f)(4)(ii)

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

1910.1030(f)(4)(ii)(A)

A copy of this regulation;

1910.1030(f)(4)(ii)(B)

A description of the exposed employee's duties as they relate to the exposure incident;

1910.1030(f)(4)(ii)(C)

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

1910.1030(f)(4)(ii)(D)

Results of the source individual's blood testing, if available; and

1910.1030(f)(4)(ii)(E)

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

1910.1030(f)(5)

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

1910.1030(f)(5)(i)

The healthcare professional's written opinion for Hepatitis B vaccination shall be limited to whether Hepatitis B vaccination is indicated for an employee, and if the employee has received such vaccination.

1910.1030(f)(5)(ii)

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

1910.1030(f)(5)(ii)(A)

That the employee has been informed of the results of the evaluation; and

1910.1030(f)(5)(ii)(B)

That the employee has been told about any medical conditions resulting from exposure to blood or other potentially infectious materials which require further evaluation or treatment.

1910.1030(f)(5)(iii)

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

1910.1030(f)(6)

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

1910.1030(g)

Communication of Hazards to Employees --

1910.1030(g)(1)

Labels and Signs --

1910.1030(g)(1)(i)

Labels.

1910.1030(g)(1)(i)(A)

Warning labels shall be affixed to containers of regulated waste, refrigerators and freezers containing blood or other potentially infectious material; and other containers used to store, transport or ship blood or other potentially infectious materials, except as provided in paragraph (g)(1)(i)(E), (F) and (G).

1910.1030(g)(1)(i)(B)

Labels required by this section shall include the universal biohazard symbol.

1910.1030(g)(1)(i)(C)

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

1910.1030(g)(1)(i)(D)

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

1910.1030(g)(1)(i)(E)

Red bags or red containers may be substituted for labels.

1910.1030(g)(1)(i)(F)

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

1910.1030(g)(1)(i)(G)

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

1910.1030(g)(1)(i)(H)

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

1910.1030(g)(1)(i)(I)

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

1910.1030(g)(1)(ii)

Signs.

1910.1030(g)(1)(ii)(A)

The employer shall post signs at the entrance to work areas specified in paragraph (e), HIV and HBV Research Laboratory and Production Facilities, which shall bear the universal biohazard symbol.

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

1910.1030(g)(1)(ii)(B)

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

1910.1030(g)(2)

Information and Training.

1910.1030(g)(2)(i)

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

1910.1030(g)(2)(ii)

Training shall be provided as follows:

1910.1030(g)(2)(ii)(A)

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

1910.1030(g)(2)(ii)(B)

At least annually thereafter.

1910.1030(g)(2)(iii)

[Reserved]

1910.1030(g)(2)(iv)

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

1910.1030(g)(2)(v)

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

1910.1030(g)(2)(vi)

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

1910.1030(g)(2)(vii)

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

1910.1030(g)(2)(vii)(A)

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

1910.1030(g)(2)(vii)(B)

A general explanation of the epidemiology and symptoms of bloodborne diseases;

1910.1030(g)(2)(vii)(C)

An explanation of the modes of transmission of bloodborne pathogens;

1910.1030(g)(2)(vii)(D)

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

1910.1030(g)(2)(vii)(E)

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

1910.1030(g)(2)(vii)(F)

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

1910.1030(g)(2)(vii)(G)

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

1910.1030(g)(2)(vii)(H)

An explanation of the basis for selection of personal protective equipment;

1910.1030(g)(2)(vii)(I)

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

1910.1030(g)(2)(vii)(J)

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

1910.1030(g)(2)(vii)(K)

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

1910.1030(g)(2)(vii)(L)

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

1910.1030(g)(2)(vii)(M)

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

1910.1030(g)(2)(vii)(N)

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

1910.1030(g)(2)(viii)

The person conducting the training shall be knowledgeable in the subject matter covered by the elements contained in the training program as it relates to the workplace that the training will address.

1910.1030(g)(2)(ix)

Additional Initial Training for Employees in HIV and HBV Laboratories and Production Facilities. Employees in HIV or HBV research laboratories and HIV or HBV production facilities shall receive the following initial training in addition to the above training requirements.
1910.1030(g)(2)(ix)(A)
The employer shall assure that employees demonstrate proficiency in standard microbiological practices and techniques and in the practices and operations specific to the facility before being allowed to work with HIV or HBV.
1910.1030(g)(2)(ix)(B)
The employer shall assure that employees have prior experience in the handling of human pathogens or tissue cultures before working with HIV or HBV.
1910.1030(g)(2)(ix)(C)
The employer shall provide a training program to employees who have no prior experience in handling human pathogens. Initial work activities shall not include the handling of infectious agents. A progression of work activities shall be assigned as techniques are learned and proficiency is developed. The employer shall assure that employees participate in work activities involving infectious agents only after proficiency has been demonstrated.
1910.1030(h)
Recordkeeping --
1910.1030(h)(1)
Medical Records.
1910.1030(h)(1)(i)
The employer shall establish and maintain an accurate record for each employee with occupational exposure, in accordance with 29 CFR 1910.1020.
1910.1030(h)(1)(ii)
This record shall include:
1910.1030(h)(1)(ii)(A)
The name and social security number of the employee;
1910.1030(h)(1)(ii)(B)
A copy of the employee's hepatitis B vaccination status including the dates of all the hepatitis B vaccinations and any medical records relative to the employee's ability to receive vaccination as required by paragraph (f)(2);
1910.1030(h)(1)(ii)(C)
A copy of all results of examinations, medical testing, and follow-up procedures as required by paragraph (f)(3);
1910.1030(h)(1)(ii)(D)
The employer's copy of the healthcare professional's written opinion as required by paragraph (f)(5); and
1910.1030(h)(1)(ii)(E)
A copy of the information provided to the healthcare professional as required by paragraphs (f)(4)(ii)(B)(C) and (D).
1910.1030(h)(1)(iii)
Confidentiality. The employer shall ensure that employee medical records required by paragraph (h)(1) are:
1910.1030(h)(1)(iii)(A)
Kept confidential; and
1910.1030(h)(1)(iii)(B)
Not disclosed or reported without the employee's express written consent to any person within or outside the workplace except as required by this section or as may be required by law.
1910.1030(h)(1)(iv)

The employer shall maintain the records required by paragraph (h) for at least the duration of employment plus 30 years in accordance with 29 CFR 1910.1020.

1910.1030(h)(2)

Training Records.

1910.1030(h)(2)(i)

Training records shall include the following information:

1910.1030(h)(2)(i)(A)

The dates of the training sessions;

1910.1030(h)(2)(i)(B)

The contents or a summary of the training sessions;

1910.1030(h)(2)(i)(C)

The names and qualifications of persons conducting the training; and

1910.1030(h)(2)(i)(D)

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

1910.1030(h)(2)(ii)

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

1910.1030(h)(3)

Availability.

1910.1030(h)(3)(i)

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

1910.1030(h)(3)(ii)

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

1910.1030(h)(3)(iii)

Employee medical records required by this paragraph shall be provided upon request for examination and copying to the subject employee, to anyone having written consent of the subject employee, to the Director, and to the Assistant Secretary in accordance with 29 CFR 1910.1020.

1910.1030(h)(4)

Transfer of Records.

1910.1030(h)(4)(i)

The employer shall comply with the requirements involving transfer of records set forth in 29 CFR 1910.1020(h).

1910.1030(h)(4)(ii)

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

1910.1030(h)(5)

Sharps injury log.

1910.1030(h)(5)(i)

The employer shall establish and maintain a sharps injury log for the recording of percutaneous injuries from contaminated sharps. The information in the sharps injury log shall be recorded and maintained in such manner as to protect the confidentiality of the injured employee. The sharps injury log shall contain, at a minimum:

1910.1030(h)(5)(i)(A)

The type and brand of device involved in the incident,
1910.1030(h)(5)(i)(B)
The department or work area where the exposure incident occurred, and
1910.1030(h)(5)(i)(C)
An explanation of how the incident occurred.
1910.1030(h)(5)(ii)
The requirement to establish and maintain a sharps injury log shall apply to any employer who is required to maintain a log of occupational injuries and illnesses under 29 CFR 1904.
1910.1030(h)(5)(iii)
The sharps injury log shall be maintained for the period required by 29 CFR 1904.6.
1910.1030(i)
Dates --
1910.1030(i)(1)
Effective Date. The standard shall become effective on March 6, 1992.
1910.1030(i)(2)
The Exposure Control Plan required by paragraph (c) of this section shall be completed on or before May 5, 1992.
1910.1030(i)(3)
Paragraph (g)(2) Information and Training and (h) Recordkeeping shall take effect on or before June 4, 1992.
1910.1030(i)(4)
Paragraphs (d)(2) Engineering and Work Practice Controls, (d)(3) Personal Protective Equipment, (d)(4) Housekeeping, (e) HIV and HBV Research Laboratories and Production Facilities, (f) Hepatitis B Vaccination and Post-Exposure Evaluation and Follow-up, and (g)(1) Labels and Signs, shall take effect July 6, 1992.

[56 FR 64004, Dec. 06, 1991, as amended at 57 FR 12717, April 13, 1992; 57 FR 29206, July 1, 1992; 61 FR 5507, Feb. 13, 1996; 66 FR 5325 Jan., 18, 2001; 71 FR 16672 and 16673, April 3, 2006]

Appendix B: NAU Equipment Release Form

NAU NORTHERN ARIZONA UNIVERSITY	**Environmental Health & Safety** **Equipment Release Form** 2023-4-17 Rev.10

Date: _____Building:_____Room:_____

Supervisor/Principal Investigator/Departmental Representative:_____

Type of Equipment: _____

Service to Be Performed: _____

Destination/Service Department:_____

☐ Not Applicable/Never Contaminated

☐ Method of Decontamination Used to Remove Chemical Contamination:

_____

☐ Method of Decontamination Used to Remove Radiological Contamination:

_____

☐ Method of Decontamination Used to Remove Biological Contamination:

_____

I certify that the above listed equipment is free of contamination/hazardous agents, and that it is safe to release to unrestricted areas and/or perform the work described above.

Person Performing Decontamination: Signature of Supervisor/PI/Representative:

_____ _____

Equipment Release Information Call List	
Chemical Safety / Hazardous Waste	523-5903 / 523-1146
Radiation Safety	523-6109
Biological Safety	523-7268 / 523-4782
Building Material Safety	523-6435
Property Surplus Manager	523-6391
For emergencies involving the release of chemical, biological, or radiological materials, call the NAU Police at 911	

***Please note:** In addition to this form, equipment previously used in Radiation areas must also be accompanied by a completed Radioactive area/article decommissioning log.

NAU NORTHERN ARIZONA UNIVERSITY	**Environmental Health & Safety** **Equipment Release Procedure** 2023-4-17 Rev.10

Equipment Release Procedure for Maintenance/Repair, Relocation, and/or Surplus

Purpose
These procedures apply to the safe maintenance or repair, relocation, or surplus of any NAU property which may have been exposed to various contaminants. These contaminants may include hazardous chemicals, radiological, or biological substances. Property includes all scientific/medical equipment and any office furniture/equipment or supplies that have been used in laboratories, clinical areas, animal care facilities or other potentially hazardous locations. Procedures are also specified for abandoned property. These procedures are intended for use by NAU employees involved in the oversight, maintenance and repair, decontamination, relocation and surplus of NAU property with the intent of maintaining a safe workplace and hazard-free equipment.

Property Maintenance/Repair, Relocation, or Surplus
All NAU property which may have been exposed to hazardous materials must be certified to be free of hazards with an Equipment Release Form completed by the last user or responsible party prior to:

- relocation on or off-campus
- maintenance or repair work by NAU staff or contractors
- release of the NAU property through NAU Property Surplus

Equipment Release Form
The NAU Equipment Release Form has been developed by Environmental Health & Safety (EHS) in order to assure proper decontamination of NAU property, when needed, prior to release for maintenance or repair, relocation, or surplus through NAU Property Surplus. This form must be completed by the last user of the equipment or responsible person (departmental representative), and attached to the equipment prior to requests for maintenance or repair, requests for relocation or NAU Property Surplus pick-up. Surplus items may eventually be released for sale, or disposed as normal trash or scrap. In some cases, decontamination of equipment or property will be necessary. Decontamination processes are outlined within this procedure and are the responsibility of the department.

Abandoned Property
Abandoned property is defined as any property which is in an inappropriate location and has no known user. Abandoned property can cause space, security, and health and safety issues.

Supervisors/Principal Investigators/Departmental Representatives are responsible for keeping abandoned property from cluttering corridors and building areas. The NAU Fire Life Safety or EHS or other responsible officials may require that abandoned property be moved when it impedes the normal flow of traffic, creates a hazard, or for other reasons.

Abandoned property will be identified with a sticker or form that indicates the property will be removed within one week if not claimed by the owner. Individuals marking abandoned property for movement must coordinate with EHS concerning certification that the abandoned property is free from contamination or other hazards.

Chemical Decontamination:
Studies indicate that a large percentage of chemical contamination can be removed from environmental surfaces by scrubbing with detergent and water. As a general rule, this basic cleaning technique should be used for decontaminating the surfaces of scientific equipment which contain chemical residues. However, if the chemical is known to be extremely persistent and is more soluble in a non-aqueous medium, consider first wiping with an appropriate solvent, then washing with detergent and water.

Wear appropriate personal protective equipment, such as safety glasses, gloves, and lab coat to avoid unnecessary exposure to surface contaminants while cleaning. If the chemical contaminant is considered too toxic to risk exposure while scrubbing and rinsing, select and use a surface decontamination procedure in which the toxic material decomposes to form a safe product. EHS can advise on effective in-situ destruction techniques for some chemicals.

If the chemical contaminant is considered hazardous and cannot be effectively neutralized on the surface of the equipment, any wash water resulting from scrubbing with detergent and water is to be treated as chemical waste and must be disposed of according to the guidelines of the EHS hazardous waste disposal policy. Contact EHS for information regarding the proper collection, labeling, and disposal of contaminated wash water.

These recommendations do not apply to the treatment of an overt spill of hazardous chemicals. Should a spill occur, call the NAU Police, 911, for assistance.

Radioactive Material Decontamination:
Before any property is permitted to be removed from a radioactive materials laboratory, whether or not labeled as contaminated, it must be surveyed using appropriate methods for the presence of radioactivity. If you have questions regarding appropriate monitoring methods, decontamination procedures, or how to handle a situation where contamination cannot be removed, please contact EHS. Equipment may be decontaminated by one of the following methods. If these methods are not adequate contact EHS.

Method #1: Tape patch for dry or localized contamination.
1. Place masking, adhesive, friction, or duct tape over the contaminated area.
2. Remove tape and dispose of as radioactive waste.
3. Repeat as necessary.

Method #2: Wiping or mopping of dust or accumulated contamination.
1. Wipe contaminated area with a wet mop, cloth, or towel.
2. A decontaminating agent or mild soap and hot water may be applied to mop, cloth or towel.
3. Rinse area with clean water.
4. Repeat as necessary.
5. Dispose of contaminated materials as radioactive waste.

Method #3: Detergents for nonporous surfaces with accumulated film contamination.
Apply detergents at full strength or per manufacture's recommendation. Application may be by the use of a mist applicator, using caution to prevent spread of contamination to other surfaces.

1. Vigorously wipe area with a towel/rag/brush being careful not to spread contamination.
2. Rinse area with clean water.
3. Repeat as necessary.
4. Dispose of contaminated materials as radioactive waste.

After monitoring to ensure that such items are free of radioactive contamination, any radioactive warning signs, labels, tape, or other indicators must be completely defaced or removed. Property must be tagged with a completed Equipment Release Form. Principal Users, as designated on the approved radioactive materials protocol, are to sign the certification tag for property that was formerly used with radioactive materials. Freezers, refrigerators, and centrifuges must be certified free of contamination by EHS, call to make arrangements for this clearance.

Liquid Scintillation counters, gamma counters, and gas chromatographs with Ni-63 electron capture detectors require special procedures because they contain an internal radioactive source that must be removed prior to surplus. Although not all gamma counters have an internal radioactive source they all must undergo special clearance procedures before being moved. Contact EHS to make arrangements for movement of this type of equipment.

Biological Decontamination:
All equipment used to handle or store biological agents or equipment located in a biological laboratory (e.g., freezers, incubators, centrifuges, etc.) must be decontaminated with bleach or another EPA-registered disinfectant http://www.epa.gov/oppad001/chemregindex.htm.
Wear appropriate personal protective equipment; such as safety glasses, gloves, and lab coat to avoid unnecessary exposure to surface contaminants while cleaning. Spray an EPA-registered disinfectant on the equipment. In most cases, a 1:9 bleach:water solution can be used to disinfect biological agents. Allow disinfectant to remain on the equipment for the appropriate contact time (at least 20 minutes). Remove the disinfectant from the equipment.

Biological Safety Cabinets:
Laboratory personnel are NOT permitted to perform or certify the decontamination of a biological safety cabinet that is being moved. A certified vendor must be contacted to conduct the decontamination process and certify the unit prior to moving.

Sharps:
Sharps (any object that can puncture or lacerate the skin, such as syringes, razor blades, glass and some plastics) pose both a physical and potential biological or chemical hazard depending on what they were used for. All sharps must be removed from equipment before it will be removed by Surplus Property employees or serviced by NAU or contractor maintenance personnel.

Appendix C: Summary and Comparison of Liquid Disinfectants (Page 1)

Commonly used disinfectants, recommended when appropriate.

Class	Recommended Use	How They Work	Advantages	Disadvantages	Comments/Hazards	Examples
70% Isopropyl alcohol solution	· Cleaning some instruments · Cleaning skin	· Changes protein structure of microorganism · Presence of water assists with killing action	· Fairly inexpensive	· <50% solution not very effective · Not active when organic matter present · Not active against certain types of viruses · Evaporates quickly - contact time not sufficient for killing	·Flammable ·Eye Irritant ·Toxic	
Chlorine compounds	· Spills of human body fluids · Bactericidal - Good · Fungicidal - Good · Sporicidal - Good at >1000 ppm Sodium Hypochlorite	· Free available chlorine combines with contents within microorganism - reaction byproducts cause its death · Need 500 to 5000 ppm · Produce chemical combination with cell substances · Depend upon release of hypochlorous acid	· Kill hardy viruses (e.g., hepatitis) · Kill a wide range of organisms · Inexpensive · Penetrates well · Relatively quick microbial kill · May be used on food prep surfaces	· Corrode metals such as stainless, aluminum · Organics may reduce activity · Increase in alkalinity decreases bactericidal property · Unpleasant taste and odor · Tuberculocidal - with extended contact time	· Follow spill procedure and dilution instructions · Make fresh solutions before use · Eye, skin, and respiratory irritant ·Corrosive ·Toxic	· Bleach solutions (sodium hypochlorite) · Clorox · Cryosan · Purex
Glutaraldehyde	· Bactericidal - Good · Fungicidal - Good · Tuberculocidal - Excellent · Virucidal - Good · Sporicidal - Good	· Coagulates cellular proteins	· Non-staining, relatively non-corrosive · Useable as a sterilant on plastics, rubber, lenses, stainless steel, and other items that can't be autoclaved	· Not stable in solution · Has to be in alkaline solution · Inactivated by organic material	·Eye, skin and respiratory irritant. ·Sensitizer ·Toxic	· Calgocide 14 · Cidex · Vespore

Summary and Comparison of Liquid Disinfectants (Page 2)

Class	Recommended Use	How They Work	Advantages	Disadvantages	Comments/Hazards	Examples
Iodophors (iodine with carrier)	· Disinfecting some semi-critical medical equipment · Bactericidal - Very Good · Fungicidal - Excellent · Virucidal - Excellent	· Free iodine enters microorganism and binds with its cellular components · Carrier helps penetrate soil/fat · Need 30 to 50 ppm · Probably by disorder of protein synthesis due to hindrance and/or blocking of hydrogen bonding	· Kill broad range of organisms · Highly reactive · Low tissue toxicity · Kill immediately rather than by prolonged period of stasis · Not affected by hard water · May be used on food prep surfaces	· May stain plastics or corrode metal · May stain skin/laundry · Stains most materials · Odor · Some organic and inorganic substances neutralize effect · Tuberculocidal - with extended contact time · Sporicidal - some	· Dilution critical - follow directions! · Use only EPA-registered hard surface iodophor disinfectants · Don't confuse skin antiseptic iodophors for disinfectants ·Skin and eye irritant ·Corrosive ·Toxic	· Bactergent · Hy-Sine · Ioprep · Providone-iodine; betadine · Wescodyne
Phenolic Compounds	· Bactericidal - Excellent · Fungicidal - Excellent · Tuberculocidal - Excellent · Virucidal - Excellent	· Gross protoplasmic poison · Disrupts cell walls · Precipitates cell proteins · Low concentrations inactivate essential enzyme systems	· Nonspecific concerning bactericidal and fungicidal action · When boiling water would cause rusting, the presence of phenolic substances produces an anti-rusting effect	· Unpleasant odor · Some areas have disposal restrictions · Effectiveness reduced by alkaline pH, natural soap, or organic material · Sporicidal - NO	·Skin and eye irritant ·Sensitizer ·Corrosive ·Toxic	· Hil-Phene · Lph · Metar · Vesphene
Quaternary ammonium compounds (QUATS)	· Ordinary housekeeping (e.g., floors, furniture, walls) · Bactericidal - Excellent · Fungicidal - Good · Virucidal - Good (not as effective as phenols)	· Affect proteins and cell membrane of microorganism · Release nitrogen and phosphorous from cells	· Contain a detergent to help loosen soil · Rapid action · Colorless, odorless · Non-toxic, less corrosive · Highly stable · May be used on food prep surfaces	· Do not eliminate spores, TB bacteria, some viruses · Effectiveness influenced by hard water · Layer of soap interferes with action	· Select from EPA list of hospital disinfectants ·Skin and eye irritant ·Toxic	· Coverage 258 · End-Bac · Hi Tor

Appendix D: Hepatitis B Vaccination and Declination Forms

NAU Hepatitis B Vaccination Form

Instructions: Bring this form with you to your vaccination appointments with a Licensed Healthcare Professional. When the vaccination series is complete, please send this form to Environmental Health and Safety via fax 928-523-0050, or email to biosafety@nau.edu.

Employee Name:	**Department:**
Job Title:	**PI/Supervisor Name:**
NAU ID No.:	**Email Address:**
Local Address (or NAU Box):	**Work/Home Phone:**

My employer has provided me with information on how to receive the vaccination free-of-charge. I understand that I am responsible for scheduling (within 10 days of training/initial assignment) and keeping my appointments to receive the hepatitis B vaccination series. I acknowledge that I have been provided with a copy of the CDC Hepatitis B Vaccine Information Statement. I have read and understood the information provided to me. I understand this vaccination includes three injections at prescribed intervals over a 6-month period, there is no guarantee that I will become immune to hepatitis B and that I might experience an adverse side effect as the result of the vaccination. I understand the benefits and risk of the vaccine, I have discussed any concerns or questions with a NAU Bloodborne Pathogens Instructor and/or my physician or nurse, and I consent to receive this vaccine. I consent to Environmental Health and Safety personnel confidentially maintaining my hepatitis B vaccination records.

Employee Signature:	**Date:**

---------- *Below this line to be completed by Licensed Healthcare Professional* ----------

	Date Vaccinated	**Lot #**	**Injection Site**	**Signature of Licensed Healthcare Professional**
1				
2				
3				

Please forward a copy of this completed form to **Environmental Health and Safety, Box 4137.** Provide a copy of this form to your PI/Supervisor. One copy of this form must be maintained in the workplace and be readily available for inspection purposes. A copy must also be retained by the individual.

NAU Hepatitis B Declination Form

My employer has provided me with information on how to receive the hepatitis B vaccination free-of-charge. If I elect to be vaccinated, I understand that I am responsible for scheduling (within 10 days of training/initial assignment) and keeping my appointments to receive the hepatitis B vaccination series. I understand this includes three injections at prescribed intervals over a 6-month period. I understand that there is no guarantee that I will become immune to hepatitis B and that I might experience an adverse side effect as the result of the vaccination. I acknowledge that I must provide proof of vaccination to Environmental Health and Safety, Box 4137, either through vaccination documentation from the healthcare professional that administered the vaccination series or using the NAU Hepatitis B Vaccination Form.

I understand that due to my occupational exposure to human blood or other potentially infectious materials (OPIM), including tissues, fluids, cells, cell lines, etc. I may be at risk of acquiring hepatitis B virus (HBV) infection which can potentially cause a serious disease. I have been given the opportunity to be vaccinated with hepatitis B vaccine, at no charge to myself. However, I decline the hepatitis B vaccination at this time. If in the future I continue to have occupational exposure to potentially infectious material and I want to be vaccinated with the hepatitis B vaccine, I can receive the vaccination series at no charge to me.

Potential reasons for declining vaccination:

- Previously completed the hepatitis B vaccination series
- Received antibody testing to confirm immunity to hepatitis B
- Vaccine is contraindicated for medical reasons
- Will not be working with human blood, tissues, fluid, cells, or cell lines
- Philosophical or other objection

I Decline the Hepatitis B Vaccination [Pursuant to 29 CFR § 1910.1030(f)(2)(iv)]

Employee Signature _____ Date _____

Employee Name:	**Department:**
Job Title:	**PI/Supervisor Name:**
NAU ID No.:	**Email Address:**

One copy of this completed form **must be submitted to**: **Environmental Health and Safety, Box 4137.** Provide a copy of this form to your PI/Supervisor. One copy of this form must be maintained in the workplace and be readily available for inspection purposes. A copy must also be retained by the individual.

Appendix E: Employee Reporting of Significant Work Exposure to Bodily Fluids Guidance & Forms

Protocol for Employee Reporting of Significant Work Exposure to Bodily Fluids or Other Infectious Material

What Is a Significant Exposure Under the Arizona Workers' Compensation Act?

Northern Arizona University (NAU) has established this guidance for employees and their supervisors in response to a significant exposure at work, which generally means contact of an employee's ruptured or broken skin or mucous membrane with another person's blood, semen, vaginal fluid, surgical fluid(s) or any other fluid(s) containing blood or other potentially infectious material. A report of significant work exposure to blood, bodily fluids, or other potentially infectious materials may be made by completing an Industrial Commission of Arizona (AZICA) form that reports this exposure. Additional information and a fillable form can be found on the AZICA website.

If you believe that you have had a significant exposure, promptly initiate the following steps:

1. First aid:
   - Wash needle sticks and cuts with soap and water.
   - Flush splashes to the nose, mouth, or skin with water.
   - Irrigate eyes with clean water, saline, or other sterile irrigant.
2. Notify your Supervisor as soon as possible.
3. At the earliest opportunity, preferably within 24 hours of your exposure, complete the Online Report of Injury form with your supervisor, and submit the completed form to NAU Human Resources (HR). Retain a copy for your records. HR will submit this document to Arizona State Risk Management.
4. Seek medical attention. NAU Employees who experience exposure at work will receive standard medical testing as prescribed for the exposure at no cost to the employee. If an infection occurs as a result of your exposure, a workers' compensation claim will be opened within the provisions of the Arizona Workers' Compensation Law, and the rules of the Industrial Commission of Arizona. Note: **An employee must consult a physician to support a claim.** The following Health Care Providers (HCPs) have working knowledge of NAU's Significant Work Exposure Protocol:
   - Flagstaff Industrial Medicine
   - Concentra Medical Center
   - Flagstaff Medical Center (for afterhours emergencies)
5. If you have specific information about the infectious agent to which you were exposed, or a current vaccination record, make those available to the HCP at the time of your first visit.
6. Inform the HCP that fees incurred for vaccinations, lab work or treatment **as a result of this exposure** will be covered by NAU and should be sent to: NAU Human Resources, PO Box 4113, Flagstaff, AZ 86011

Additional Resources:

Environmental Health and Safety, Director of Biological Safety	928-523-7268
NAU Human Resources	928-523-2223
Industrial Commission of Arizona	602-542-4661

REPORT OF SIGNIFICANT WORK EXPOSURE TO BODILY FLUIDS OR OTHER INFECTIOUS MATERIAL

(This form is not a claim form, but a report of exposure. Forms to report a claim to the Industrial Commission are available at: www.azica.gov .)

1. Exposed Employee _____ Birth Date _____ Job Title _____
   Last Name First M.I.
2. Address _____ Phone No. _____
3. Employer's Full Name _____
4. Employer's Address _____
5. Date of Exposure _____ Time of Exposure _____ A.M. _____ P.M. _____
6. Address or Location of Exposure _____
7. Describe the circumstances surrounding the exposure, including (if applicable) personal protective equipment worn and the names of any witnesses to the exposure (be specific) _____
   _____
   _____
8. What were you exposed to? (Directly or indirectly via bandages, personal items, etc.) Check all that apply.
   ☐ Blood ☐ Vaginal fluid ☐ Broken skin ☐ Urine ☐ Any other fluid(s) containing blood or infectious material (Describe)_____
   ☐ Semen ☐ Surgical fluid(s) ☐ Mucous membrane ☐ Feces ☐ Airborne/Respiratory/Oral Secretions ☐ Other (specify):_____
   ☐ Saliva ☐ Vomitus ☐ Skin infection (e.g. abscesses, boils, or pus-filled/red/swollen/painful skin lesions)
9. Source person(s) information ☐ Unknown ☐ Known
   Name _____ DOB _____ Phone No. _____
   Address _____ City _____ State _____ Zip _____
10. What part(s) of your body was exposed to bodily fluids/infectious material? Did exposure take place through your skin or mucous membrane (be specific)? _____
    _____
11. Did you have any open cuts, sores, rashes, or other breaks/ruptures in your skin or mucous membrane that were exposed to bodily fluids/infectious material (please describe)? _____
    _____

I HAVE GIVEN THIS FORM TO MY EMPLOYER AND HAVE RECEIVED A COPY OF THIS COMPLETE FORM.

EMPLOYEE SIGNATURE _____ DATE _____

Other Required Steps to Establish Prima Facie Claim for HIV, AIDS or Hepatitis C (A.R.S. §§ 23-1043.02, -03; A.A.C. R20-5-164)

1. **You must file this report with your employer no later than ten (10) days after your exposure.**
2. **You must have blood drawn no later than ten (10) calendar days after exposure.**
3. **You must have blood tested for HIV or Hepatitis C by Antibody Testing no later than thirty (30) calendar days after exposure and test results must be negative.**
4. **You must be tested or diagnosed as HIV positive no later than eighteen (18) months after the exposure, or tested and diagnosed as positive for the presence of Hepatitis C within seven (7) months after the exposure.**
5. **You must file a workers' compensation claim with the Industrial Commission of Arizona no later than one (1) year from the date of diagnosis or positive blood test if you wish to receive benefits under the workers' compensation system.**

Other Required Steps to Establish Prima Facie Claim for MRSA (A.R.S. § 23-1043.04; A.A.C. R20-5-164)

1. **You must file this report with your employer no later than thirty (30) days after your exposure.**
2. **For a claim involving MRSA, you must be diagnosed with MRSA within fifteen (15) days after you report in writing to your employer the details of the exposure.**
3. **You must file a workers' compensation claim with the Industrial Commission of Arizona no later than one (1) year from the date of diagnosis if you wish to receive benefits under the workers' compensation system.**

Other Required Steps to Establish Prima Facie Claim for Spinal Meningitis or TB (A.R.S. § 23-1043.04; A.A.C. R20-5-164)

1. **You must file this report with your employer no later than ten (10) days after your exposure.**
2. **For a claim involving spinal meningitis, you must be diagnosed within two (2) to eighteen (18) days of the possible significant exposure and for a claim involving tuberculosis, you must be diagnosed within twelve (12) weeks of the possible significant exposure.**
3. **You must file a workers' compensation claim with the Industrial Commission of Arizona no later than one (1) year from the date of diagnosis if you wish to receive benefits under the workers' compensation system.**

Employer: Keep Original (Notify Carrier) Employee: Keep Copy
THIS FORM APPROVED BY THE INDUSTRIAL COMMISSION OF ARIZONA

REV. 7/11

Appendix F: Occupational Exposure Procedure Cards

NAU Mountain Campus Employee Occupational Exposure Procedure	
Initial Response	1. If the exposure threatens life or limb, call 911 2. Remove soiled clothing and wash exposed area with soap and water, if appropriate. 3. Administer first aid as appropriate to the exposure.
Immediate Reporting & Medical Evaluation	1. Immediately notify attending supervisor. 2. Employee must call 800-685-2877 to speak with a Registered Nurse at the AZ Workers' Compensation Employee Injury Call Center, available 24/7. 3. If recommended by the Registered Nurse, contact Flagstaff Industrial Medicine, FMC ER, or Urgent Care for assessment and initial prophylactic treatment. If employee goes to a private physician, download the Workers Compensation Physician Information Sheet (info on back). 4. Present this card to treating health care provider.
Documentation & Follow-Up	1. Following the incident, the supervisor must report all employee-related injuries by filling out the Significant Exposure Packet and the online Report of Injury (ROI) form through LOUIE Department Self Service. If employee is admitted to hospital, notify NAU HR. 2. For Blood/Body Fluid Exposures: Health care provider shall immediately make available to the affected employee a copy of all records relating the treatment, follow up, and, if/when available, results regarding the HIV, HBV, and HCV status of the source, to the extent permitted by the law.

Appendix G: Needlestick/Sharps Safety and Prevention

NAU NORTHERN ARIZONA UNIVERSITY

Environmental Health and Safety

The Needlestick Safety and Prevention Act (Pub. L. 106-430) was signed into law in November of 2000. Occupational exposure to bloodborne pathogens from accidental sharps injuries in healthcare and other occupational settings continues to be a serious problem, Congress felt that a modification to OSHA's Bloodborne Pathogens Standard (29 CFR 1910.1030) was necessary to better specify OSHA's requirement for employers to identify, evaluate, and implement safer sharps devices. The act also mandated additional requirements for maintaining a sharps injury log and for the involvement of non-managerial personnel in evaluating and choosing devices.

Requirements:

- **Exposure Control Plan (ECP):**
  Employer's ECP must now annually review and update to reflect changes in technology that eliminate or reduce exposure to bloodborne pathogens, including:
  - take into account innovations in procedure and technological developments that reduce the risk of exposure (e.g. devices designed to reduce needlesticks)
  - document consideration and use of appropriate, commercially-available, and effective safer devices (e.g. describe the devices identified as candidates for use, the method(s) used to evaluate those devices, and justification for the eventual selection)

  No one device is considered appropriate or effective for all circumstances. Employers must select devices that, based upon reasonable judgment:
  - will not jeopardize patient or employee safety
  - is not medically inadvisable or will impede success of a research protocol
  - will make an exposure incident involving a contaminated sharp less likely to occur

- **Employee Input:**
  Employers must solicit input from non-managerial employees responsible for direct patient care. This includes the identification, evaluation, and selection of effective engineering controls, including safer medical devices. Employees selected should represent the range of exposure situations encountered in the workplace. OSHA will check for compliance with this provision during inspections by questioning a representative number of employees to determine if/how their input was requested.

- **Documentation of employee input:**
  Employers are required to document how they received input from employees. This can be met by:
  - Listing the employees involved and describing the process by which input was requested
    -OR-
  - Presenting other documentation (e.g. references to the minutes of meetings, copies of documents used to request employee participation, or records of responses received from employees.

- **Recordkeeping:**
  Employers who have employees who are occupationally exposed to blood or other potentially infectious materials, and who are required to maintain a log of occupation injuries and illnesses under existing recordkeeping rules, must also maintain a sharps injury log. This log is to be maintained in such a way to protect the privacy of the employee, and the NAU sharps injury log is located at Environmental Health and Safety. At a minimum, the log must contain:

- the type and brand of device involved in the incident
- the location of the incident (e.g. department or work area)
- a description of the incident.

Definitions:

- **Engineering Controls** include all control measures that isolate or remove a hazard from the workplace, such as sharps disposal containers and self-sheathing needles. The revision now specifies that "safer medical devices, such as sharps with engineered sharps injury protection and needleless systems" constitute an effective engineering control, and must be used where feasible.

- **Sharps with Engineered Sharps Injury Protections** are non-needle sharps or needle devices that contain built-in safety features that are used for collecting fluids, administering medications/other fluids, or other procedures involving the risk of sharps injury. This covers a broad range of devices, such as:
  - syringes with a sliding sheath that shields the attached needle after use
  - needles that retract into a syringe after use
  - shielded or retracting catheters
  - intravenous medication (IV) delivery systems that use a catheter port with a needle housed in a protective covering

- **Needleless systems are devices which provide an alternative to needles for various procedures to reduce the risk of injury involving contaminated sharps, such as:**
  - IV medication systems which administer medication or fluids through a catheter port using non-needle connections
  - jet injection systems which deliver liquid medication beneath the skin or through a muscle

Still have questions? Check out OSHA's FAQs page about the Needlestick Safety and Prevention Act at http://www.osha.gov/needlesticks/needlefaq.html for more information. Or, feel free to call or email the biosafety office (928-523-7268, biosafety@nau.edu) with NAU Environmental Health and Safety.

Information adapted from:
Revision to OSHA's Bloodborne Pathogens Standard [Internet]. 2001. Washington, DC: Occupational Safety & Health Administration: [cited 2012 Sept 6]. Available from:
http://www.osha.gov/needlesticks/needlefact.html

Sharps Injury Prevention Strategies

- Eliminate the use of sharps as much as possible
- Use engineering controls or engineered safety devices, such as devices where safety features are built into the device, passively enabled devices, and devices that cannot be deactivated
- Participate in work practice controls
- Involve staff in device selection to ensure the most user-friendly devices are chosen
- Ensure that all necessary equipment is available to staff prior to starting a sharps procedure
- Provide adequate lighting for staff to perform procedures safely
- Ensure the patients' ability to cooperate prior to performing a procedure to lessen the chance of accidental needlesticks
- Ensure that needles are not opened until they are to be used and they are pointed away from the user at all times
- Maintain visual contact with sharps during use

- Establish a neutral zone to place sharps, such as a tray, announcing the placement of sharps, and not passing sharps between staff members
- Activate safety features of sharps right after procedure is completed
- Keep track of all sharps by double-checking trays, linens, and waste materials prior to handling and use tongs/forceps to safely pick up rouge sharps
- Visually inspect disposal container(s) to make sure there is enough room for sharps to fit
- Keeping fingers away from the tip of the device during disposal and avoiding contact with disposal container
- Notifying EH&S (https://www5.nau.edu/logger/orc/) when disposal container is full
- Replacing sharps containers before they are 3/4 full

Information from:
Healthcare Wide Hazards: Needlestick/Sharps Injuries [internet]. 2012. Occupation Safety & Health Administration (OSHA): [cited 2012 Sept 6]. Available from:
http://www.osha.gov/SLTC/etools/hospital/hazards/sharps/sharps.html

Injury Prevention Strategies [Internet]. 2010. SAFENEEDLE.org: [cited 2012 Sept 6]. Available from:
http://safeneedle.org/us-needlesticks/prevention-strategies/

Response to a Sharps Injury

1. Wash exposure site with soap and water. In the event of a splash (such as blood or other potentially infection materials), remove affected clothing and/or flush affected mucous membranes with water for 15 minutes.
2. Immediately seek evaluation and treatment for the injury from Flagstaff Medical Center ER, or Urgent Care center.
3. Report the incident to your supervisor.
4. Report the incident to the Biological Safety Office with NAU EHS.
5. If appropriate, identify and document the source patient (if known) who should be tested for HIV, hepatitis C, and hepatitis B (depending on known immunity of affected employee). It may be necessary to seek source patient consent.
6. Be tested immediately for HIV, hepatitis B (if immunity uncertain/unknown), and hepatitis C.
7. Get post-exposure prophylaxis (PEP) when source patient is unknown. If source patient tests positive for:
    - HIV – Then start prophylaxis within two hours of exposure
    - Hepatitis B – Then get the hepatitis B immune globulin (HBIG) injection and initiate the hepatitis B vaccine series if you are not vaccinated; no treatment necessary if you are vaccinated with known immunity
        - The Hepatitis B vaccine series is available for free to all NAU employees that are reasonably anticipated, as a result of performing their job duties, to come into contact with blood or other infectious materials.

- Hepatitis C – Then no customary prophylaxis; but consult your physician or other care provider about experimental PEP

8. Get follow-up testing, counseling, and monitoring of post-exposure prophylaxis toxicity as appropriate.

Information from:

6 Things to do in Response to Needlestick Injury. 2010. American Nurses Association (ANA) via SAFENEEDLE.org: [cited 2012 Sept 6]. Available from: http://safeneedle.org/us-needlesticks/7-things-to-do-in-response-to-a-needlestick-injury/

Guidelines for Using the Needlestick Prevention Evaluation Sheets

- Determine which products are to be evaluated
- Select staff who represent the scope of personnel who will use or handle the device
- Choose a reasonable testing period (2-4 weeks should be sufficient)
- Staff should receive training in the correct use of the device, which can be provided by product representatives
- Encourage staff to provide informal feedback during the evaluation period
- Monitor the pilot test to ensure proper use of the safer device and remove the device immediately if it is found to be unsafe
- Forms should be completed and returned to the safety coordinator as soon as possible after the evaluation period
- Please note that the evaluation process needs to be repeated for every different type of sharp, or different use for a sharp, in the workplace (e.g. different gauge needles, scalpels, etc)

Interpreting the Results

- After the evaluation phase, speak with personnel who have completed the forms to determine the criteria that should receive the most consideration. For example, personnel may express that criteria regarding the "feel" of the device (e.g. weight and size of the device, how the device fits in their hand) are important in maintaining proper injection technique.
- If the responses to many of the criteria are negative, check with personnel who have completed the form for additional information. Balance this feedback with safety and practical considerations before determining whether to continue using the device in your practice.
- Fill out at return the NAU Needlestick Prevention Device Evaluation Interpretation Form to EH&S.
- The American Nurses Association (ANA) has identified eight indications letting healthcare workers know when a safety device is beneficial. Use these indications to help guide the evaluation process:
    1. Device is needleless
    2. If device uses needles, it performs reliably with all needle sizes
    3. The safety feature is built into the device (you do not have to install anything)
    4. The safety feature of the device works passively (you do not have to activate anything)
    5. It is clear that the safety feature has been activated
    6. The safety feature cannot be deactivated and remains protective through disposal
    7. The device is easy to use and practical
    8. The device is safe, effective, and does not diminish patient comfort and care

NAU Sharps Injury Prevention Device Evaluation Form

Device: Name, brand, company: _____

Applications in workplace: _____

Reviewer: _____ **Date:** _____

For each question, circle the appropriate response for the needlestick prevention device (NPD) being evaluated. Not applicable (N/A) may be used if the question does not apply to this particular product. If you have more comments, please write them at the end of the form. Please retain this form for your records and send a copy to the Biological Safety Officer at NAU EHS.

During Use	**Agree**				**Disagree**	
1. The safety feature can be activated using one hand.	1	2	3	4	5	N/A
2. The user's hands remain behind the sharp until activation of the safety feature is complete.	1	2	3	4	5	N/A
3. The safety feature does not obstruct vision of injection site or the tip of the sharp.	1	2	3	4	5	N/A
4. Use of the product requires you to use the safety feature.	1	2	3	4	5	N/A
5. This product does not require more time to use than a non-safety device.	1	2	3	4	5	N/A
6. The safety feature works well with a wide variety of hand sizes.	1	2	3	4	5	N/A
7. The weight of the device is similar to that of a convention sharp.	1	2	3	4	5	N/A
8. The NPD is easy to handle while wearing gloves.	1	2	3	4	5	N/A
9. The NPD fit comfortably into your hand.	1	2	3	4	5	N/A
10. The NPD does not interfere with uses that do not require a needle.	1	2	3	4	5	N/A
11. The NPD offers a good view of any aspirated fluid.	1	2	3	4	5	N/A
12. The NPD will work with all necessary syringe and needle sizes.	1	2	3	4	5	N/A
13. The NPD provides a better alternative to traditional recapping.	1	2	3	4	5	N/A
14. The device did not appear to increase patient discomfort.	1	2	3	4	5	N/A
After Use						
15. The safety feature is easy to recognize and activate.	1	2	3	4	5	N/A
16. There is a clear and unmistakable change (audible or visible) that occurs when the safety feature is activated.	1	2	3	4	5	N/A
17. The safety feature operates reliably when activated properly.	1	2	3	4	5	N/A
18. The exposed sharp is permanently blunted or covered after use and prior to disposal.	1	2	3	4	5	N/A
19. The safety mechanism remains activated through disposal of the NPD.	1	2	3	4	5	N/A
20. The NPD is no more difficult to process after use than other non-safety devices.	1	2	3	4	5	N/A
21. The NPD felt stable during assembly, use, and disassembly.	1	2	3	4	5	N/A
22. The "feel" of the device did not cause you to change your technique.	1	2	3	4	5	N/A
23. Were you able to use the device for all of the same purposes for which a conventional device is typically used? (aka, does it meet your clinical needs?)	1	2	3	4	5	N/A
Training and Ease of Use						
24. The user does not need extensive training for correct operation.	1	2	3	4	5	N/A
25. The design of the NPD indicates proper use.	1	2	3	4	5	N/A
26. It is not easy to skip a crucial step in the proper use of the NPD.	1	2	3	4	5	N/A
27. The NPD be used by a left handed person as easily as by a right handed person.	1	2	3	4	5	N/A
28. It is easy to identify the type and size of the product from the packaging.	1	2	3	4	5	N/A
29. Using the NPD instead of a conventional device would result in only a modest (if any) increase in sharps container waste volume.	1	2	3	4	5	N/A
Overall						
30. Would you recommend using this device?	1	2	3	4	5	N/A

Are there other questions which you feel should be asked regarding the safety/utility of this NPD?

Comments (e.g. describe problems, list incompatibilities, etc):

NORTHERN ARIZONA UNIVERSITY

Environmental Health and Safety

NAU Sharps Injury Prevention Device Evaluation Interpretation Form

After reviewing a variety of applicable sharps using the Needlestick Prevention Device Evaluation Form and performing a review of the sharps needs for specific protocols and procedures in the workplace, it has been determined that:

☐ The facility will discontinue the use of their current sharps technology in favor of a sharp with engineered sharps injury protection, listed below:

☐ The facility will continue using their current sharps technology instead of a sharp with engineered sharps injury protection for the reason(s) listed below:

☐ The facility is already using the most appropriate sharp with engineered sharps injury protection for their procedure.

Name of PI/Lab Manager/Supervisor	Signature of PI/Lab Manager/Supervisor	Date

Location of Laboratory/Workspace: _____

Building Name Building Number Room Number(s)

Please return this completed form to the Biosafety Office via email, campus mail, or upload to the Documents area of the laboratory/facility group's BioRAFT page:

NAU Biosafety Office
NAU Box 4137
biosafety@nau.edu
nau.bioraft.com

NAU NORTHERN ARIZONA UNIVERSITY

Environmental Health and Safety

KNOW WHERE TO THROW:
SHARPS DISPOSAL

Protect others from injury by properly disposing of sharps

Did you know?

- Medical sharps (e.g., needles, scalpels) must be disposed of in a hard-walled, puncture-resistant container with a tight-fitting lid.
- Used needles/sharps can transmit infectious diseases such as hepatitis B, hepatitis C, or HIV to others through sharps injuries.

How you can help:

- Prevent accidental needlesticks and other sharps injuries by properly disposing of sharps.
- NEVER place used needles or lancets in garbage or recycling containers.
- If you are not sure how to dispose of used sharps (e.g., insulin needles) contact NAU Biosafety at (928) 523-7268 or biosafety@nau.edu.

NON-HAZARDOUS GLASS & PLASTIC	BIOHAZARDOUS GLASS & PLASTIC	SHARPS
NOT contaminated with biohazards & could puncture a plastic bag: • Micropipette tips • Serological pipettes • Test tubes • Swabs and sticks • Razor blades • Broken glass • Fragile glass items • Pasteur pipettes • Slides and cover slips • Broken plastic **Use sturdy boxes. Label as "Glass" or "Sharp", depending on material. Thoroughly tape closed and place in trash can.**	**CONTAMINATED with biohazards & could puncture a plastic bag:** • Syringes without needles • Micropipette tips • Serological pipettes • Test tubes • Swabs and sticks • Other items that could puncture a biohazard bag **Place items in pipette box/keeper or sturdy cardboard box. Line cardboard box with biohazard bag, and label box as "Glass" with biohazard symbol. Thoroughly tape closed and place in biohazardous waste collection drum.**	**ALWAYS sharps waste:** • Needles, syringes w/needles, & IV tubing w/needles • Lancets • Scalpel blades **Sharps waste if CONTAMINATED with biohazards:** • Razor blades • Broken glass • Fragile glass items, Pasteur pipettes, slides and cover slips **When no more than two-thirds full, close lid and place in biohazardous waste collection drum.**

Please contact NAU Biosafety for a copy of the above poster, or if you would like a modified version for your workplace.