EXPOSURE CONTROL PLAN

University of Michigan
Plant Operations Division
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Appendix A  Hepatitis B Vaccine Declination Form
Appendix B  Biohazard Spill Response Standard Operating Procedure
Appendix C  HBV Vaccine Request Form


2001 revisions to OSHA's Bloodborne Pathogens Standard mandated by The Needlestick Safety and Prevention Act (Pub. L. 106-430)
Section I. General Policy

SCOPE:
This policy applies to all program groups within the University of Michigan Plant Operations Division (Plant Ops) whose employees may reasonably anticipate contact with potentially infectious materials in the performance of their duties.

POLICY:
In compliance with the MIOSHA Bloodborne Infectious Diseases Standard, Plant Ops shall minimize employee risk from exposure to bloodborne pathogens by instituting an Exposure Control Plan (ECP) in the form of departmental policy.

PROCEDURE:
EXPOSURE DETERMINATION – The Plant Ops Safety Officer has determined that some classifications of Plant Ops employees have potential for occupational exposure to bloodborne pathogens. The primary opportunity for exposure is during injury incidents of workers or building occupants that may involve the clean up of blood or unidentified body fluids. The Plant Ops Safety Officer will determine on a case-by-case basis if other employees are considered at risk of exposure by reviewing job classifications and specific tasks according to procedures described in Section 2 of this ECP. Employees classified as occupationally exposed are subject to provisions of this policy addressing exposure control.

METHODS OF COMPLIANCE - Exposure control methods involving administrative controls, engineering controls, personal protective equipment, and housekeeping will be implemented as standard operating procedures described in Section 3 of this ECP.

HIV AND HBV RESEARCH LABORATORIES AND PRODUCTION FACILITIES - Specialized control methods are required for areas that present an exceptional pathogen risk to employees. The specialized methods address standard and special microbiological practices, containment equipment, special lab practices and disposal methods as described in section 4 of this ECP. Plant Ops employees entering these facilities must have permission from the UM Biosafety Officer and receive additional training from the facility’s Director. Specific safety information can be found in each facility’s Biosafety Manual.

HEPATITIS B IMMUNIZATION PROGRAM - The hepatitis immunization series will be provided, free-of-charge, to all Plant Ops employees determined to be at-risk due to their regular handling of human body substances. The immunization program will be conducted through an approved occupational medical provider, as described in Section 5 of this ECP.

POST-EXPOSURE EVALUATION AND FOLLOW-UP – In the event an employee sustains an occupational exposure to human blood or body substances, evaluation, follow-up, and counseling will be provided free-of-charge. The evaluation and follow-up program will be conducted as described in Section 6 of this ECP.

COMMUNICATION OF HAZARDS TO EMPLOYEES – The workplace risks associated with human body substances will be effectively communicated to at-risk employees. Prudent
practices and mandatory safety procedures in the ECP will be described in detail. The information will be communicated to the employees in a manner described in Section 7 of this ECP.

RECORDKEEPING - Employee records concerning training, exposures, medical surveillance, etc. will be maintained according to specific methods described in Section 8 of this ECP. Sharps injury and exposure logs are maintained by UM Risk Management.

ANNUAL REVIEW AND UPDATE - This ECP will be carefully reviewed and updated annually by the Plant Ops Safety Officer. Engineering controls will be evaluated for effectiveness and new technology will be considered.

SCHEDULE AND METHOD OF IMPLEMENTATION – Plant Ops compliance with the Bloodborne Pathogens Standard became mandatory in 1992. The ECP and its various aspects were implemented at that time. Some additions were made in 2001 to implement OSHA’s revisions to the BBP standard.

______________________________
Plant Ops Safety Officer

______________________________
Date
Section 2. Exposure Determination

POLICY:
The Plant Ops Safety Officer shall determine the exposure risk of employees, both in terms of position descriptions and specific task categories, and classify the employees as “Occupationally-exposed” or “Non-exposed” for the purposes of training, recordkeeping, and Hepatitis B immunization. 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 employees 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.

PROCEDURE:
- Exposure determination will be made without regard to the use of personal protective equipment.

- The following forms will be completed to document the exposure determination of all occupationally exposed employees as described in the above definition:
  - FORM I - Lists all job/position descriptions/categories/titles in which ALL employees handle human body substances.
  - FORM II - Lists all job/position descriptions/categories/titles in which SOME employees handle human body substances.
  - FORM III - Lists all tasks and procedures (or groups of closely related tasks and procedures) in which human body substances are handled and are performed by employees in job classifications listed on FORM II.

- Employees whose job/position descriptions/categories/titles listed in Forms I or II are entitled to the protection of the Bloodborne Pathogens Standard and this Policy.

- Employees whose job/position descriptions/categories/titles do not have occupational exposure to bloodborne pathogens may be entitled to protection under other OSHA Standards including, but not limited to:
FORM I
Job/Position Descriptions/Categories/Titles in which ALL employees have Occupational Exposure
[Required for Compliance with 29 CFR 1910.1030(c)(2)(i)(A)]. Therefore all employees in these classifications will be included in all aspects of this ECP.

NONE
FORM II
Job/Position Descriptions/Categories/Titles in which SOME employees have Occupational Exposure

FOR COMPLIANCE WITH 29 CFR 1910.1030(c)(2)(i)(B) Some Plant Ops employees in the below job classifications may clean-up blood spills or other potentially infectious materials (OPIM), work in environments where accidental exposure could occur, or are trained in first aid procedures as part of their assigned job duties.

730180 CARPENTER
730190 APPREN CARPENTER
730280 CABINET MAKER
731380 MECH A/C & REFRIG (STEAM)
731390 APPREN A/C & REFRIG MECH
731480 A/C AND REFRIGERATION MECHANIC
731510 HVAC CONTROLS SPECIALIST
731520 MECH SYS FIELD SERVICE SPEC
731580 PIPECOVERER
731780 PLUMBER
731790 APPREN PLUMBER
731980 STEAMFITTER
731990 APPREN STEAMFITTER
732980 PLASTERER
733380 PAINTER
733480 GLAZIER
733980 SHEETMETAL WORKER
734490 APPREN HIGH VOLT ELECTRICIAN
734590 APPREN ELEVATOR MECHANIC
734650 FIRE ALARM ELECTRICIAN
734670 INDUSTRIAL ELECTRICIAN
734680 ELECTRICIAN
734690 APPREN ELECTRICIAN
734750 HIGH VOLTAGE ELECTRICIAN
734760 CENTRAL POWER PLANT ELECTRICIAN
734880 ELEVATOR MECHANIC
734980 MASON
735280 HEAVY EQUIP OPERATOR
735480 HEAVY EQUIP OP-UNDER SPEC
735490 SANITARY & STORM WATER SYSTEMS SPECIALIST

735580 CONSTRUCTION LABORER
736180 MATERIAL EXPEDITOR/TRADES
737780 WELDER
838350 UTILITY SYSTEMS TECH II
838370 UTILITY SYSTEMS TECHNICIAN III
838600 INSTRUMENT & CONTROL SPEC
838670 INSTR & CONTROL SPEC DES
838780 BOILER OPERATOR
838800 INSTR/CONTRL REPAIRPERSON
838880 POWERHOUSE OPERATOR
838890 CIRCUIT OPER MAIN RPR-AA
838900 POWERHOUSE MAINT REPAIRPERSON
838980 SENIOR OPERATING ENGINEER
838990 POWERHOUSE REPAIRPERSON
839000 OPERATING ENGINEER
970600 HEAVY EQUIP MECHANIC
970980 FIXTURE & WALL CLEANER
971080 VENETIAN BLIND CLEANER
971180 CUSTODIAN I
971280 CUSTODIAN II
971490 HOUSEKEEPER PRES HOUSE
972370 TREE TRIMMER TRAINEE
972380 TREE TRIMMER I
972480 TREE TRIMMER II
972720 MILLWRIGHT
972780 ELEVATOR MAINTENANCE MECHANIC
972880 MAINTENANCE MECHANIC I
972980 MAINTENANCE MECHANIC II
973080 MAINTENANCE MECHANIC III
FORM III
Closely Related Groups of Tasks and Procedures in which Occupational Exposure Occurs and that are Performed by Employees in Job Classifications Listed on FORM II [FOR COMPLIANCE WITH 29 CFR 1910.1030(c)(2)(i)(c)]

Servicing waste and vacuum systems in research, medical and dental facilities.

Servicing laboratory equipment from research, medical and dental facilities.

Cleaning up incidental spills and leaks that could contain blood or OPIM.

Rendering first aid or CPR to coworkers injured while performing assigned job tasks.

Working in or around research, medical and dental facilities.
Section 3. Methods of Compliance

POLICY:
Plant Ops supervisors will minimize employee risk from bloodborne pathogens by selecting appropriate control measures from the list below, and implementing them as standard procedures.

PROCEDURE:

General Administrative Controls

• Universal precautions will be observed to prevent contact with blood or other potentially infectious materials. Universal Precautions is an approach by which all human blood and body fluids are treated as if they are potentially infectious for bloodborne pathogens.

Engineering and Work Practice Controls

• Engineering and work practice controls will be used to reduce or eliminate potential employee exposures to human blood and body fluids. Where occupational exposure remains after institution of these controls personal protective equipment will also be used.
• Engineering controls will be reviewed and updated on a yearly schedule to ensure their effectiveness.
• Readily accessible hand washing facilities will be provided to employees. When provision for hand washing facilities are not feasible in a work area, employees will be provided with either an appropriate antiseptic hand cleanser in conjunction with paper towels or antiseptic towelettes. Supervisors will ensure that employees wash their hands immediately or as soon as feasible after removal of gloves or other personal protective equipment.
• Supervisors will ensure that employees wash any exposed skin with soap and water and flush mucous membranes with water immediately following contact of such body areas with blood or other potentially infectious materials.
• Contaminated needles and other contaminated sharps will not be bent or recapped. Shearing or breaking of contaminated needles is prohibited. Under conditions where equipment does not allow single-handed needle disposal into a sharps container, such as dental syringe assemblies, contaminated needles may be recapped or removed through the use of a mechanical device (e.g. pliers).
• Immediately or as soon as possible after use, contaminated reusable sharps will be placed in appropriate containers until properly reprocessed. These containers will be:
  • closable
  • puncture resistant
  • labeled or color-coded
  • leak-proof on the sides and bottom
  • stored or processed in a manner that does not require employees to reach by hand into the containers
• 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. Food and drink will not be kept in refrigerators, freezers, shelves, cabinets, or on countertops or bench tops where blood or other potentially infectious materials are present. All procedures involving blood or other potentially infectious materials will be performed in
such a manner as to minimize splashing, spraying, spattering, and generation of droplets of these substances.

- Specimens of blood or other potentially infectious materials will be placed in a container that prevents leakage during collection, handling, processing, storage, transport, or shipping. When universal precautions are used for handling all specimens within a facility, and the specimens are not destined to leave the facility, the labeling or color-coding of specimen containers as biohazardous is not necessary, provided containers are recognizable as containing specimens. When such specimens and containers are destined to leave the facility, they will be labeled with the internationally recognized biohazard logo and the word “biohazard”.

- If outside contamination of the primary container occurs, the primary container will be placed within a second container that prevents leakage and is properly labeled as containing biohazardous materials. If the specimen could puncture the primary container, the container will be placed within a second container that is puncture-resistant in addition to the above characteristics.

- Equipment that may become contaminated with blood or other potentially infectious materials will be examined prior to servicing or shipping and will be decontaminated as necessary, unless it can be demonstrated that the decontamination of such equipment or portions of such equipment is not feasible. A readily observable label containing the internationally recognized biohazard logo and the word “biohazard” will be attached to the equipment stating which portion remains contaminated. The departmental management will ensure that information pertaining to the contamination status of a piece of equipment 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.

**Personal Protective Equipment**

- When there is potential occupational exposure, employees will be provided, 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. 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.

- Supervisors will ensure that employees use appropriate personal protective equipment and that the equipment in the appropriate sizes is readily accessible at the worksite or is issued to employees. Employees who demonstrate sensitivity to certain personal protective items, such as latex gloves, will be supplied with hypoallergenic versions of the equipment or protective liners or alternative equipment that allows the same level of performance of duties.

- Cleaning, laundering, and disposal of personal protective equipment will be provided by Plant Ops at no cost to the employees. The department will repair or replace personal protective equipment as needed to maintain its effectiveness, at no cost to the employees. If blood or other potentially infectious materials penetrate a garment, the garment will be removed immediately or as soon as feasible.

- All personal protective equipment will be removed prior to leaving the work area. When personal protective equipment is removed it will be placed in an appropriately designated
area or container for storage, washing, decontamination, or disposal. Gloves will be worn when it can be reasonably anticipated that the employee may have hand contact with blood, other potentially infectious materials, mucous membranes, or non-intact skin; and when handling or touching contaminated items or surfaces. Disposable (single use) gloves, such as surgical or examination gloves, will 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.

- Disposable gloves will not be washed or decontaminated for re-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.

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

- Appropriate protective clothing such as, but not limited to, gowns, aprons, lab coats, coveralls, clinic jackets, or similar outer garments will be worn in occupational exposure situations. Surgical caps or hoods and/or shoe covers or boots will be worn in instances when gross contamination can reasonably be anticipated (e.g. large emergency response blood clean-up).

**Housekeeping and Waste Disposal**

- Supervisors will ensure that the worksite is maintained in a clean and sanitary condition. Additional procedures may be necessary 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 (See the Biohazard Spill Response Standard Operating Procedure (SOP) in Appendix B).

- All equipment and environmental and working surfaces will be cleaned and decontaminated after contact with blood or other potentially infectious materials. Contaminated work surfaces will 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.

- Protective coverings, such as plastic wrap, aluminum foil, or impervious-backed absorbent paper used to cover equipment and environmental surfaces, will 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 that have a reasonable likelihood for becoming contaminated with blood or other potentially infectious materials will be inspected and decontaminated on a regularly scheduled basis and cleaned and decontaminated immediately or as soon as feasible upon visible contamination.

- Broken glassware, sharps or other objects that could puncture the skin and may be contaminated will not be picked up directly with the hands. It will be cleaned up using mechanical means such as a brush and dustpan, tongs, or forceps. Flat shovels and brooms are also available on UM emergency response vehicles for this purpose. Reusable sharps that are contaminated with blood or other potentially infectious materials will not be stored or processed in a manner that requires employees to reach into the containers with their hands.
• Instructions on biomedical waste disposal can be found in OSEH Guideline – HM001 “Biohazardous (Medical) Waste Disposal”
• Contaminated sharps will be discarded immediately or as soon as feasible in containers that are:
  • closable
  • puncture-resistant
  • leak-proof on sides and bottom
  • labeled with the international biohazard logo and the word “biohazard”
• During use, containers for contaminated sharps will be:
  • easily accessible
  • located at the point of generation
  • maintained upright throughout use
  • replaced routinely and not allowed to be overfilled
• When moving containers of contaminated sharps from the area of use, the containers will be:
  • closed prior to removal
  • placed in a secondary container if leakage is possible
• The secondary container will be:
  • closable
  • constructed to contain all contents and prevent leakage during handling
  • labeled as biohazardous
  • Reusable containers will not be opened, emptied, or cleaned manually or in any other manner that would expose employees to the risk of needle sticks or cuts.
• Non-sharps contaminated waste will be placed in containers that are:
  • closable
  • constructed to contain all contents and prevent leakage of fluids during handling
  • labeled as biohazardous
  • closed prior to removal.
• If contamination of the exterior of the waste container occurs, it will be placed in a second container that meets the criteria listed above.

Section 4. HIV & HBV Research Labs and Production Facilities

POLICY:
HIV and HBV research laboratories and production facilities present increased risk for occupational exposure to bloodborne pathogens. All laboratories engaged in bloodborne pathogens infectious disease research will reduce employee exposure risk by providing additional administrative controls, protective equipment, information and training beyond that required for research laboratories not involved in such work. Plant Ops employees entering these laboratories are required to follow all lab specific polices and procedures dictated by the laboratory’s director. Any entry by Plant Ops staff into a Biosafety Level 3 facility will require the prior notification of the UM Biosafety Officer (BSO) and the Plant Ops Safety Officer.
PROCEDURE:
• Employees will notify the Plant Ops Safety Officer prior to working within any HIV and HBV research laboratories, production facilities or BSL 3 facilities. While in the lab the employee will adhere to the laboratory’s safety procedures detailed in their Biosafety Manual. The Biosafety Manual is based on standard microbiological safety practices as described in the CDC/NIH Guidelines for Biosafety in Microbiological and Biomedical Research Laboratories.
• The following special practices will be followed in HIV and HBV Research Laboratories, Production facilities and BSL 3 labs:
  • Contaminated materials that are to be decontaminated at a site away from the work area will be placed in a durable, leak proof, labeled or color-coded container that is closed before removal from the work area.
  • Access to the work area will be limited to authorized persons. Only persons who have been advised of the potential biohazard, who meet any specific entry requirement, and who comply with all entry and exit procedures will be allowed to enter the work areas.
  • Laboratory coats, gowns, smocks, uniforms, or other appropriate protective clothing will be used in the work area and animal rooms. Protective clothing will not be worn outside the work area and will be decontaminated before being laundered.
  • Special care will be taken to avoid skin contact with potentially infectious materials. Latex, nitrile or vinyl gloves will be worn when handling infected animals and when hand contact with potentially infectious materials is unavoidable. Leather gloves will also be worn over the previous listed gloves if handling sharp or rough items that may damage them.
  • All spills will 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 will be immediately reported to the laboratory director and Plant Ops Safety Officer.
  • All activities or procedures with potentially infectious materials that pose a threat of exposure to droplets, splashes, spills or aerosols require a combination of personal protective equipment and primary containment such a respirator and biological safety cabinet, or special protective clothing and containment caging for animals. Contact the Plant Ops Safety Officer for advice on appropriate precautions and protective equipment.

Section 5. Hepatitis B Immunization Program

POLICY: One major bloodborne infectious disease, Hepatitis B, is entirely preventable through immunization. Plant Ops employees who are determined to be “Occupationally exposed”, as defined in the job classifications listed on Form I of Section 2, will be offered immunization at the time they begin working with human blood and body substances. Plant Ops will cover the cost of the elective vaccination series, administered through an approved occupational medical provider.
PROCEDURE:

- Immunization against Hepatitis B virus (HBV) by means of a vaccination series, will be made available to all employees who are determined to be “occupationally-exposed”.
- Employee participation in the Immunization Program will be on a voluntary basis and will be provided at no cost to them.
- The immunization program consists of a series of three intramuscular vaccinations administered at times zero, one month and six months.
  - Vaccination will be made available within 10 working days of initial employee assignment; and after the employees have been given information on the HBV vaccine efficacy, safety, method of administration, the benefits of immunization, and that the vaccination series will be offered free of charge.
  - Testing of protective titer may be an alternative to getting the vaccination series a second time for previously immunized employees without adequate vaccination records.
  - No follow-up serology testing is necessary after immunization – lifetime immunity has been documented.
  - If the employee consents to participate in the immunization program, the vaccinations will be offered at a time and place convenient to the employee.
  - If the employee has previously received the complete HBV vaccination series and/or antibody testing has revealed that the employee is immune or the vaccine is contraindicated for medical reasons, the vaccination series will not be offered.
  - If an occupationally exposed employee chooses not to participate in the immunization program, he/she is required to document the declination with a special form, included as Appendix (A) in this policy. UM’s medical provider will explain the benefits and disadvantages of the vaccination and have the employee sign a declination form if they refuse the vaccination. The medical provider will retain a copy of this form and place it in the employees medical records.
  - The medical provider will also coordinate with UM’s medical surveillance program to ensure employee compliance.
  - If the employee initially declines to participate in the HBV immunization program, but at a later date decides to become immunized, the vaccination series will be made available at that time.

HBV vaccinations will be provided for employees through the UM medical surveillance program.

Section 6.  Post-Exposure Evaluation and Follow-up

POLICY:

All occupational exposures to human blood and body substances will be regarded as serious, reported promptly, evaluated by a trained healthcare professional, and treated according to Public Health Service (PHS) Guidelines (Management of Health-Care Worker Exposure to HIV and Recommendations for Post-exposure Prophylaxis, MMWR No. RR-07, May 15, 1998).
PROCEDURE:

- Upon injury from a suspected exposure source, the employee will attempt to determine the nature of the exposure and any biohazardous material associated with it.
- The employee will also attempt to carefully retain the exposure source and any biohazardous materials that may have constituted an exposure.
- If necessary, first aid should be administered immediately for any cuts or punctures and any exposed skin should be washed with soap and water. The employee should report the injury to their supervisor within one hour.
- The supervisor will assess the situation and determine if the incident constitutes an occupational exposure to a biohazardous material. The supervisor will then complete a Work–Connections “Illness and Injury Report Form” and a “Plant Ops Accident Investigation Form”.
- If the injury is received during normal work hours, the employee will present at MWorks Occupational Medical Clinic (ph. 998-8788) as soon as possible and report that they have received an occupational injury of a potentially infectious nature. If the supervisor has completed the “Illness and Injury Report Form” it should be sent with the employee or faxed to MWorks when completed. If the employee arrives before the referral form, MWorks will contact the employee’s supervisor for a verbal referral. If there is a problem getting the referral, MWorks will treat the employee first and then work to obtain the referral.
- Persons with exposure injuries after the MWorks clinic closes at 5 pm, on weekends or holidays must report immediately to UMHS Emergency for medical evaluation and treatment. Employees will report that they are UM staff and have received an occupational injury of a potentially infectious nature.
- The employee will provide details on their injury to the occupational medical physician:
  - the type of injury the employee received
  - the type and samples of any biohazardous material the employee was exposed to
  - circumstances under which the exposure occurred
  - the hepatitis immunization status of the employee
- The physician will provide the employee with a confidential medical evaluation and follow-up of the incident:
  - evaluation of the exposure risk of the incident based on the exposure source
  - providing the employee with a written list of recommended options for testing and preventative treatment
  - explaining to the employee the rationale and benefits of these tests and treatments.
- **Testing options** include Hepatitis B Virus (HBV), Hepatitis C Virus (HCV) and Human immunodeficiency virus (HIV) antibody testing of any samples of biohazardous material to which the employee was exposed, and base-line testing of an employee blood sample for Hepatitis B & C and HIV Ab for determination of pre-exposure status.
- **Preventative treatment options** include Hepatitis B immunoglobulin (H-BIG) - protective antibody product) for short-term protection and HBV immunization for long-term protection against HBV. For the preventative treatments to be most effective the H-BIG must be given within 72 hours of exposure and HBV immunization must begin within seven days of exposure. Depending on the circumstances of exposure, oral anti-viral medication may be given per CDC guidelines.
- Employee acceptance of these tests/treatments will be on a completely voluntary basis and services will be provided at no cost to them.
The medical provider will provide the University with a written opinion (physician’s determination), within 7 days of the exposure incident. The report will summarize:

- that the employee has been informed of the results of the evaluation and has been told about any medical conditions resulting from exposure to blood or other biohazardous materials that require further evaluation and treatment
- whether HBIG or HBV vaccine was indicated for the employee, and if the employee has received such treatment
- all other findings or diagnoses will remain confidential and will not be included in the report.

The University will provide the employee a copy of the physician’s determination within 15 days of the exposure incident. A copy of the report will be included in the employee’s permanent medical records with the University.

If the employee eventually becomes ill or seroconverts (develops antibodies to the virus) as a direct result of occupational exposure to a bloodborne pathogen, the medical provider will file a complete report with the University Office of Risk Management (ORM), which handles Worker’s Compensation.

The report will be confidential and will be sent to no other organization within the University.

If the exposure source sample is positive or not available and the employee is negative for HBV, HCV, and HIV, follow up testing will be made available to them at 3 months and 6 months.

If occupational exposure of the employee to a bloodborne pathogen is confirmed, the University shall provide, through the healthcare service, confidential counseling and evaluation of any consequent illness that the employee reports for a period of up to 6 months.

Section 7. Communication of Hazards to Employees

POLICY:
Employees must be informed of the risks associated with the human blood and body substances they use, and required precautions they must follow to protect themselves and fellow workers. Labels, signs, and other written information assure that employees are aware of the hazardous materials in their workplace. Use of this information and precautions will reduce the risk of employee exposure to bloodborne pathogens.

PROCEDURE:

Labels and Signs

- Warning labels must be affixed to or printed on containers and bags of biohazardous waste, refrigerators and freezers containing blood or other potentially infectious material, and other containers used to store, or transport blood or other potentially infectious materials.
- Labels must include the internationally recognized biohazard logo and the word “biohazard.”
- The labels must be printed on stickers as black-on-orange and on bags as red-on-clear.
- Labels must be affixed at a conspicuous location on the container by direct print or adhesive.
- Contaminated equipment must be labeled as biohazardous and indicate which parts are contaminated.
• Biohazardous waste that has been decontaminated by steam sterilization must have a positive indication of safety. Printed-on sterilization indicator on the autoclave bag accomplishes this.
• Signs that include the internationally recognized biohazard logo and the word “biohazard” will be posted at the entrance of HIV and HBV research laboratories and production facilities.

Information and Training
• Each supervisor will ensure that all employees with occupational exposure, including themselves, participate in a Bloodborne Pathogens training program that is provided.
• The training will be provided at the time of initial assignment and at least annually thereafter.
• The Plant Ops Safety Officer will ensure that additional training is provided when changes such as modification of tasks or institution of new procedures affect the employees’ occupational exposure.
• The bloodborne pathogens training program is provided by UM-OSEH several time annually and covers basic risks and prudent practices to avoid occupational exposure:
  • **Bloodborne Pathogens Standard** purpose, policy and responsibilities
  • **modes of transmission, epidemiology, and symptomatology** of bloodborne diseases
  • **Exposure Control Plan** - means by which the employee may obtain a copy of the document
  • **tasks and other activities** that may involve exposure to blood and other potentially infectious materials
  • **methods that will prevent or reduce exposure** - including appropriate engineering controls, work practices, and personal protective equipment
  • **personal protective equipment** - types, selection, proper use, storage location, removal, handling, decontamination and disposal.
  • **hepatitis B immunization program** - including information on the efficacy, safety, administration, and benefits of the vaccine and that the vaccine will be offered at no cost to the employees
  • **appropriate actions to take and persons to contact in an emergency**
  • **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
  • **post-exposure evaluation and follow-up** that the department is required to provide for the employee following an exposure incident
  • **labels, signs and color-coding pertaining to biohazards** required by departmental policy
  • **opportunity for interactive questions and answers**

Section 8. Recordkeeping

**POLICY:**
Accurate records of required safety services must be carefully maintained for the Bloodborne Pathogens Standard to be effective.
PROCEDURE:

Medical Records
- The medical service provider maintains accurate records for each employee with occupational exposure. These records include:
  - name and employee number
  - a copy of the employee’s hepatitis B immunization 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 exposure incident follow-up procedures
  - a copy of the physician’s written opinion concerning hepatitis B vaccination and post-exposure evaluation and follow-up.

- The University will ensure that the employee medical records are kept confidential and are not disclosed or reported without the employee’s express written consent to any person within or outside the workplace except as required by availability provisions in the Michigan Occupational Safety and Health Act (MIOSHA).

- The University, through its medical service provider, will maintain the employee medical records for at least the duration of employment plus 30 years.

Training Records
- Bloodborne Pathogens training records for courses given by UM-OSEH will be maintained in the Plant Ops training record management system.
- The University will maintain all training records for a period of 3 years after the training occurred.

Vaccination/Declination Records
- The medical service provider will maintain vaccination records and declination forms.
- UM’s medical surveillance coordinator will maintain copies of the physicians written opinions in the employee’s file.

Availability
- The University will ensure that applicable records are made available, upon request, to the MDLEG.
- The University will ensure that all medical records will be provided upon request for examination and copying to the subject employee and to anyone having written consent of the subject employee.
- The Plant Ops Safety Officer will ensure that all training records are provided upon request for examination and copying to employees and to employee representatives.

Sharps Injury Log
- The log is required for percutaneous injuries from contaminated sharps and it must be confidential to protect the privacy of the injured person. Alternative identifiers other than name will be used.
• Will be maintained by Risk Management.
• The information to be maintained in the log is the type and brand of the device, location of the incident, and a description of how the injury happened.
APPENDIX (A) - HEPATITIS B VACCINATION PROGRAM

HEPATITIS B VACCINE DECLINATION FORM (MANDATORY)

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

Employee Name

______________________________

Employee Signature & Date

______________________________

Supervisor Name

______________________________

Supervisor Signature & Date

______________________________
APPENDIX (B) - Biohazard Spill Response Standard Operating Procedure

This SOP pertains to decontaminating biohazardous materials. Biohazards include human blood and other potentially infectious materials. 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.

STEP 1: REQUIRED PERSONAL PROTECTIVE EQUIPMENT

Prior to entering the area of contamination wear the proper personal protective equipment.

Gloves: Nitrile, neoprene, PVC or latex can provide effective skin protection. Two pairs Nitrile is recommended. If cleaning a large area place a large pair of vinyl or rubber gloves over the Nitrile gloves.

Eyewear: Wear goggles for eye protection and face shield to prevent potential exposure to nose, and mouth.

Clothing: Wear a disposable coverall, if necessary to protect clothing from contamination.

Boots: Wear disposable shoe covers or for large spills the rubber boots, if necessary to protect feet from contamination.

Respirator: Not required. Although a disposable N95 respirator can also be worn in conjunction with goggles to protect from splashes to the nose and mouth.

STEP 2: SPILL DECONTAMINATION PROCEDURES

Cover the spill area with freshly mixed 10% bleach and water solution, or other appropriate disinfectant. Allow solution to soak into the biohazardous material for 20 minutes prior to cleaning up contaminated areas. Work from the outside edges of the spill inward when applying the bleach solution.

Any glass, needles, or other sharp objects that may puncture the skin will not be picked up by hand. Only mechanical means such as a brush and dustpan, tongs, or forceps are allowed. Flat shovels and brooms are also acceptable tools.

Wipe up decontaminated material with paper towels or absorbent pads. It may be necessary to use a scrub brush to remove the material if it impacted a hard porous surface such as concrete. If carpet is contaminated, an outside vendor may be called in to clean the impacted area. Before
contacting an outside vendor discuss particulars of incident with the Plant Ops Safety Officer or UM-OSEH.

Decontaminate with the disinfectant all potentially contaminated non-disposable tools or protective equipment used in the cleanup. This includes shovels, goggles, face shields, boots, dustpans and brooms. Anything that cannot be effectively cleaned (disinfectant must be able to make contact with all surfaces) must be disposed as waste.

Place neutralized material, coveralls and other potentially contaminated cleanup materials in two plastic bags and then place into exterior container. Depending on size of the spill use either a 5-gallon pail, or 20-gallon or 55-gallon polyvinyl drums for containing clean-up materials. Ensure lids are firmly sealed on all waste containers when spill clean up is complete.

WASH YOUR HANDS. If hand-washing facilities are not available at the job site use waterless disinfectant soap or disinfectant wipes. After the contaminated area has been cleaned, use fresh water to remove disinfectant residue from all surfaces.

In the event of a response to a potential crime scene, contact DPS immediately and do not perform any activities in the area until approved by DPS.

**STEP 3: WASTE DISPOSAL**

Contact Plant Ops Safety Officer or UM-OSEH for guidance on disposal of infectious waste.

**BIOHAZARD EXPOSURE**

If you believe you were exposed to biohazard material that had not been decontaminated with the bleach solution follow these recommended steps:

- **Skin exposure:** Vigorously wash affected skin with plenty of soap and water while removing contaminated clothing and shoes.
- **Eye exposure:** Wash eyes for at least 10 minutes with copious amounts of water, lifting the upper and lower eyelids occasionally.
- **Seek follow-up medical attention.** Weekdays Monday – Friday 7am- 5pm
  Mworks Clinic
  1500 E. Medical Center Drive
  Ann Arbor, MI. 48109-0019
  998-8788
- **Report the incident to Work~Connections using standard injury reporting procedures and forms.**
Appendix (C) – HBV Vaccine Request Form

UNIVERSITY OF MICHIGAN

HEPATITIS B VACCINATION REQUEST

All Hepatitis B vaccinations are re-billed. All accounting information must be given before the Hepatitis B vaccination series of injections is initiated.

<table>
<thead>
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<th>FUND</th>
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<tbody>
<tr>
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<tr>
<td>PROGRAM</td>
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<tr>
<td>PROJECT GRANT</td>
<td></td>
</tr>
</tbody>
</table>

Please Print:

Employee Name__________________________________________________________

Dept _______________________________ Job Title ____________________________

Supervisor Name _______________________ Phone# ____________________________

Authorized signer for account number

Print __________________ Signature __________________

This completed form can be taken to MWorks to initiate the Hep B series of injections or to complete a declination form on a walk-in basis – or call to make an appointment.

MWorks Occupational Health Clinic
1500 East Medical Center Drive
(located at the University Hospital, next to the emergency room entrance)
998-8788