

Bloodborne Pathogens

BP WIND ENERGY POLICIES AND PROCEDURES

Bloodborne Pathogens

[Document Control Details](#)

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1.0 Purpose/Scope

- 1.1 This BPWE HSSE Procedure provides the minimum requirements to be followed when BPWE employees or on-site contractors perform designated occupational health care responsibilities. (See Section 5.2 Exposure Determination).
- 1.2 The Bloodborne Pathogens standard as written by the Occupational Safety and Health Administration (OSHA) at 29 CFR 1910.1030 was established to eliminate or minimize exposure to blood or other potentially infectious materials in the workplace.
- 1.3 This Bloodborne Pathogens procedure provides control measures and steps to be followed at all BPWE locations to prevent occupational exposure to pathogens found in blood and other potentially infectious materials.
- 1.4 Contractors are covered under the contractor company's written Exposure Control Practice in accordance with 29 CFR 1910.1030. Contractors are expected to follow all methods of compliance as listed below. Training, Hepatitis B vaccination, post exposure evaluation and follow up, incident reporting, and medical records will be managed by the contractor company as specified in their Practice.

2.0 Reference

- 2.1 29 CFR 1910.1030, Bloodborne Pathogens
- 2.2 Centers for Disease Control. Guidelines for prevention and transmission of Human Immunodeficiency Virus and Hepatitis B Virus to health-care and public-safety workers. MMWR 1989; 38.
- 2.3 US Department of Labor, US Department of Health and Human Services. Joint advisory notice: protection against occupational exposure to Hepatitis B Virus (HBV) and Human Immunodeficiency Virus (HIV) Washington, DC: US Department of Labor, US Department of Health and Human Services, 1987.
- 2.4 Center for Disease Control. Recommendations for prevention of HIV transmission in health-care settings. MMWR 1987;36 (supply no. 2s).
- 2.5 Center for Disease Control. Update: universal precautions for prevention of transmission of Human Immunodeficiency Virus, Hepatitis B Virus, and other bloodborne pathogens in health care settings. MMWR 1988;37:377-82,87-88.
- 2.6 HSSE 11.10.01 BPWE Incident Notification, Reporting and Investigation Procedure

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3.0 Responsibilities

3.1 Line Management – FM (Facility/Site Manager) and PM (Project Manager)

- A. Managers and supervisors whose personnel perform duties that may expose them to bloodborne pathogens must ensure that the requirements of this procedure are met.
- B. Managers and supervisors must ensure that any contractors for which they are responsible also meet the requirements of this procedure when they have employees who may be exposed to Bloodborne Pathogens.
- C. Ensure training is completed for employees performing duties in category 1 or 2 as outlined in Table 1 below.
- D. Inform HSSE Advisor that an exposure incident has occurred.
- E. If an exposure occurs, collect the following information:
 - Name of potentially exposed employee, incident details and route of exposure to the blood or OPIM,
 - Name of the person who was the “source” of the blood or OPIM, their address and phone number.
 - Document the time, place, and source of contact. This information must be kept confidential,
 - Name of witnesses and their contact information.

3.2 Employees

- A. All employees must be trained in and understand the requirements of this procedure.
- B. All employees, regardless of employer, shall report any observed occurrence of blood or other potentially infectious material immediately so that it can be cleaned appropriately by trained individuals.

3.3 Contractors

- A. BPWE contractors must inform the responsible line manager of their workers who perform duties covered by the requirements of this procedure and must certify that those workers have received the training as set forth by this procedure.

3.4 Business Unit HSSE Manager

- A. Acting as the local administrator for this procedure or selecting a designee to confirm that it is implemented appropriately.
- B. Verifying that employees assigned to a job classification where an occupational exposure to Bloodborne pathogens is reasonably anticipated or who are required to administer first aid or respond to medical emergencies have been offered hepatitis B vaccine.
- C. Verifying that training is provided to personnel regarding Bloodborne pathogens.
- D. Assisting in incident investigations to determine if exposure to possibly infectious materials has occurred.

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4.0 Acronyms and Definitions

Acronyms Table

Acronym	Definition
HBV	Hepatitis B Virus
HIV	Human Immunodeficiency Virus
HSSE	Health, Safety, Security and Environment
OPIM	Other Potentially Infectious Materials
PPE	Personal Protective Equipment

Definitions Table

Term	Definition
Blood	Human blood, human blood components, and products made from human blood.
Blood Borne Pathogens	Pathogenic or disease causing 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), Human Immunodeficiency Virus (HIV), hepatitis C, malaria, syphilis, babesiosis, brucellosis, leptospirosis, arboviral infections, relapsing fever, crueutzfeld-jakob disease, human T-lymphotrophic virus type 1, and viral hemorrhagic fever.
Contaminated Sharps	Any contaminated object that can penetrate the skin including, but not limited to, needles, scalpels, and broken glass.
Contamination	The presence or the reasonably anticipated presence of blood or other potentially infectious materials on an item or surface.
Contractors	Any third party groups under contract directly with BP and performing work on the BPWE sites.
Decontamination	The use of physical or chemical means to remove, inactivate, or destroy bloodborne pathogens on a surface or item to the point where they are no longer capable of transmitting infectious particles and the surface or item is rendered safe for handling, use or disposal.
Exposure Incident	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.
Hand Washing Facilities	A facility providing an adequate supply of running potable water, soap and single use towels or hot air drying machines.
Line Management	Employees whose primary responsibility is the direction and oversight of other employees. May also be referred to as Director, Manager, Supervisor, Superintendent, Foreman, or Lead Person.
Occupational Exposure	Skin, eye, mucous membrane, or parenteral contact with blood or other potentially infectious body fluids or materials that could result from the performance of an

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Term	Definition
	employee's duties.
Other Potentially Infectious Materials (OPIM)	Human body fluids such as semen, vaginal secretions, cerebrospinal fluid, synovial fluid, pleural fluid, pericardial fluid, peritoneal fluid, amniotic fluid, saliva in dental procedures, and body fluid that is visibly contaminated with blood.
Parenteral	Piercing mucous membranes or the skin barrier through such events as needlesticks, human bites, cuts, and abrasions.
Sharps	Any object that can penetrate the skin including needles, scalpels, broken glass, and exposed ends of wires.
Sharps with Engineered Injury Protection	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.
Source Individual	Any individual, living or dead, whose blood or other potentially infectious materials may be a source of occupational exposure.
Universal Precautions	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.

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5.0 Procedure

5.1 Regulatory Background

- A. The Blood borne Pathogens OSHA Standard (29CFR 1910.1030) was established to eliminate or minimize infections caused by contact with or exposure to blood borne pathogens in the workplace.
- B. Blood borne pathogens include any pathogenic microorganism that is present in human blood and can infect and cause disease in persons who are exposed to blood containing the pathogen. Examples include HBV and HIV, hepatitis C, malaria, syphilis, babesiosis, brucellosis, leptospirosis, arboviral infections, relapsing fever, Crueutzfeld-Jakob disease, human T-lymphotropic virus type 1, and viral hemorrhagic fever.

5.2 Exposure Determination

- A. The exposure determination is based on identifying employees who may reasonably have occupational exposure to blood or other potentially infectious materials when performing their duties.
- B. Occupational exposure means any reasonably anticipated skin, eye, mucous membrane, or parenteral contact (piercing, such as needle sticks, cuts, abrasions) with blood or other potentially infectious materials (OPIM) that may result from the performance of an employee's duties. The primary factors to be considered are:
 - Probability of exposure
 - Potential routes of exposure
- C. The procedure requires an analysis of job tasks and procedures so that job duties are classified into exposure categories without regard to the use of personal protective equipment (PPE). The employees in categories 1 and 2 (*see Table 1, below*) comprise the groups who come under the Blood borne Pathogens Standard.
- D. BPWE employees and contractors are not required to render first aid or CPR, unless the performance of first aid is a part of an employee's designated job duty or the employee is participating in a special emergency medical response organization.
- E. Personnel who have designated occupational health care responsibilities are considered to have potential occupational exposure and shall be included in the BPWE Bloodborne Pathogens Exposure Control Plan.

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Table 1

Category 1	Category 2	Category 3
Job duties that routinely involve exposure to blood or bodily fluids	Job duties that normally do not involve exposure to blood or bodily fluids, but employment may require performing unplanned tasks consistent in category 1	Personnel not exposed to blood or bodily fluids because of their job duties but are trained in first aid procedures to enhance the overall safety program of the company and provide the employee with valuable information/skills to use at home and/or off the job. “Good Samaritan” acts, such as assisting a coworker with a nose- bleed or controlling bleeding as the result of a fall, are not considered occupational exposures by OSHA. Personnel who are first aid trained but are not required as part of their job duties to render first aid shall be informed of that fact, and they need to report any exposure incident as a result of a Good Samaritan act immediately to their supervisor.
Category 1 Examples	Category 2 Examples	Category 3 Examples
• Site or medical dept. physician • Site or medical dept. nurse • EMT	• First aid trained employees who are required by their employer to render first aid and emergency rescue at a specific job site or location • Custodians who may clean up or otherwise handle regulated wastes in the course of their duties. • Designated first responders	Job classifications in this category include but are not limited to: • Technicians • Line Managers • Engineers • Field Workers • Office Workers • Administrative Staff • Security Staff

5.3 Exposure Controls

In general the best method of ensuring the health and safety for workers at risk is to understand and follow the concept of universal precautions as it applies to an employee's duties and work practices. This concept refers to the assumption that all blood and bodily fluids are contaminated with pathogens. Instruction in universal precautions shall take place during initial and annual training as specified by this procedure.

A. Engineering and Work Practice Controls

- Hand washing is a primary work practice control. Hand washing facilities must be provided for employees and contractors to use following exposure to blood. If this

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is not available or feasible, then alternative methods, such as antiseptic hand cleaners, in conjunction with clean cloths or paper towels, or antiseptic towelettes, will be provided. When these alternative methods are used, personnel shall wash their hands (or other affected areas) with soap and running water as soon as feasible after exposure.

- Rigid containers for used needle disposal, self-sheathing needles, and disposable needles shall be used in medical and/or first aid rooms. Personnel who bring kits for insulin or other required injections shall be instructed by their line manager to provide rigid containers for proper needle disposal.

B. Personal Protective Equipment

- Latex or vinyl gloves shall be worn when first aid or medical treatment begins and until treatment stops. One should assume all patients may be infectious. Always wear a new pair of gloves before handling another person.
- Gloves, and mouth shields, shall be present in or as a part of all first aid kits and shall be worn whenever there is a reasonable probability for blood splashes or contact with contaminated body fluids.

C. Housekeeping

- Surfaces that have been exposed to blood or other potentially infectious materials shall be cleaned of gross material and fluids, and then wiped with an appropriate disinfectant/germicide.

D. Waste Handling

- All medical wastes, blood specimens, and other body fluids shall be placed in containers that are color coded and which exhibit the biohazard symbol.
- Medical wastes include but are not limited to, needles, disposable equipment, and items such as soiled dressings, sponges, and used gloves.
- The disposal containers shall be constructed so that they are closeable, leak-proof, puncture-resistant, fluorescent orange, orange-red, or red in color, and display the biohazard legend.
- Biohazard containers shall be removed by or taken to an approved disposal facility.

5.4 Hepatitis B Vaccination

- A. Hepatitis B vaccination (HBV) will be made available to all Category 1 and Category 2 personnel. It shall be offered after the worker has received the required training and within 10 working days of assignment at no cost, at a reasonable time and place, and under the supervision of a licensed physician or licensed healthcare provider. Documentation shall be on maintained by the appropriate the HSSE Manager, or (FM or PM) for BPWE employees (see Attachment D). Contractors shall maintain immunization documentation for their employees.
- B. The employee who chooses not to be vaccinated must sign a declination form (see Attachment E). This form shall remain on file. The employee may later opt to receive

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the vaccine, again at no cost. HBV shall also be offered to any employee or contractor, irrespective of designated category or classification, who has been involved in an occupational exposure incident.

- C. Hepatitis B vaccination series shall also be made available as soon as possible, but in no event later than 24 hours, to any employee, irrespective of designated category or classification, and to all unvaccinated first aid providers who have rendered assistance in any situation involving the presence of blood or other potentially infectious material, regardless of whether or not an actual “exposure incident,” as defined by the standard, may have occurred.

5.5 Good Samaritan Acts

- A. Personnel, who are first aid trained but are not required as part of their job duties to render first aid shall be informed of that fact, and they need to report any exposure incident as a result of a Good Samaritan act immediately to their supervisor.
- B. Any exposure as a result of a Good Samaritan act shall be investigated by the responsible line manager and an appropriate HSSE representative and shall be treated in the same manner as other blood borne pathogen exposures in accordance with this procedure.

5.6 Incident Investigation

- A. All first-aid-rendered incidents involving the presence of blood or other possibly infectious material must be reported to the responsible line manager *immediately*, or as soon as is safely possible before the end of the work shift during which the first aid care incident occurred.
- B. The Line Manager must promptly conduct an exposure incident investigation that documents the following information in addition to any other information as required by the BPWE Incident Investigation Procedure:
- The names of all first aid providers who rendered assistance, regardless of whether personal protective equipment was used.
 - A description of the incident, including the time and date.
 - A determination of whether or not, in addition to the presence of blood or other potentially infectious materials, an “exposure incident,” as defined by the standard, occurred. This determination is necessary in order to ensure that the proper post-exposure evaluation, prophylaxis and follow-up procedure are made available immediately if there has been an “exposure incident”.
 - Documentation of the route(s) of exposure and the circumstances under which the exposure occurred.
 - Identification and documentation of the source individual, unless this is not feasible or prohibited by state or local law.
- C. Incident investigation reports shall be entered into Traction by the responsible line manager.

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5.7 Post-exposure Evaluation

- A. An exposed person's employer shall provide a confidential medical evaluation and follow-up immediately subsequent to an exposure incident. An exposure incident means a specific eye, mouth, or other mucous membrane, non-intact skin or parenteral contact (piercing, such as needle sticks, cuts, or abrasions) with blood or other potentially infectious material that result from the performance of an employee's duties.
- B. The exposed person's employer shall maintain a confidential medical record for each exposed employee. The record shall include:
 - The employee's name and Social Security number,
 - A copy of the employee's HBV vaccination records,
 - Information concerning the employee's ability to receive HBV vaccine, and information and data related to any HBV or HIV exposure.
 - The activity the worker was engaged in at the time of exposure,
 - The extent to which appropriate work practices and protective equipment were used, and
 - A description of the exposure source.
- C. This record shall be maintained for at least the duration of employment plus 30 years.

6.0 Training

- 6.1 BPWE line managers (FM and PM) who supervise personnel performing duties in category 1 or 2 above shall ensure Bloodborne Pathogens training is provided at the time of employment.
- 6.2 This training shall include all of the elements listed in the Bloodborne Pathogens Training Outline (*See Attachment A*).
- 6.3 All category 1 and 2 employees shall receive annual in-service training concerning the prevention of communicable diseases, emphasizing bloodborne diseases. Topics to be discussed include:
 - Clinical and epidemiological information about infectious disease,
 - Specific measures to reduce the risks of exposure,
 - The OSHA Rule on Bloodborne Pathogens, and
 - BPWE's Bloodborne Pathogens Exposure Control Plan.
 - This training shall also include an opportunity for interactive questions and answers with the instructor.
- 6.4 For BP employees, a record of each training session, including the date and contents of the session, the name of the persons who conducted the training and names of employees who attended, shall be entered into VTA.
- 6.5 Exposure records, training records, immunization records, declination forms, consent forms, and the sharps injury log will be maintained by the appropriate Site Manager, FM or PM.
- 6.6 Contractors who have personnel that may be exposed to bloodborne pathogens must

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certify to the appropriate responsible line manager that the contractor has a bloodborne pathogens program equal to or exceeding the BPWE bloodborne pathogens program and that all affected employees have been trained and immunized in accordance with the program prior to assigning those employees to any duty covered by this procedure.

- 6.7 Contractors are responsible for maintaining exposure records, training records, immunization records, declination/consent forms in accordance with the blood borne pathogens standard.

7.0 Auditing

- 7.1 The requirements outlined in this procedure are subject to each sites annual Operations and HSSE audit.
- 7.2 This procedure shall be reviewed and updated as necessary every three years.

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Attachment A:

Bloodborne Pathogen Exposure Control Training Outline

The training program must contain at least the following elements:

1. Personnel must be given access to a copy of the Bloodborne Pathogen Standard (1910.1030), and its contents must be explained to them.
2. There must be a general discussion of bloodborne diseases with special emphasis on the epidemiology, symptomatology, and modes of transmission of HIV and HBV.
3. There must be an explanation of the BPWE Exposure Control Plan, and personnel must be told how to obtain a copy of the written plan for their review.
4. An explanation of the methods of recognizing tasks and other activities that may involve exposure to blood or other potentially infectious materials.
5. An explanation of engineering and work-practice controls and PPE, and how these preventive measures will reduce the risk of exposure and the limitations of each of these methods to limit exposure.
6. Information must be made available on the types, proper use, location, removal, handling, decontamination, and disposal of PPE. Training also must be included to enable personnel to select the appropriate PPE for a given task.
7. Information on the Hepatitis B vaccine, its effect, HSSE procedures, method of administration, benefits, and that it will be offered free of charge to all personnel that have occupational health care responsibilities.
8. Information on the appropriate actions to take, who to contact in an emergency involving blood or other potentially infectious material.
9. Appropriate actions to be taken in an exposure incident, including the method of reporting and the medical follow up that will be available.
10. Information on the post-exposure evaluation and follow-up that the employer is required to provide for the employee following an exposure incident.
11. An explanation of the BIOHAZARD labels and red bags.
12. The instructor will provide an interactive question and answer period.

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The following are some typical activities with recommended guidelines for wearing personal protective equipment by employees who may be exposed to blood or other potentially infectious material:

Task/Activity	Disposable Gloves	Gown	Mask	Protective Eyewear	Mouth Shield
Mouth-to-mouth breathing/CPR	Yes	No	No	No	Yes
Spurting blood	Yes	Yes	Yes	Yes	No
Minimal bleeding	Yes	No	No	No	No
Blood drawing	Yes	No	No	No	No
Intubation	Yes	No	Yes	Yes	No
Handling/cleaning contaminated equipment or surfaces	Yes	Yes	No	Yes	No
Measuring blood pressure	No	No	No	No	No
Measuring temperature	No	No	No	No	No
Giving injections	No	No	No	No	No

Protective gloves shall be made of either latex or vinyl material. Gowns (aprons, surgeon's gowns, lab coats, etc.) shall be constructed of material such as Tyvek or plastic that does not allow fluids to penetrate and soak clothing.

Masks shall have a NIOSH approval for dusts and mists.

Goggles and/or face shields shall be approved by ANSI.

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Attachment C

Cleaning and Disinfecting

Cleaning, disinfecting of surfaces and non-disposable equipment will be accomplished by the following methods:

Sterilization

This process destroys all forms of microbial life. It is used for instruments or devices that penetrate the skin or contact normally sterile parts of the body (scalpels and needles).

High-Level Disinfection

This process destroys all forms of microbial life except high numbers of bacterial spores. It is used on reusable instruments that come into contact with mucous membranes (laryngoscope blades and endotracheal tubes).

Intermediate Level Disinfection

This process destroys mycobacteria, tuberculosis, most viruses, vegetative bacteria, and most fungi, but not bacterial spores. This is used on surfaces that come into contact with intact skin (stethoscopes, blood pressure cuffs, splints) and have been visibly contaminated with blood or body fluids. Surfaces must be pre-cleaned of visible material before disinfection. The following are intermediate levels of disinfection:

1. Use of EPA-registered “hospital disinfectant” chemical germicides that claim to be tuberculocidal on the label.
2. Hard-surface germicides as indicated above or solutions containing at least 500 ppm free available chlorine (1:1000 dilution of common household bleach—about 1/4 cup bleach per gallon of water).

Low Level Disinfection

EPA-registered “hospital disinfectants” (no claim on the label for tuberculocidal activity) are used to destroy some viruses, most bacteria, and some fungi, but not mycobacterium tuberculosis or bacterial spores. This is used for routine housekeeping or removal of soiling when there is no visible blood.

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Attachment D

Hepatitis B Consent Form

In accordance with OSHA recommendations, Hepatitis B vaccine is offered to all BPWE health care workers.

Hepatitis B Vaccine inoculation is recommended for all health care personnel who are or possibly will be at increased risk of infection with Hepatitis B Virus. Hepatitis B Virus is indicated for immunization against infection caused by all known subtypes of Hepatitis B Virus. The Vaccine will not prevent Hepatitis caused by other agents, such as Hepatitis A Virus, Non-A, Non-B Hepatitis Viruses, or other viruses known to infect the liver.

Hepatitis B Vaccine inoculation is generally well tolerated. No serious adverse reactions attributable to vaccination were reported during the course of clinical trials by the manufacturer. Adverse reactions are usually limited to some localized redness or soreness of the injection site. If you still have questions regarding the Vaccine, please discuss your concerns with the, HSSE Department and/or your personal physician.

I have been given an opportunity to ask questions about the inoculation and risks involved. All my questions have been answered to my satisfaction.

PLEASE CHECK INDICATING YOUR RESPONSE

☐ Yes, I would like to receive the Hepatitis B inoculations

Employee Signature: _____ Date: _____

SS#: _____

I have received, read, and understand the Company Bloodborne Pathogen Exposure Control Plan.

Employee Signature: _____ Date: _____

Witness: _____

Distribution: Original in Employer's Medical Record; Copy to Employee, Copy to HSSE Manager.

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Attachment E

Hepatitis B Vaccine Declination

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.

I have been given an opportunity to ask questions about the inoculation and risks involved. All my questions have been answered to my satisfaction.

I have received, read, and understand the BPWE Bloodborne Pathogen Exposure Control Plan.

PLEASE CHECK INDICATING YOUR RESPONSE

☐ No, I do not wish to receive the Hepatitis B inoculations

Employee Signature: _____ Date: _____

SS#: _____

Witness: _____ Date: _____

Distribution: Original in Employer's Medical Record; Copy to Employee, Copy to HSSE Manager.

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