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Standard Operating Procedure For:

Bloodborne Pathogen Exposure Control Plan

REVISION

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1. PURPOSE

To meet the legal requirements set forth by the Occupational Safety and Health Administration's (OSHA's) Bloodborne Pathogen (BBP) Standard at 29 CFR 1910.1030.

To meet specific requirements of the OSHA standard that will prevent transmission of bloodborne diseases to employees.

To provide specific work instructions and training requirements for Emergency Response Team (ERT) members, housekeeping personnel and designated Bio faculty and students.

To establish a written BBP Exposure Control Plan (ECP) designed to eliminate or minimize employee exposure to bloodborne pathogens.

2. SCOPE

The ECP shall contain at least the following elements:

- Exposure determination,
- Methods of compliance,
- Hepatitis B vaccination and post exposure evaluation and follow-up,
- Communication of hazards to employees via training, and
- Record keeping requirements.

These work instructions apply only to NY CREATES employees engaged in on site work activities that could lead to a possible occupational exposure to bloodborne pathogens or other potentially infectious materials (OPIM).

Tenant employees, contractors and sub-contractors must comply with their own organization's program for OSHA BBP compliance.

3. **DEFINITIONS**

- 3.1 **Biohazard Logo:** Universal logo used to label a biohazard waste.
- 3.2 **Biohazard Waste:** Any waste containing body fluids contaminated by visible blood; blood limited to no more than a band-aid shall not be included.
- 3.3 **Blood:** Refers to human blood components, and products made from human blood.

3.4 Contaminated: The presence or the reasonably anticipated presence of blood or other potentially infectious materials on an item or surface. 3.5 Clinical Laboratory: A workplace where diagnostic or other screening procedures are performed on blood or OPIM. 3.6 **Exposure Incident:** A specific eye, mouth, other mucous membrane, non-intact skin, or parenteral contact with blood or other potentially infectious materials that result from the performance of an employee's duties. 3.7 **Exudate:** Accumulation of fluid in a cavity, or matter that penetrates through vessel walls into adjoining tissue or the passing of puss or serum. 3.8 **Febrile:** The elevation of one's temperature due to injury or illness. 3.9 **HBV:** Hepatitis B Virus. 3.10 **HCV:** Hepatitis C Virus. 3.11 **Health Care Worker:** is a person trained in First Aid methods of giving emergency care to an injured or ill person in the absence of professional health care workers. 3.12 **HIV:** Human immunodeficiency virus (precursor to AIDS). 3.13 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. 3.14 **OPIM:** Other potentially infectious materials. 3.15 **OSHA Log 300:** Mandatory log form for reporting accidents /illness occurring at work and meeting the OSHA regulations for this subject. 3.16 Oxidative Lesions: Draining wound - infectious material draining from wound. 3.17 Personal Protective Equipment (PPE): Specialized protective equipment used by NY CREATES employees to protect themselves from direct exposure to blood or other potentially infectious materials. 3.18 Professional Healthcare Worker: is a person whose legally permitted scope of practice allows him or her to independently perform the activities of ordering /or administering vaccine, and giving appropriate counseling.

- 3.19 **Red Biohazard Containers:** Red plastic bags labeled with the biohazard logo used for disposing of biohazard waste.
- 3.20 **Red Sharps Container:** Special sealed container used for collecting and disposing of all sharps potentially used in the Albany Nanotech Complex.
- 3.21 **Regulated Medical Waste:** Liquid or semi-liquid blood or OPIM; contaminated items that would release blood or OPIM in a liquid or semi-liquid state if compressed; items that are caked with dried blood or other potentially infectious materials and are capable of releasing these materials, during handling; contaminated sharps; and pathological and micro biological wastes containing blood or OPIM.
- 3.22 **Source Individual:** Any individual, living or dead, whose blood or other potentially infectious materials may be a source of occupational exposure to employees. *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 its components.
- 3.23 **Universal Precautions:** Refers to a method of infection control in which all potentially infected bodily fluids are treated, as apply to feces, nasal secretions, sputum, sweat, or vomit unless they contain visible blood.
- 3.24 **Weeping Dermatitis:** Any skin disease or wound, which is open and causing drainage

4. RESPONSIBILITIES

4.1 Environmental, Health and Safety (EHS) Department

The EHS staff is responsible for the implementation of the ECP. The EHS staff will maintain, review and update the ECP at least annually and whenever necessary to include new or modified tasks and procedures. The EHS department shall make a copy of the ECP accessible to employees. Contact EHS via email at ehs@ny-creates.org with any questions.

EHS shall identify employees who may potentially be exposed directly to blood or other OPIM. The following is a list of all job classifications for which employees have occupational exposure. Included are the associated job classifications in which exposure may occur.

Job Classification	<u>Task(s)</u>			
ERT members	Responding to rescue calls where First Aid and CPR may be needed or evacuating employees with injuries/bleeding			
Housekeeping	Housekeeping and clean-up			

4.2 ERT Members

The ERT members currently working on site are responsible for responding to medical emergencies that occur on site; for providing first aid and administrating CPR to employees working on site.

ERT members incur a risk of infection and subsequent illness each time they are exposed to blood or OPIM. Therefore, the infection control program is the core element used to reduce worker risk by minimizing or eliminating employee exposure incidents to bloodborne pathogens; specifically, HIV, HBV and HCV.

4.3 Housekeeping

Housekeeping staff currently working on site are responsible for the cleanup and correct disposal of blood or OPIM after a spill or medical emergency; they also incur a risk of infection and subsequent illness each time they are exposed to blood or OPIM.

4.4 NY CREATES Employees

NY CREATES employees, tenants, contractors and sub-contractors who have an accident or injury are responsible for reporting the incident to the site emergency number. A member of ERT will be dispatched and provide assistance and/or first aid treatment.

4.5 Human Resources

The Human Resources (HR) Department is responsible for maintaining all of the BBP medical records required by the OSHA BBP Standard, including the sharps injury log, and for coordinating medical evaluations following from an exposure incident.

The medical records required by the OSHA BBP Standard include:

- the name and social security number of the employee;
- a copy of the employee's hepatitis B vaccination status including the dates of all of the hepatitis B vaccinations;
- copies of all results of examinations, medical testing and follow-up procedures;
- copies of the healthcare professional's written opinion; and
- copies of the information provided to the healthcare professional.

5. ASSOCIATED DOCUMENTS

- 5.1 **EHS-00012-F1** Bloodborne Pathogen Post Exposure Checklist
- 5.2 **EHS-00012-F2** Health Resources Consent for Serology Testing
- 5.3 **EHS-00012-F3** EHS Consent for Serology Testing
- 5.4 **EHS-00012-F4** Hepatitis B Vaccine Form
- 5.5 EHS-00012-F7 First Aid Report
- 5.6 **EHS-00026** Incident (Injury, Illness, or Close Call Event) Reporting and Prevention Policy

6. PROCEDURES/ METHOD OF COMPLIANCE

6.1 **Employee Exposure Prevention and Controls**

Universal Precautions: Employees (i.e., ERT, housekeeping) will utilize universal precautions. Universal precautions are a method of infection control in which human blood and certain human body fluids are treated as if known to be infectious with HIV, HBV and other BBP. Universal precautions are to be observed in all situations where there is a potential for contact with blood or OPIM. For the purpose of this document, human "exposure" is defined as contact with blood or other body fluids to which universal precautions apply through contact with an open wound, non-intact skin or mucous membrane during the performance of normal job duties. An "exposed worker" is defined, for the purposes of this document, as an individual exposed to blood or OPIM, as described above, while performing normal job duties.

NY CREATES employees (i.e., ERT, housekeeping) shall routinely use appropriate barrier precautions and universal precautions to prevent skin and mucous membrane exposure when in contact with blood or other OPIM of any employee. Gloves shall be worn for touching blood and body fluids, mucous membranes, non-intact skin of all patients and for handling items or surfaces soiled with blood or body fluids. Gloves shall be changed after contact with each patient.

Hands and other skin surfaces shall be washed immediately and thoroughly, if contaminated with blood or other body fluids. Hands shall be washed immediately after gloves are removed.

Although saliva has not been implicated in HIV, HBV and HCV transmission, barrier devices are available to help minimize the spread of disease during mouth to mouth resuscitation. These ventilation devices include but are not limited to CPR microshields and/or CPR pocket masks. They shall be available (at a minimum) on the First Aid Responder bags located in NanoFab South, NanoFab North, NanoFab East, and NanoFab Central. Some personal ventilation devices may also be worn/carried by the First Aider on his/her person. If any ventilation device is used, it should be disposed of after use, as biohazard waste and a replacement device will be issued by EHS. It should be noted on the First Aider's Report Form that the device was used and disposed of.

ERT members who have extensive open areas on skin or weeping dermatitis should refrain from all direct patient care until condition is resolved.

Pregnant ERT members are not known to be at any greater risk of contracting HIV, HBV or HCV infection than other health care workers. Employees incur the risk of infection and subsequent illness each time they are exposed to blood or other potentially infectious materials. Therefore, the infection control program is the key element to reduce worker risk by minimizing or eliminating exposure incidents to BBP, such as HIV, HBV and HCV. Because of the risk to the unborn child, pregnant ERT members shall be especially familiar with and strictly adhere to precautions to minimize the risk of HIV, HBV and HCV transmission.

6.2 Personal Protective Equipment (PPE)

Personal protective clothing or equipment must be worn or used whenever the ERT, or housekeeping member anticipates any contact with blood or OPIM. All forms of personal protective clothing and equipment shall be immediately disposed of as biohazard waste, after use. Personal protective clothing shall be provided at no cost to the employee by NY CREATES and shall include but not be limited to gloves, gowns, masks, eye wear and foot protection. Part or all shall be worn as deemed appropriate for circumstances involved at time of incident.

NY CREATES shall provide and assure that ERT, and housekeeping members use gloves, pocket masks, or other ventilation devices when there is a potential for exposure to blood or other potentially infectious materials.

NY CREATES shall provide for cleaning, laundering, or disposal of PPE used in the course of an emergency treatment within the Albany Nanotech Complex working environment.

NY CREATES shall repair or replace PPE as needed to maintain its effectiveness.

Surgical or examination gloves shall be replaced when visibly soiled, torn, and punctured or whenever their integrity is compromised. A new pair will be donned for each new use. They shall not be washed, disinfected, or otherwise reused. At no time are gloves to be considered a replacement for hand washing.

NY CREATES employees must follow a safe procedure for glove removal, being careful that no pathogens from the soiled gloves contact your hands or body.

- Carefully remove all other PPE while still wearing both gloves.
- With both hands gloved, peel one glove off from top to bottom and hold it in the gloved hand.
- With the exposed hand, peel the second glove from the inside, tucking the first glove into the second.
- Dispose of the entire bundle promptly.
- Wash hands thoroughly.

6.2.1 Engineering Controls

Red biohazard "sharps" containers shall be available in areas where sharps are to be stored and/or used.

"Biohazard" labeled bags or boxes shall be available in all SUNY Poly -Albany places of anticipated need for disposal of biohazard waste materials. Proper instruction and annual review of OSHA BBP Standard shall be provided by NY CREATES EHS Department with mandatory attendance for all NY CREATES ERT members, housekeeping and designated Bio faculty and students.

Engineering controls will be examined annually to ensure their effectiveness and will be replaced as needed.

6.3 Biohazard Waste Clean-Up and Disposal – Tags, Labels, and Bags

Tags that comply with 29 CFR 1910.1030 shall be used to identify the presence of an actual or potential biological hazard.

Tags shall contain the word "BIOHAZARD" or the biological hazard logo and state the specific hazardous condition or the instructions to be communicated to employees.

The word and message must be understandable to all employees who may be exposed to the identified hazard.

Labels / tags may be an integral part of the container or affixed as close as safely possible to their respective hazards by string, wire, or adhesive to prevent their loss or unintentional removal.

Red bags or red containers may be substituted for labels on containers of infectious waste.

Employees with potential occupational exposure (e.g., ERT, housekeeping) shall be informed of the meaning of various labels, tags and color-coding system.

Portable biohazard clean-up kits, including PPE, are available in all First Aid Responder bags.

Regulated waste is placed in containers which are closable, constructed to contain all contents and prevent leakage, appropriately labeled or color-coded (see Labels), and closed prior to removal to prevent spillage or protrusion of contents during handling.

All infectious waste shall be placed in closable, leak proof containers or bags that are color coded, labeled, or tagged.

Disposable syringes, needles, scalpel blades and other sharp items shall be placed in closable puncture-resistant containers for disposal.

Puncture-resistant sharp containers shall be easily accessible to workers and located in areas where they are commonly used.

Double-bagging prior to handling, storing, and/or transporting infectious waste is necessary if the outside of a bag is contaminated with blood or other potentially infectious materials.

Lab specimens of body fluids shall be transported in a container that will prevent leaking, and disposed of in accordance with institutional policies and regulatory requirements.

Initial clean-up of blood or OPIM shall be done with a dilute solution of household bleach, solution strength of 1:10 with water.

NY CREATES shall ensure that contractor housekeeping workers wear appropriate PPE and clothing including gloves during all cleaning of potentially infectious materials, which have been previously decontaminated by a NY CREATES ERT member. Clean-up shall be done under the direction of a NY CREATES ERT member.

6.4 Exposure Incident Procedures and Follow-up

6.4.1 Report

Any NY CREATES employee or tenant, contractor and/or sub-contractor employee who have an on-site exposure incident (as defined above) shall report this by calling Security via the site emergency number at 518-437-8600.

- Security will immediately notify ERT of the exposure incident and ERT will respond.
- For all exposure incidents (as defined above) occurring onsite, ERT will document the incident via completion of a First Aid Report (EHS-00012-F7) (even if the exposure incident did not actually require rendering of first aid by ERT).
- ERT will maintain the completed First Aid Reports for all onsite exposure incidents.

6.4.2 Notify Human Resources / Management

If the exposure incident involved a NY CREATES employee, ERT will concurrently orally notify Human Resources of the incident and forward to Human Resources a copy of the completed First Aid Report.

If the exposure incident involved a tenant, contractor or sub-contractor employee, EHS will orally notify the employee's manager and provide a copy of the completed First Aid Report to the employee's manager.

EHS will also inform Human Resources of the occurrence of the exposure incident to a tenant, contractor or sub-contractor employee, for their information.

6.4.3 Document Circumstances

Following the occurrence of an exposure incident involving a NY CREATES employee, Human Resources will document the known circumstances of the exposure incident via initial completion of the Bloodborne Pathogen Post Incident Exposure Checklist (EHS-00012-F1). EHS will assist Human Resources with initial completion of the Checklist, as appropriate.

6.4.4 Serology Testing

Source Individual - Concurrent with completion of the Bloodborne Pathogen Post Exposure Incident Checklist, Human Resources will request permission from the source individual for a blood draw and laboratory analysis. Human Resources will document this request via completion of the Health Resources Consent for Serology Testing form (**EHS-00012-F2**). In the event the source individual declines permission for the blood draw, this declination will also be documented on the Health Resources Consent for Serology Testing form (**EHS-00012-F2**).

Exposed Individual - Also concurrent with completion of the Bloodborne Pathogen Post Exposure Incident Checklist, Human Resources will request permission from the exposed employee for a blood draw and laboratory analysis. Human Resources will document this request via completion of the EHS Consent for Serology Testing form (**EHS-00012-F3**). In the event the exposed employee declines permission for the blood draw, this declination will also be documented on the EHS Consent for Serology Testing form (**EHS-00012-F3**).

Human Resources will ensure that the Source Individual's blood is tested as soon as feasible and after consent is obtained in order to determine HBV and HIV infectivity. If consent is not obtained from the Source Individual for a blood test, Human Resources will establish that legally required consent cannot be obtained (using **EHS-00012-F2**). 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. 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.

Human Resources will make available to the exposed employee the results of the Source Individual's blood testing, and shall inform the exposed employee of the applicable laws and regulations concerning disclosure of the identity and infectious status of the Source Individual.

Human Resources will ensure that the exposed employee's blood is collected as soon as feasible following the exposure incident and tested after consent is obtained (**EHS-00012-F3**). If the exposed 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.

6.4.5 <u>Medical Evaluation</u>

- EHS will then make arrangements for the exposed employee to be evaluated immediately at either an approved health care clinic or the nearest emergency room.
- Human Resources will provide the completed forms (EHS-00012-F1, F2, F3 and F7) to the medical care provider. The medical provider will provide post-exposure evaluation and initial consultation to the exposed employee.
- Human Resources will also ensure that the medical provider is provided with a copy of the Bloodborne Pathogen Standard (29 CFR Part 1910.1030), a description of the employee's duties as they relate to the exposure incident, results of the Source Individual's blood testing, if available, and all medical records relevant to the appropriate treatment of the employee, including the employee's Hepatitis B vaccination status, for which the employer is responsible for maintaining.
- In providing for the post-exposure medical evaluation for the exposed employee (including any follow-up after the initial medical evaluation, including prophylaxis), Human Resources will ensure that the medical evaluation is confidential, is made available at no cost to the employee and is made available to the employee at a reasonable time and place.
- Human Resources will also ensure that the medical evaluation is performed by or under the supervision of a licensed physician or by or under the supervision of another licensed healthcare professional and provided according to recommendations of the U.S. Public Health Service current at the time of examination (except as specified by 29 CFR Part 1910.1030(f)).

• EHS will also ensure that all laboratory tests are conducted by an accredited laboratory at no cost to the affected employee.

6.4.6 <u>Medical Opinion / Written Report:</u>

In providing for the post-exposure medical evaluation for the exposed employee, Human Resources will obtain and provide to the exposed employee a copy of the evaluating healthcare professional's written opinion within 15 days of completion of the evaluation.

- Human Resources will request that the healthcare professional's written opinion for Hepatitis B vaccination to be limited to whether Hepatitis B vaccination is indicated for the employee, and if the employee has received the vaccination.
- Human Resources will further request that the healthcare professional's written opinion for post-exposure evaluation and follow-up is limited to the following information:
 - 1) that the employee has been informed of the results of the evaluation
 - that the employee has been told about any medical conditions resulting from exposure to blood or OPIM that require further evaluation or treatment.
- Human Resources will request that all other findings or diagnoses remain confidential and not included in the written report.

6.4.7 Treatment / Further Testing

- Human Resources will ensure that post-exposure prophylaxis for the exposed employee, when medically indicated via the postexposure medical evaluation, and as recommended by the U.S. Public Health Service, is provided.
- EHS will ensure that, in the event of an exposure incident, appropriate counseling is provided to the exposed employee as well as medical evaluation of any reported illnesses by the exposed employee.
- Human Resources shall offer to repeat HIV testing to the exposed employee six weeks post exposure and on a periodic basis thereafter (12 weeks, and 6 months post exposure).

6.4.8 **Hepatitis B Vaccination**

The EHS Department upon request or potential exposure from an employee shall make the HBV vaccination available (EHS-00012-F4).

EHS will provide training to employees on hepatitis vaccinations, addressing the safety, benefits, efficacy, methods of administration, and availability. The hepatitis B vaccination series is available at no cost after training and within 10 days of initial assignment to employees identified in the exposure determination section of this plan. One to two months after the completion of the series, the worker will be encouraged to be screened for antibody HBs AG to ensure immunity. Employees who do not respond to the primary vaccination series will be encouraged to be re-vaccinated with a second three-dose series and re-tested. Non-responders must be medically evaluated.

Vaccination is encouraged unless:

- Documentation exists that the employee has previously received the series.
- Antibody testing reveals that the employee is immune.
- Medical evaluation shows that vaccination is contraindicated.

However, if an employee chooses to decline vaccination, the employee must indicate this while signing the Hepatitis B Vaccine Form (**EHS-00012-F4**). Employees who decline may request and obtain the vaccination at a later date at no cost. Documentation of refusal of the vaccination is kept in EHS Department.

6.5 Waste Management

All biological waste which conforms to this specification will be placed in a red biohazard bag or biohazard container and placed in the biohazard waste box located in the Central Utility Building.

The EHS Department will select and manage the account with a Medical Waste Management Company. The criteria for selection will include: certification with the Department of Health (DOH) and the EPA.

EHS shall be responsible for notifying scheduling pick-ups and all paperwork associated with the removal of the waste offsite.

6.6 Training and Education of ERT Members and Housekeeping

NY CREATES managers shall ensure that employees with a potential for exposure to infectious materials participate in a training educational program annually.

The training requires that there be an opportunity for interactive questions and answers with the person conducting the training.

NY CREATES shall ensure that training materials are appropriate in content, vocabulary, literacy, and language appropriate to the background of potentially exposed health service workers.

6.6.1 Training Program Content and Elements of the Program

- A copy and explanation of the standard
- An explanation of our ECP and how to obtain a copy
- An explanation of methods to recognize task and other activities that may involve exposure to blood and OPIM, including what constitutes an exposure incident.
- A general explanation of the epidemiology and symptoms of HIV, HBV and HCV
- An explanation of the modes of transmission of HIV, HBV and HCV
- An explanation of the use and limitations of methods of control that may prevent or reduce exposure including universal precautions, engineering controls, work practices, and PPE
- Explanation of basis for selecting PPE
- Information on the HBV vaccine, including its efficiency, safety, and the benefits of being vaccinated
- An explanation of the process to follow if an incident occurs, method of reporting the incident, and medical follow-up that shall be made available by NY CREATES.
- An explanation of the signs, labels, tags and color-coding used to denote biohazards.
- A BBP Training Program Quiz will be conducted on all ERT members and housekeeping employees following training.

7. RECORDS

7.1 Health Records

NY CREATES shall record and track each NY CREATES employee's reported exposure incident to blood or OPIM on the Bloodborne Pathogen Post Exposure Checklist (EHS-00012-F1) and according to 29 CFR 1910.1030

Blood exposures shall be recorded on the injury and illness log if medical treatment such as Gamma Globulin, Hepatitis B Immune Globulin, or Hepatitis B vaccine is prescribed and administered by a licensed medical person, or meets other OSHA recordability criteria.

The medical record of both the client and the employee shall contain a copy of the employee's vaccination status as prescribed by law.

The medical record(s) shall include but not be limited to; examinations results, medical testing, follow–up procedures, vaccination status, the Health Care Professional's written opinion, and a copy of the information provided to the employee; and will be maintained in the medical record as stated by the OSHA Standard 29 CFR 1910.1030

No record or report may be disclosed without the employee express written consent to any person within or outside of the facility except as required by the law.

7.2 Training Records

Training records shall include:

- The date of training session
- The contents or summary of training sessions
- The names and qualifications of persons conducting training
- The names and job titles / or departments of persons attending training.

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

7.3 Transfer of Records

NY CREATES shall comply with transfer requirements of all medical and training records as set forth in OSHA Standards 29 CFR 1910.20.

7.4 First-Aid Incidents

First-aid incidents involving the presence of blood or OPIM will be reported to EHS Department via walk-in, or via email (ehs@ny-creates.org) prior to the end of the work shift during which the incident occurred.

The First Aid Report (**EHS-00012-F7**) will include the names of ERT members associated with the incident, incident date and time and a description of First Aid incident. The report will also ask if there was the presence of blood or OPIM, and whether or not an exposure occurred.

The First Aid Reports will be kept by the EHS Department.

The First Aid Report will also state that the full hepatitis B vaccination is available within 24 hours to all unvaccinated ERT members who have rendered assistance in any situation including the presence of blood or OPIM, regardless of whether an exposure has occurred.

7.5 Medical Records

Medical records are maintained by NY CREATES for each employee with occupational exposure in accordance with 29 CFR 1910.20, "Access to Employee Exposure and Medical Records".

Employee medical records are provided upon request of the employee or to anyone having written consent of the employee within 15 working days.