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## Occupational Health Programs Manual – Chapter 11

# Bloodborne Pathogens

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*Approved by: QS/Chief, Safety and Health Division*

**NASA - Glenn Research Center**

**Cleveland, OH 44135**

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***Include all information for each revision. Do not remove old revision data. Add new rows to table when space runs out by pressing the tab key in the last row, far right column.*

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# Chapter 11—Bloodborne Pathogens

***NOTE:*** *The current version of this chapter is maintained and approved by the Safety and Health Division (SHeD). The last revision date of this chapter was April 2012.* ***The current version is located on the Glenn Research Center intranet within the BMS Library.*** *Approved by the Chief of Safety and Health Division.*

## 1.0 PURPOSE

The purpose of the Bloodborne Pathogen Program is to prevent or minimize employee exposure to bloodborne pathogens from blood and other potentially infectious materials (OPIMs). This chapter identifies the employees at risk for occupational exposure to bloodborne pathogens and the elements of a bloodborne pathogen exposure control plan including engineering and work practice controls, personal protective clothing and equipment, medical surveillance, hepatitis B vaccination, signs, labels, and training.

## 2.0 APPLICABILITY

This chapter is applicable to all civil servant and support service contractor employees assigned to NASA Glenn Research Center (GRC) sites, construction contractors, students, and visitors. Support service contractors, construction contractors, and visitors' employers are responsible for the health and safety of their employees and for hazard analysis, training, personal protective equipment (PPE), medical surveillance, and other requirements to ensure compliance with NASA policy. This chapter applies to all employees who have occupational exposure to blood or OPIMs of human origin. Occupational exposure is defined as reasonably anticipated skin, eye, mucous membrane, or other parenteral contact with blood or OPIM that may result from the performance of the employee's duties. Note that bloodborne pathogen regulations do not apply to "Good Samaritan" acts performed on a voluntary basis in an emergency situation.

## 3.0 BACKGROUND

Bloodborne pathogens are microorganisms such as viruses or bacteria that are carried in blood and can cause disease in people. Two examples of bloodborne pathogens are hepatitis B virus (HBV), which causes hepatitis B, a serious liver disease, and human immunodeficiency virus (HIV), which causes acquired immunodeficiency syndrome (AIDS). The Occupational Safety and Health Administration's (OSHA's) Bloodborne Pathogen Standard, 29 Code of Federal Regulations (CFR) 1910.1030, is designed to protect workers in health care and related occupations from the risk of exposure to bloodborne pathogens. The written Bloodborne Pathogen Program is essentially an exposure control plan that outlines the protective measures to eliminate or minimize employee exposure to blood or OPIM.

## 4.0 POLICY

The Glenn Research Center's safety and occupational health programs are intended to maintain and protect the health and safety of our workers, as well as to promote employee wellness. This Chapter is based upon applicable laws and regulations, industry standards or other guidelines, as well as agency policy. The agency policy providing guidance for bloodborne pathogens is NASA Procedural Requirement (NPR) 1800.1C, Chapter 2.12 Bloodborne Pathogens. NPR 1800.1C also states that NASA Centers shall comply with OSHA standards promulgated under Section 6 of the OSHA Act of 1970. In addition to complying with the OSHA Bloodborne Pathogen Standard (29 CFR 1910.1030), the Centers for Disease Control (CDC), National Institute for Occupational Safety and Health provides current guidance on bloodborne pathogens and infectious disease concerns such as the current version of "Biosafety in Microbiological and Biomedical Laboratories".

## 5.0 RESPONSIBILITIES

### 5.1 SHeD Program Lead

The Safety and Health Division (SHeD) Program Lead shall

- Develop, implement, and annually review the written Bloodborne Pathogen Program
- Conduct exposure determinations to identify employees with reasonably anticipated skin, eye, mucous membrane, or other parenteral contact with blood or OPIM

- Provide initial and annual refresher bloodborne pathogen training for employees enrolled in the program
- Advise and assist supervisors with the development of bloodborne pathogen exposure control plans
- Review and approve all bloodborne pathogen exposure control plans for compliance with 29 CFR 1910.1030
- Conduct an annual review of the Bloodborne Pathogen Program Exposure Control Plans to ensure continued effectiveness and compliance

- Provide sharps containers for the disposal of needles for employee self-administration of medicine
- Provide technical oversight for bloodborne pathogen cleanups and clearance criteria
- Conduct a program review of contractor bloodborne pathogen programs, including the most recent exposure control plans, on a periodic basis

### 5.2 Code QS, Occupational Medicine Clinic (Medical Services), Center Medical Director

The Medical Director shall

- Provide medical consultation, HBV vaccine, and vaccination series to employees who anticipate occupational exposure to bloodborne pathogens
- Provide occupational exposure incident evaluation and treatment, and the necessary followup
- Provide and complete forms required by 29 CFR 1910.1030, including the HBV vaccination declination and issuance of the written medical opinion letter
- Assist the SHeD Program Lead with bloodborne pathogen training
- Provide for short-term storage of infectious or biohazard waste for Energy and Environmental Management Office pickup.
- Record sharps injury incidents that have been reported to Medical Services in the GRC Incident Reporting and Information System (IRIS) for the OSHA sharps injury log. Sharps injuries are subject to OSHA 300 recording and recordkeeping regulations

### 5.3 FE Division, Energy and Environmental Management Office (EEMO), Waste Manager

EEMO Waste Manager shall

- Provide and coordinate infectious, biohazard, and medical waste management support for GRC, ensuring that all potentially infectious materials are disposed of according to all Federal, State, and local Department of Transportation, OSHA, and Environmental Protection Agency (EPA) regulations
- Provide infectious, biohazard, and medical waste management procedures for bloodborne pathogen program waste (The written procedures are in Chapter 26 of the Environmental Programs Manual, Medical Waste Management.)

### 5.4 Incident Reporting and Information System Site Administrator

The IRIS-site administrator shall maintain a civil servant sharps injury log for the recording of percutaneous injuries from contaminated sharps. The information in the sharps injury log shall be recorded and maintained in such manner as to protect the confidentiality of the injured employee. Sharps injuries are initially recorded by Medical Services in IRIS, for the OSHA sharps injury log.

### 5.5 Logistics and Technical Information Division, Facility Operations Specialist as the Contracting Officer's Technical Representative for Janitorial and Waste Management Services at Lewis Field.

**Plum Brook Management Office, Contracting Officer's Technical Representative for TFOME Janitorial contract**

Contracting officer's technical representatives (COTRs) for Lewis Field and PBS janitorial contracts shall facilitate contractor services for spill containment and clean up of biologically contaminated areas.

### 5.6 Human Capital Development Division F

The Human Capital Development Division shall maintain records for employees who have completed bloodborne pathogen training and coordinate with the SHeD Program Lead to ensure that the System for Administration, Training, and Educational Resources for NASA (SATERN) bloodborne pathogen training curriculum is current and activated to issue annual training reminders for civil servant employees active in the Bloodborne Pathogen Program.

### 5.7 Safety and Health Division Chief

The SHeD Division Chief shall ensure a qualified individual is identified as the Bloodborne Pathogen Program Lead, to carry out the responsibilities set forth in the written Bloodborne Pathogen Program. The qualified individual shall be identified by the organization tasked with implementation of Bloodborne Pathogen Program.

### 5.8 Supervisors

Supervisors shall

- Identify any positions, procedures, or new or revised job tasks that include occupational exposure to blood or OPIM of human origin
- Ensure that employees who may be expected to provide first aid or cardiopulmonary resuscitation (CPR) in an occupational emergency situation, such as designated emergency responders, are identified as employees who may be exposed to blood or OPIM
- Ensure that employees with reasonably anticipated occupational exposure to blood or OPIM of human origin receive initial and annual refresher bloodborne pathogen training
- Ensure that employees with reasonably anticipated occupational exposure to blood or OPIM are referred to Medical Services for HBV consultation and vaccination if necessary (If the vaccine is declined, the employee must sign the HBV vaccination declination.)
- Ensure that bloodborne pathogen exposure control plans are developed and submitted to the SHeD Program Lead for approval . Exposure control plans shall be reviewed, updated, and submitted for approval annually.
- Ensure that employees are knowledgeable about and have access to their job- or task-specific bloodborne pathogen exposure control plan(s)
- Ensure that employees have the proper bloodborne pathogen cleanup equipment, including PPE, spill containment, biohazard labels, and bloodborne pathogen waste receptacles
- Immediately refer all exposed employees to Medical Services for reporting and medical followup
- Coordinate with FE Division, Energy and Environmental Management Office (EEMO), Waste Manager to ensure proper disposal of infectious or biohazard waste
- Refer employees who need access to a sharps container to dispose of contaminated sharps used for onsite self-administration of medicine to the SHeD Program Lead.

### 5.9 Employees

Employees shall

- Review on an annual basis, or whenever there is a revision, the bloodborne pathogen exposure control plan specific to their job and tasks
- Conduct tasks and follow required bloodborne pathogen procedures, as noted in the job- or task-specific bloodborne pathogen exposure control plan, to prevent or minimize employee exposure and to ensure proper disposal of biohazard waste
- Wear the required PPE
- Comply with training and vaccination requirements
- Inform their immediate supervisor of an exposure incident and report immediately to Medical Services for exposure incident reporting and medical follow-up

Employees using hypodermic needles for self-administration of medicine shall properly dispose of personal-use syringes in a sharps container. Please refer to section6.5.5, Biohazard-Contaminated Sharps.

## 6.0 REQUIREMENTS

### 6.1 General (*OSHA 29 CFR 1910.1030* and *29 CFR 1910.1020*)

Good Samaritan acts, such as assisting a coworker with a nosebleed, are not considered to be occupational exposure and thus do not require the establishment of a bloodborne pathogen exposure control plan. Only employees with reasonably anticipated skin, eye, mucous membrane, or other parenteral contact with blood or OPIM of human origin, are included in this program.

"Universal precautions" is an approach to infection control in which all human blood and OPIM of human origin are treated as if known to be infectious for bloodborne pathogens. Employees shall adhere to universal precautions.

### 6.2 Exposure Determination (*OSHA 29 CFR 1910.1030(c)(2)*)

An exposure determinationis required for each employees with potential occupational exposure to bloodborne pathogens or OPIM of human origin. These determinations require the listing of the job classifications and the tasks and procedures where occupational exposure occurs. The following civil servant jobs have been identified as having tasks with potential bloodborne pathogen exposure and are covered by this program: GRC Mishap Interim Response Team may come in contact with blood on a mishap scene; Aircraft Operations personnel who may provide preliminary cleanup of bodily fluids; employees supporting the Biomedical Devices Lab in building 110.

The following support service contractor jobs have been identified as having tasks with potential exposure to bloodborne pathogens and are covered by their employers' exposure determinations found in the employers written exposure control plan: Medical Services and Fitness Center personnel, Waste Management personnel whose tasks include transporting biohazard waste, security personnel, custodial personnel whose tasks include cleaning up blood or OPIM after an occupational or medical incident, custodial personnel whose tasks include Occupational Medicine Clinic (Medical Services) housekeeping, and Lewis Little Folks personnel who administer first aid for children enrolled in daycare.

### 6.3 Exposure Control Plan (*OSHA 29 CFR 1910.1030(c)(1)*)

An exposure control plan is required for each employee, or group of employees, with potential occupational exposure to bloodborne pathogens. The exposure control plan shall include the exposure determination, which identifies job classifications and, in some cases, tasks and procedures where employees are exposed to blood or OPIM; the procedures for evaluating the circumstances surrounding an exposure incident; methods of compliance; HPV vaccination and postexposure followup; communication of hazards to employees; and recordkeeping.

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

6.1 to 6.3 – The SHED verification procedure to ensure supervisor compliance with exposure determinations and written exposure control plans shall be a review of the applicable Exposure Determination and Exposure Control Plan (EDECP). The EDECP is maintained by supervisor, and a copy stored on SHED server, IH Bloodborne folder.

### 6.4 Bloodborne Pathogen Program Enrollment (*OSHA 29 CFR 1910.1030*)

Employees with reasonably anticipated skin, eye, mucous membrane, or other parenteral contact with blood or OPIM of human origin shall be enrolled in a bloodborne pathogen program.

#### 6.4.1 Training (*OSHA 29 CFR 1910.1030(g)(2)*)

The SHeD Program Lead and the medical services provider shall provide initial and annual refresher bloodborne pathogen training to employees enrolled in the Bloodborne Pathogen Program. The training shall be provided within 10 days of an employee being assigned to job duties that have the potential for bloodborne pathogen exposure.

Training shall include the following elements:

- Bloodborne Pathogen Program requirements
- Epidemiology and symptoms of bloodborne diseases
- Modes of transmission of bloodborne pathogens and methods to control transmission
- Identification of and recognition of tasks that may involve exposure to potentially infectious materials
- Review of the job- or task-specific exposure control plan(s), including the use and limitations of safe work practices and engineering controls
- Information on the types, proper use, location, removal, handling, and disposal of PPE
- HBV vaccine requirements
- Actions to take and persons to contact in an emergency involving blood or OPIM
- Actions to take if an exposure incident occurs, including incident reporting and medical followup
- Information on the postexposure evaluation and followup that the employer is required to provide
- Explanation of signs, labels, and color-coding requirements

### 6.4.2 Medical Consultations and the HBV Vaccination (*OSHA 29 CFR 1910.1030(f)* and *NPR 1800.1C, Chapter 2.1*)

All employees enrolled in the Bloodborne Pathogen Program shall receive a medical consultation and the HBV vaccination series, according to recommendations of the U.S. Public Health Service current at the time these evaluation and procedure. Medical Services shall provide the vaccination series, at no cost to the employee, after the employee has received initial bloodborne pathogen training and within 10 days of the initial assignment date, as required by OSHA .

If an employee with potential occupational exposure to bloodborne pathogens declines the HBV vaccination series, they shall be required to sign the HBV vaccination declination, which dismisses GRC and its employees from responsibility. Medical Services shall provide this waiver to the employee and maintain it in the employee's medical records.

### 6.3.1 6.4.3 Personal Protective Equipment (*OSHA 29 CFR 1910.1030(d)*)

Where the potential for exposure to bloodborne pathogens is a concern, employees shall wear PPE. Appropriate PPE prevents blood and OPIM from penetrating through employee work clothing to the skin, eyes, mouth, or mucous membranes.

Employees shall wear gloves when it is reasonably anticipated that they may have hand contact with blood or OPIMs and when handling or touching contaminated items or surfaces. Gloves shall be replaced as soon as practical when they become contaminated or as soon as possible when they have been torn, punctured, or can no longer act as a barrier between the body and potentially infectious material.

Employees shall wear masks—in combination with eye protection devices, such as goggles or glasses with side shields, or chin-length face shields—whenever splashes, spray, spatter, or droplets of blood or OPIMs may be generated and eye, nose, or mouth contamination can be reasonably anticipated.

CPR masks should be used whenever possible but are not required.

Employees shall wear appropriate protective clothing—such as gowns, aprons, lab coats, clinic jackets, or similar outer garments—when there is a potential for splashing, spraying, or lying in potentially infectious material. The type and characteristics of each garment will depend upon the task and degree of exposure anticipated.

Employees shall remove contaminated PPE as soon as possible and before leaving the work area. Employees shall remove torn, punctured, or worn PPE immediately and must wash the affected area thoroughly with soap and water. PPE shall be removed in a manner that does not create an additional exposure. After removal, contaminated garments

shall be kept inside out so that the contaminated surface faces inside. Contaminated PPE shall be discarded in an approved biohazard container.

6.4 – The SHED verification procedure to ensure compliance with bloodborne pathogen enrollment requirements shall be a review of the SATERN bloodborne pathogen training files, medical services employee health records, and the applicable EDECP. Training completion is documented in SATERN and accessible by the reporting function of an administrative SATERN session. Medical files are kept by Medical Services. The EDECP is maintained by supervisor, and a copy stored on SHED server.

## 6.5 Engineering and Work Practice Controls (*OSHA 29 CFR 1910.1020(d)*)

### 6.5.1 Universal Precautions (1910.1030(d)(1)

Universal precautions is an approach to infection control in which all human blood and OPIM of human origin are treated as if known to be infectious for bloodborne pathogens. Employees shall adhere to universal precautions.

### 6.5.2 Laboratory Design (*NPR 8715.3C, paragraph 3.9.2.g*) ((CDC) 21-1112)

Laboratory designs shall include additional considerations for biohazards resulting from the use or handling of biological materials such as infectious microorganisms, viruses, medical waste, or genetically engineered organisms.

### 6.5.3 Housekeeping (*OSHA 29 CFR 1910.1030(d)(4)*)

All equipment and work surfaces that have been contaminated with blood or OPIMs shall be cleaned and decontaminated with an appropriate disinfectant. GRC custodial contractors at Lewis Field and PBS custodial contractors shall contain spills and clean up biologically contaminated areas at their respective facilities. The COTR(s) for the custodial contract services shall provide contract oversight. The SHeD Program Lead shall provide technical oversight for bloodborne pathogen cleanups and final clearance criteria.

### 6.5.4 Personal Hygiene (*OSHA 29 CFR 1910.1030(d)(2)*)

Hand washing is a critical work practice for exposure control. Immediately after working with potentially infectious substances, employees shall wash their hands and all other body parts that may have contacted potentially infectious material. If gloves have been worn, employees shall wash their hands immediately after removing the gloves. If hand-washing facilities are not available, antiseptic hand cleanser in conjunction with paper towels or antiseptic towelettes shall be used.

Eating, drinking, smoking, applying cosmetics or lip balm, and handling contact lenses shall be prohibited in workareas where there is a reasonable likelihood of occupational exposure. Employees shall not store food and drinks in refrigerators, freezers, shelves, or cabinets, or on countertops or benches where blood or OPIMs are present.

### 6.5.5 Biohazard-Contaminated Sharps (Medicinal Use) (*OSHA 29 CFR 1910.1030(d)(4)(iii)*)

Employees, such as diabetics, using hypodermic needles for the self-administration of medicine shall properly dispose of all biohazard sharps; the sharps must be stored such that there is no potential for another individual to come into contact with the needle.

For the disposal of medicinal use biohazard sharps employees may use either a puncture-proof container with a lid that is then taken home for disposal, or employees may obtain a sharps container from the SHeD Program Lead. It should be noted that FE Division, Energy and Environmental Management Office (EEMO), Waste Manager only provides assistance for the disposal of biohazard waste generated on-site and stored in GRC-provided biohazard waste containers. The Centers for Disease Control and the Ohio Department of Health provide guidance for the disposal of domestic biohazard waste.

Employees choosing to use a GRC-provided sharps container for disposal shall obtain the sharps container from the SHeD Program Lead. Full sharps containers originating at GRC shall be closed and secured prior to transport, and then transported to Medical Services for temporary storage and subsequent Ops Team Waste Management pickup. Sharps containers for PBS employees are located next to or near the “main” first aid station at each of the PBS test sites.

Biohazard-contaminated needles and other biohazard-contaminated sharps (other than those used personally by a diabetic) shall not be bent, recapped, or removed unless no other alternative is feasible or a specific medical procedure requires the needle to be bent, recapped, or removed. If a contaminated needle does need to be bent, recapped, or removed, these operations must be done by a mechanical device designed specifically for the purpose.

### 6.5.6 Labeling of Biohazard-Contaminated Materials (*OSHA 29 CFR 1910.1030(g)*)

Warning labels must be placed on all containers that contain potentially infectious material. These labels shall contain the biohazard symbol and the word "BIOHAZARD." The labels shall be predominantly fluorescent orange or orange-red. See Figure 1. The labels must be affixed as close to the container as possible by string, wire, adhesive, or any other method that prevents the label from becoming easily removed. Red bags or red containers with the biohazard symbol and word printed on them can be substituted for the labels.

Figure 1.—Biohazard label.

### 6.5.7 Biohazard-Contaminated Equipment (*OSHA 29 CFR 1910.1030(e)*)

Equipment potentially contaminated with blood or OPIM shall be examined and, prior to servicing, shipping, storage, or use shall be decontaminated as necessary. The Facility Operations Specialist COTR oversees housekeeping contract services. Employees with biohazard-contaminated equipment shall contact the Facility Operations Specialist COTR for equipment decontamination assistance. THE SHeD Program Lead provides technical oversight for bloodborne pathogen cleanups and clearance criteria

If disinfection is not feasible or possible, equipment must have a readily observable label attached to it stating which portions remain contaminated. This information must be conveyed to all affected employees, the servicing representative, and/or the manufacturer, as appropriate prior to handling, servicing, or shipping so that appropriate precautions can be taken.

### 6.5.8 Biohazard-Contaminated Laundry (*OSHA 29 CFR 1910.1030(d)*)

Laundry shall be bagged or containerized at the location where it was used and shall not be sorted or rinsed in the location of use. The bags or containers used must be labeled or color-coded in accordance with this program. Employees who have contact with contaminated laundry must use protective gloves and other appropriate PPE.

### 6.5.9 Biohazard Waste Disposal (*OSHA 29 CFR 1910.1030(d)*)

Potentially infectious materials shall be disposed of in accordance with SHeD procedures detailed in the Environmental Programs Manual, Chapter 26, Medical Waste Management. The FE Division, EEMO, Waste Manager provides support for biohazard waste concerns.

All potentially infectious waste, including clothing contaminated with blood or OPIM, shall be placed in red biohazard waste containers or bags. If the outside of the biohazard container becomes contaminated, the container shall be placed inside a secondary container that can prevent leakage during handling, processing, storage, transport, or shipping. The outside, secondary container shall be labeled or color-coded according to the requirements of this standard. The

container for transport or shipping shall be labeled or color-coded according to this program and closed prior to being stored, transported, or shipped.

6.5 – The SHeD verification procedure to ensure compliance with engineering and work practice controls shall be a review of the EDECP and program evaluation files. The EDECP and the program evaluation files are maintained by supervisor, and a copy stored on SHeD server.

**6.6 Bloodborne Pathogen or Other Potentially Infectious Material Exposure Incidents (*OSHA 29 CFR* 1910.1030*(f) and* (29 CFR 1904.5)**

An exposure incident occurs when blood or OPIM comes in direct contact with an employee's eyes, mouth, or other mucous membranes, or non-intact skin, and when there is other parenteral contact. Non-intact skin includes skin with dermatitis, hangnails, cuts, abrasions, and chafing.

Any employee involved in an incident resulting in exposure to blood or OPIM shall immediately report the incident to Medical Services and their supervisor. Medical Services shall provide a postexposure evaluation, incident reporting, and followup documentation.

**6.7 Bloodborne Pathogen Postexposure Evaluation and Followup (*OSHA 29 CFR 1910.1030(f)*)**

Civil servants shall be provided with a confidential medical evaluation and followup. The IRIS report shall document the route of exposure, circumstances under which the exposure occurred, and the source individual.

Contractor personnel shall have an initial evaluation at GRC's onsite Medical Services who will generate the necessary reports. The contractor shall be assisted in determining the process for further evaluation and treatment by an outside facility as required by their medical program.

The SHED Program Lead or the contractor health and safety representative, with medical provider assistance, shall facilitate access to the following documentation to be provided to the licensed healthcare professional evaluating an employee after an exposure incident:

- A copy of OSHA's Bloodborne Pathogen Regulation 29 CFR 1910.1030
- A description of the exposed employee's duties as they relate to the exposure incident
- Documentation of the route(s) of exposure and the circumstances under which exposure occurred
- Results of the source individual's blood testing, if available
- All medical records relevant to the appropriate treatment of the employee including vaccination status (The employer is responsible for maintaining these records.)

Medical Services shall obtain a copy of the evaluating physician's written opinion and provide it to the exposed individual within 15 days of the completion of the evaluation. The postexposure evaluation shall only include information regarding relevant medical conditions that require further evaluation or treatment.

6.6 & 6.7 – The SHeD verification procedure to ensure compliance with exposure incidents and postexposure evaluations and followup shall be a review of Medical Services medical records. The medical records are kept by Medical Services.

**6.8 Annual Update of Exposure Control Plan *(OSHA 29CFR1910.1030(c)(1)(iv)***

The Bloodborne Pathogen Program Exposure Control Plans will be reevaluated every year to ensure they are effective and in compliance with all applicable regulations, as required by OSHA.Contractors are responsible for providing, upon request, the SHED Program Lead with the most recent version of their bloodborne pathogen program and exposure control plans.

6.8 – The SHeD verification procedure to ensure compliance with program requirements shall be a review of the most recent EDECP. The most recent EDECP is kept by the supervisor.

## 7.0 RECORDS (*29 CFR 1910.1030(h)*)

Training records.—Maintained in SATERN by Human Capitol Development Division

Bloodborne pathogen written program - Maintained on SHED server, IH Bloodborne Folder

Exposure determinations (hazard analysis).—Maintained by supervisors and documented in EDECP

Exposure control plans.—Maintained by supervisors and documented in EDECP

Exposure Determination and Exposure Control Plan (EDECP) – Maintained by supervisor, and a copy stored on SHED server, IH Bloodborne folder.

Medical evaluations.—Maintained by Medical Services and kept for the duration of an employee's employment plus 30 years.

Biohazard waste manifests.— FE Division, Energy and Environmental Management Office

Civil Servant Sharps injury log on IRIS.—Maintained by IRIS-site administrator

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## 8.0 REFERENCES

| Document number | Document name |
|---|---|
| 29 CFR 1910.1030 | Occupational Safety and Health Administration (OSHA), Bloodborne Pathogen Standard. |
| NPR 1800.1 | NASA Procedural Requirements, NASA Occupational Health Program Procedures. |
| 29 CFR 1910.1020 | OSHA Access to Employee Exposure and Medical Records. |
| 29 CFR 1904.5 | OSHA, Recording and Reporting Occupational Injuries and Illness. |
| CDC | Biosafety in Microbiological and Biomedical Laboratories, 5th Edition, Centers for Disease Control and Prevention, National Institutes of Health, HHS Publication No. (CDC) 21-1112, Revised December 2009. |

## APPENDIX A.—DEFINITIONS AND ACRONYMS

**Acquired immunodeficiency syndrome (AIDS)**

**Blood**.—Human blood, human blood components, and products made from human blood.

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

**Cardiopulmonary resuscitation (CPR)**

**Code of Federal Regulations (CFR)**

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

**Contracting officer's technical representative (COTR)**

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

**Engineering controls**.—Controls that isolate or remove the bloodborne pathogen hazard from the workplace. Examples of engineering controls include sharps disposal containers and self-sheathing needles.

**Environmental Protection Agency (EPA)**

**Exposure Determination and Exposure Control Plan (EDECP)**

**Exposure incident**.—Specific eye, mouth, other mucous membrane, nonintact skin, or other parenteral contact with blood or other potentially infectious materials that results from the performance of an employee's duties.

**Good Samaritan**.—Individual who provides first aid, rescue breathing, or cardiopulmonary resuscitation (CPR) for a coworker but whose job does not require him or her to perform such acts.

**Glenn Research Center (GRC)**

**Hand-washing facility**.—Facility providing an adequate supply of running potable water, soap, and single-use towels or hot-air drying machines.

**Hepatitis B virus (HBV)**

**Human immunodeficiency virus (HIV)**

**Incident Reporting and Information System (IRIS)**

**Industrial hygienist (IH)**.—Professional tasked with the anticipation, recognition, evaluation, and control of health hazards in the workplace.

**Licensed healthcare professional**.—Person whose legally permitted scope of practice allows him or her to independently perform the activities required by OSHA 29 CFR 1910.1030, paragraph (f), Hepatitis B Vaccination and Post-Exposure Evaluation and Follow-Up.

**NASA Procedural Requirement (NPR)**

**Occupational exposure**.—Reasonably anticipated skin, eye, mucous membrane, or other parenteral contact with human blood or other potentially infectious materials that may result from the performance of an employee's duties.

**Occupational Safety and Health Administration (OSHA)**

**Operations (Ops) Team**.—Team within the Safety and Health Division.

**Other potentially infectious materials (OPIM)**.—Human body fluids such as synovial fluid, pericardial fluid, peritoneal fluid, and 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.

**Parenteral**.—Entering the body through some other way besides the digestive tract, such as through the mucous membranes by piercing or through the skin by events such as needlesticks, human bites, cuts, and abrasions.

**Personal Protective Equipment (PPE)**.—Specialized clothing or equipment worn by an employee for protection against a hazard. Examples include gloves, goggles, face shields, and coveralls.

**Plum Brook Station (PBS) Team**.—Team within the Safety and Health Division.

**Safety and Health Division (SHeD)**

**Sharps**.—Medical slang for needles or other sharp objects.

**Sharps with engineered sharps injury protections**.—Non-needle sharp or needle device used for medicinal purposes that has a built-in safety feature or mechanism that effectively reduces the risk of an exposure incident.

**Source individual**.—Individual, living or dead, whose blood or other potentially infectious materials may be a source of occupational exposure to an employee.

**System for Administration, Training, and Educational Resources for NASA (SATERN)**

**Universal precautions**.—Approach to infection control that treats all human blood and certain human body fluids as if known to be infectious for the human immunodeficiency virus, hepatitis B virus, or other bloodborne pathogens.

**Work practice controls**.—Controls that reduce the likelihood of exposure by specifying the manner in which a task is performed. An example is prohibiting the recapping of needles by a two-handed technique.