CALIFORNIA STATE UNIVERSITY
SAN BERNARDINO

Environmental Health and Safety Department

Biohazard Management Plan

October 3, 2019

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Biohazard Management Plan
Review and/or Update Log

The biohazard management plan shall be reviewed and updated at least every year. The revision and update shall be documented in the form blow:

Date	Revised by:	Approved by:	Program reviewed* (x)	Program updated**	Comments:
12-6-2018	Kathy Pierson	Teresa Fricke	X		
7-22-2018	Rominna Valentine Ico	Teresa Fricke		X	Regulations and content were edited
4-23-2019	Rominna Valentine Ico	Teresa Fricke		X	ECP was updated due to audit findings
5-23-2019	Rominna Valentine Ico	Teresa Fricke		X	Added certification proving validity and accuracy of information provided.
8-26-2019	Kathy Pierson	Teresa Fricke		X	Minor changes to Part II, ECP
9-12-2019	Kathy Pierson	Teresa Fricke		X	Minor content change to Part II, ECP.
10-3-2019	Kathy Pierson	Teresa Fricke		X	Minor content change to Part II, ECP.

*Review: Program was either edited for grammatical errors and formatting, small changes occurred
** Update: Program was edited for changes in content

We certified at the time of review, the information provided on this plan is complete and accurate

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EXECUTIVE SUMMARY

Materials that are hazardous to humans as a result of their biological or infectious properties (as opposed to chemical or physical) are called *biohazardous materials* or simply *biohazards.* The management of biological hazards through the proper application of engineered containment devices and administrative controls is usually referred to as *biosafety* or *biohazard control.* An effective biohazard management program should have the following objectives:

1. Preventing or minimizing the possibility of infection as a result of any activities involving biohazardous materials and

2. Assuring that all biohazardous material handling, storage, and waste management activities are performed in compliance with applicable standards and regulations.

A comprehensive Biohazard Management Plan has been developed for California State University, San Bernardino (CSUSB); 5500 University Parkway, San Bernardino. This plan provides guidance, prescribes requirements, and assigns responsibilities aimed at achieving the objectives listed above. Primary responsibility for proper Biohazard Management resides with all employees that may encounter biohazards including custodians, nurses, Public Safety officers, Principal Investigators (PI), Lab Supervisors, and Instructional Technicians (IT), although important functions are also assigned to the Environmental Health and Safety Department.

Three (3) departments on campus are the primary generators and satellite storage locations of regulated medical wastes:

- *Biology/Science Departments – average medical waste generation per month:* ***329.0 pounds***
- *Student Health Center – average medical waste generation per month:* ***26.0 pounds***
- *Social and Behavioral Sciences – average medical waste generation per month:* ***51.0 pounds***

Since there are many facets to this plan, and in order to facilitate implementation, the plan has been divided into three distinct parts:

Part I describes the principles and criteria related to general management of biological hazards in laboratory settings, including a classification scheme for biosafety levels

Part II describes the University's Procedure for controlling the spread of bloodborne pathogens

Part III is the University's Procedure for the management of infectious wastes.

This delineation is also based on the different recommendations and regulations with which CSUSB activities must comply. Part I implements the recommendations of Center for Disease Control National Institutes of Health, as stated in their publication **Biosafety in Microbiological and Biomedical Laboratories.** Part II is based on the Occupational Health and Safety Administration (OSHA) **Standards for Blood-borne Pathogens.** Part III includes regulatory requirements promulgated by California Department of Industrial Relations (Cal-OSHA), California Department of Health Services, and San Bernardino County Environmental Health Services.

PART I - BIOHAZARD MANAGEMENT IN THE LABORATORIES

A. PURPOSE

This Procedure provides guidance and requirements for the safe use of infectious materials in laboratory settings. This Procedure implements the recommendations of Center for Disease Control and National Institutes of Health, as stated in **Biosafety in Microbiological and Biomedical Laboratories** (referred to hereafter as the CDC-NIH Handbook).

B. RESPONSIBILITIES

1. Principal Investigators (PI's) and Supervisors (including course instructors) who perform or oversee activities that utilize or produce infectious materials are responsible for:

    a. Assuring infectious materials are stored and handled in accordance with the criteria described below for the appropriate Biosafety Level and Universal Precautions.

    b. Assuring that the containment equipment and facility requirements for activities performed under their direction meet the criteria for the appropriate Biosafety Level.

    c. Providing documented training for employees under their supervision on the proper handling and storage of infectious materials, and maintaining records of employee training.

    d. Periodic inspections of facilities to ensure compliance with all regulations and guidelines, and maintaining records.

    e. Ensuring that infectious wastes are managed in accordance with Part III of the Biohazard Management Plan, BIOHAZARDOUS WASTE MANAGEMENT.

    f. Getting approval for work involving etiologic agents and potentially hazardous protocols from the Institutional Bio-Safety Committee prior to commencement of work.

2. Environmental Health & Safety (EH&S) is responsible for:

    a. Developing campus requirements and guidelines for biohazard control, which are consistent with applicable Federal, State, and local regulations and guidelines. This Biohazard Management Plan is the guideline.

    b. Coordinating the University's Biohazardous Waste Management Program as described in Part III of this procedure.

    c. Performing random audits of specific biohazard material handling activities to assess compliance with this procedure

3. The Institutional Bio-Safety Committee is responsible for:

    a. Reviewing and approving all proposed research activities which are potentially

biohazardous.

b. Helping ensure that requirements and guidelines developed by EH&S for application at CSUSB are followed.

c. Ensure that all facets of a research protocol conform to applicable regulations and guidelines.

C. TERMINOLOGY AND PRINCIPLES OF BIOSAFETY

1. BIOSAFETY LEVELS

Four biological safety levels (BSL) are described in the CDC-NIH Handbook. These involve a combination of laboratory practices and techniques, safety equipment, and laboratory facilities appropriate for the operations performed and the hazard posed by the infectious agents in question. These levels are designated in ascending order, by degree of protection provided to personnel, the environment, and the community (i.e., BSL 1-4). A description of BSL 1 and 2 with criteria and associated laboratory control measures is presented below. BSL 3 & 4 is not described, because CSUSB currently cannot facilitate ~~at~~ these levels.

2. CONTAINMENT

The principles of biohazard control center on the concept of *containment,* which refers to safe methods for managing infectious agents in the laboratory environment where they are being handled or maintained. *Primary containment* involves the protection of personnel in the immediate laboratory environment from exposure to infectious agents, and is provided by good microbiological technique, the use of proper safety equipment, and appropriate vaccines. *Secondary containment* refers to the protection of the environment external to the laboratory from exposure to infectious materials, and is provided by a combination of facility design and operational practices. The three major elements of containment are:

Laboratory practice and technique;

Use of enclosed containers such as Biological Safety Cabinets or other enclosures as primary barriers;

Proper design of laboratories facilities (basic, containment, and maximum containment) as secondary barriers.

3. BIOSAFETY CABINETS

Biological Safety Cabinets (sometimes called *Biosafety Cabinets)* are among the most effective and widely used devices for providing primary containment. The three types of biosafety cabinet's - Class I, II, and III - have varying design and performance characteristics. Class I biosafety cabinets, when used in conjunction with good microbiological techniques, provide an effective partial containment system for the safe manipulation of low to moderate risk microorganisms (i.e., BSL 2 agents). Class II cabinets are acceptable for work with moderate to high-risk agents (i.e., BSL 2 and 3).

All Class I and II biosafety cabinets must be tested and certified on site at the time installation in the laboratory is complete, any time the biosafety cabinet is moved, and at least annually

thereafter unless more frequent schedules are recommended by the manufacturer. All laboratory personnel must be trained in the proper use of these devices. (See Appendix A of the CDC-NIH Handbook for a description of the design and use of biosafety cabinets.)

D. LABORATORY BIOSAFETY LEVEL CRITERIA

Essential elements of the two biosafety levels applicable to CSUSB for activities involving infectious microorganisms and laboratory animals are described below. A synopsis of requirements pertaining to the general use of infectious materials is presented in Table 1 of the CDC-NIH Handbook.

Biosafety Level 1

Biosafety Level 1 practices, safety equipment, and facilities are appropriate for most undergraduate training and teaching laboratories, and for other facilities in which work is done with defined and characterized strains of viable microorganisms not known to cause disease in healthy adult humans.

Biosafety Level 1 controls are suitable for work involving agents of no known or of minimal potential hazard to laboratory personnel and the environment. The laboratory is not separated from the general traffic patterns in the building. Work is generally conducted on open bench tops. Special containment equipment is not required or generally used. Laboratory personnel have specific training in the procedures conducted in the laboratory and are supervised by a scientist with general training in microbiology or related science.

The following standard and special practices, safety equipment, and facilities apply to agents assigned to BSL 1:

1. STANDARD MICROBIOLOGICAL PRACTICES

    a. Access to the laboratory is limited or restricted at the discretion of the Principal Investigator or laboratory director when experiments are in progress.

    b. Work surfaces are decontaminated once a day and after any spill of viable material.

    c. All contaminated liquid or solid wastes are decontaminated or disposed of in accordance with Part III of this Plan.

    d. Mechanical pipetting devices are used; pipetting by mouth is strictly prohibited.

    e. Eating, drinking, smoking, and applying cosmetics are not permitted in the work area. Food may be stored in cabinets or refrigerators designated and used for this purpose only. Food storage cabinets or refrigerators should be located outside of the work area.

    f. Persons wash their hands after they handle viable materials and animals and before leaving the laboratory.

    g. All procedures are performed carefully to minimize the creation of aerosols.

h. Laboratory coats, gowns, or uniforms should be worn to prevent contamination or soiling of street clothes.

2. SPECIAL PRACTICES

a. Medical waste contaminated materials that are to be decontaminated at a site away from the laboratory are placed in a red biohazard bag, properly closed and labeled, before being removed from the laboratory.

b. Effective insect and rodent control precautions are in effect.

3. CONTAINMENT EQUIPMENT

Special containment equipment is generally not required for manipulations of agents assigned to Biosafety Level 1.

4. LABORATORIES FACILITIES

a. The laboratory is designed so that it can be easily cleaned.

b. Bench tops are impervious to water and resistant to acids, alkalis, organic, solvents, and moderate heat.

c. Laboratory furniture is sturdy. Spaces between benches, cabinets, and equipment are accessible for cleaning.

d. Each laboratory contains a sink for hand washing.

e. If the laboratory has windows that open, they are fitted with fly screens.

Biosafety Level 2

Biosafety Level 2 is similar to BSL 1 and is suitable for work involving agents of moderate potential hazard to personnel and the environment. It differs in that (1) laboratory personnel have specific training in handling pathogenic agents and are directed by competent Principal Investigators (PI) or personnel, (2) access to the laboratory is limited when work is being conducted, and (3) certain procedures in which infectious aerosols may be created are conducted in biological safety cabinets or other physical containment equipment. Examples of BSL 2 agents include:

Human nematode, protozoal, trematode, and cestode parasites (e.g., *Strongylyoides* spp*,* hookworms, *Plasmodium* spp*, Toxoplasma* spp*, Schistosoma* spp*, Fasciola* spp*, Echinococcus granulosus,* and *Taenia solium).*

Certain fungal agents such as *Cryptococcus neofortnans* and *Sporothrix schenckii* Certain viral agents such as Hepatitis A, B, non-A, and non-B, Herpes viruses, Influenza, Polioviruses, Poxviruses, and Rabies Virus (Exceptions: activities with high potential for producing aerosols of some of these agents, or concentrating virus in quantities greater than 1 liter may require BSL 3).

The following standard and special practices, safety equipment, and facilities apply to agents assigned to BSL 2:

1. STANDARD MICROBIOLOGICAL PRACTICES

    a. Access to the laboratory is limited or restricted by the PI or Lab Supervisor when work with infectious agents is in progress.

    b. Work surfaces are decontaminated at least once a day and after any spill of viable material.

    c. All infectious liquid or solid wastes are decontaminated or disposed of in accordance with Part III of this Plan.

    d. Mechanical pipetting devices are used; pipetting by mouth is prohibited.

    e. Eating, drinking, smoking, and applying cosmetics are not permitted in the work area. Food may be stored in cabinets or refrigerators designed and used for this purpose only. Food storage cabinets or refrigerators should be located outside of the work area.

    f. Persons wash their hands after handling infectious materials and animals and when they leave the laboratory.

    g. All procedures are performed carefully to minimize the creation of aerosols.

2. SPECIAL PRACTICES

    a. Contaminated materials that are to be decontaminated at a site away from the laboratory are placed in a red biohazard bag before being removed from the laboratory.

    b. The PI or Lab Supervisor limits access to the laboratory. In general, persons who are at increased risk of acquiring infection or for whom infection may be unusually hazardous are not allowed in the laboratory or animal rooms. The PI or Lab Supervisor has the final responsibility for assessing each circumstance and determining who may enter or work in the laboratory.

    c. The PI or Lab Supervisor establishes procedures hereby only persons who have been advised of the potential hazard and meet any specific entry requirements (e.g., immunization) enter the laboratory or animal rooms.

    d. When the infectious agent(s) in use in the laboratory require special provisions for entry (e.g., vaccination) a hazard warning sign, incorporating the universal biohazard symbol, is posted on the access door to the laboratory work area. The hazard warning sign identifies the infectious agent, lists the name and telephone number of the laboratory director or other responsible person(s), and indicates the special requirement(s) for entering the laboratory. (See Figure 1).

    e. Effective insect and rodent control precautions are in effect.

f. Laboratory coats, gowns, smocks, or uniforms are worn while in the laboratory. Before leaving the laboratory for any non-laboratory area (e.g., cafeteria, library, administrative offices), this protective clothing is removed and appropriately stored in the laboratory.

g. Animals not involved in the work being performed are not permitted in the laboratory.

h. Special care is taken to avoid skin contamination with infectious materials; gloves should be worn when handling infected animals and when skin contact with infectious materials is unavoidable.

i. All materials from laboratories and animal rooms are appropriately decontaminated before disposal. Hypodermic needles and syringes are used only for parenteral injection and aspiration of fluids from laboratory animals and diaphragm bottles. Only needle-locking syringes or disposable syringe-needle units (i.e., needle is integral to the syringe) are used for the injection or aspiration of infectious fluids. Extreme caution should be used when handling needles and syringes to avoid auto inoculation and the generation of aerosols during use and disposal. Needles should not be bent, sheared, replaced in the sheath or guard, or removed from the syringe following use. The needle and syringe should be promptly placed in a puncture-resistant sharps container and disposed following the procedures on Part III of this Plan.

j. Spills and accidents which result in overt exposures to infectious materials are immediately reported to the PI or Lab Supervisor. Medical evaluation, surveillance, and treatment are provided as appropriate and written records are maintained.

k. When appropriate, considering the agent(s) handled, baseline serum samples for laboratory and other at-risk personnel are collected and stored. Additional serum specimens may be collected periodically, depending on the agents handled or the function of the lab. The PI is responsible for determining this need.

l. A formal, written Biosafety Management Program is prepared or adopted. Personnel are trained and advised of special hazards and are required to read instructions on practices and procedures and to follow them. Failure to follow appropriate practices should result in disciplinary action.

3. CONTAINMENT EQUIPMENT

Biological safety cabinets (Class I or II) or other appropriate personal protective or physical containment devices are used whenever:

a. Procedures with a high potential for creating infectious aerosols are conducted. These may include centrifuging, grinding, blending, vigorous shaking or mixing, sonic disruption, opening containers of infectious materials whose internal pressures may be different from ambient pressures, intranasal inoculation of animals, and harvesting infected tissues from animals or eggs.

b. High concentrations or large volumes of infectious agents are used. Such materials may be centrifuged in the open laboratory if sealed heads or centrifuge safety cups

are used and if they are opened only in a biological safety cabinet.

4. LABORATORY FACILITIES

   a. The laboratory is designed so that it can be easily cleaned.

   b. Bench tops are impervious to water and resistant to acids, alkalis, organic solvents, and moderate heat.

   c. Laboratory furniture is sturdy, and spaces between benches, cabinets, and equipment are accessible for cleaning.

   d. Each laboratory contains a sink for hand washing.

   e. If the laboratory has windows that open, they are fitted with fly screens.

   f. An autoclave for decontaminating infectious laboratory materials is available.

Biosafety Level 3 and Biosafety Level 4

Currently, no facilities at CSUSB meet the minimum requirements and criteria for BSL 3 or BSL 4.

E. ADDITIONAL REQUIREMENTS FOR LABORATORY ANIMALS

If experimental animals are used, the biosafety procedures must also address facility and operational requirements that will reasonably assure appropriate level of environmental quality, safety, and care. Laboratory animal facilities should be considered extensions of the laboratory. Indeed, in some cases they are integral to and inseparable from laboratory operations. Regardless of the physical arrangement, laboratory animal facilities, operational practice, and quality of animal care should meet the standards prescribed in **Guide for the Care and Use of Laboratory Animals,** HHS Publication, 8th Edition, 2011, and **Laboratory Animal Welfare Regulation - 9 CFR, Subchapter A, Parts 1, 2, and 3.** Additional recommendations (which should be considered "requirements") for the various biosafety levels are presented in the CDC-NIH Handbook. The CDC-NIH requirements should be consulted for any activities involving infected vertebrate animals. A synopsis of these requirements is presented in Table 2 of the CDC-NIH Handbook.

F. BLOOD-BORNE PATHOGENS

Special requirements are in place to control infection of workers by certain blood-borne pathogens such as HIV, Hepatitis-B, or Hepatitis C. The procedure to comply with these requirements is presented as Part II of the Biohazard Management Plan.

G. BIOHAZARDOUS WASTE MANAGEMENT

All laboratory operations must comply with the CSUSB procedure for Biohazardous Management, which is presented as Part III of the Biohazard Management Plan unless equally protective alternative procedures are approved.

For Further Information

Additional information on safe handling practices and associated requirements can be obtained from EH&S. Contact EH&S (ext. 75179) for copies of applicable regulations or further information.

PART II - EXPOSURE CONTROL PROGRAM FOR BLOOD-BORNE PATHOGENS

A. PURPOSE

To establish the requirements for preventing potential exposure to blood-borne pathogens and infectious waste in the workplace through education, training, and compliance with guidelines from the Center for Disease Control (CDC), Federal Occupational Safety and Health Administration (OSHA), 29 CFR 1910.1030, (Appendix II-A) and the California OSHA, 8 CCR 5193.

B. DEFINITIONS

1. Blood-Borne Pathogens

Certain pathogenic microorganisms found in the blood of infected individuals that can be transmitted from the infected individual through blood and other body fluids to cause blood-borne diseases; specifically Hepatitis B Virus (HBV), Hepatitis C (HCV) and AIDS Human Immunodeficiency Virus (HIV).

2. Disinfect

To inactivate virtually all recognized pathogenic microorganisms to reduce the probability of infection to an acceptable level.

3. Employee with Potential for Exposure

Any CSUSB employee whose work may involve direct contact with blood, blood products, other body fluids or tissues.

4. Exposure Incident

Contact of a contagion with eye, mouth, or other mucous membrane, non-intact skin, or parenteral (needle) contact with blood or other potentially infectious materials that may occur in the performance of employee duties.

5. Exposure Control Program (ECP)

CSUSB's second part of the Biohazard Management Plan provides procedures used to minimize employees' exposure to blood-borne pathogens such as Hepatitis B Virus (HBV), Hepatitis C (HCV), and Human Immunodeficiency Virus (HIV).

6. Infectious Waste

Includes blood, blood products, contaminated sharps (needles, etc.), pathological waste, and microbiological waste.

7. Other Potentially Infectious Materials (OPIM)

OPIM includes the following: semen, vaginal secretions, cerebrospinal fluid, synovial fluid, pleural fluid, pericardial fluid, peritoneal fluid, amniotic fluid, saliva in dental procedures, any other body fluid that is visibly contaminated with blood such as saliva or vomitus, and all body fluids in situation where it is difficult or impossible to differentiate between body fluids such as emergency response; any unfixed tissue or organ (other than intact skin) from a human (living or dead; and any of the following, if know or reasonably likely to contain or be infected with HIV, HBV, HCV: cell tissue, or organ cultures from humans or experimental animals; blood, organs, or other tissues from experimental animals; or culture medium or other solutions.

8. OSHA Categories for Exposure

Category 1: Employees whose tasks involve exposure to blood or body fluids.

Category 2: Employees whose tasks involve no exposure to blood or body fluids but whose employment may require unplanned Category 1 procedure.

Category 3: Employees whose tasks involve no exposure to blood or body fluids.

9. Sterilants

EPA registered chemical procedure to destroy microbial life.

10. Universal Precautions

A method of infection control in which all human blood and other potentially infectious material are treated as hazardous and known to be infectious for Hepatitis B Virus (HBV), Hepatitis C (HCV), and Human Immunodeficiency Virus (HIV).

C. ROLES AND RESPONSIBILITIES

1. Department Supervisors

Are responsible for identification of affected students/employees, assuring education and training are provided, periodic self-inspections, medical requirements and overall ECP compliance.

a. Departments shall identify body fluids which present a risk for employees.

b. Departments shall describe proper disposal of infection waste and sharps (needles, etc.) based on “Part III Biohazardous Waste Management".

c. Assure education and training on PPE are provided to all affected employees.

d. Departments shall offer HBV vaccine to workers who are exposed to blood-borne pathogens. Contact EHS for assistance at x75179.

e. Departments shall assure proper record keeping of employees accepting or waiving HBV vaccine. Central records shall be stored at EHS. Contact EHS for Participation/Declination forms at x75179.

2. Environmental Health and Safety

Is responsible for developing CSUSB's ECP, coordinating ECP implementation including hazards and controls identification assistance, and performing periodic audits for compliance.

D. GENERAL

Blood-borne pathogens may be present whenever blood or other potentially infectious materials are present. Three of the most significant blood-borne pathogens, Hepatitis B Virus (HBV), Hepatitis C (HCV), and Human Immunodeficiency Virus (HIV), have been recognized as pathogens capable of causing serious illness and even death. Because viruses are transmitted through blood and certain body fluids, employees who routinely handle these as part of their job have increased risk of contracting blood-borne diseases.

The most efficient mode of transmitting blood borne pathogens to workers is by direct inoculation such as might occur with a needle stick or injury from another sharp instrument. Moreover, infected employees may transmit the pathogens to others. It is known that exposure to extremely small amounts of HBV-positive blood may transmit infection. Blood and blood-derived body fluids contain the highest quantities of virus and are likely vehicles for HBV transmission.

HIV has been isolated from human blood, semen, breast milk, vaginal secretions, tears, and urine. However, at the present time, epidemiological evidence implicates only blood, semen, breast milk, and vaginal secretions, in the transmission of the virus. It is not known whether HIV is transmitted by casual contact. Exposure to HIV contaminated blood is the most likely mode of transmission.

The Biohazard Management Plan and Exposure Control Program serve as a guide for preventing potential exposure to blood-borne pathogens and infectious waste in the workplace. The Plan and the Program address the issue of preventing exposure to blood-borne pathogens through education and training. CSUSB's enforcement of the Exposure Control Program will provide a safe and healthy environment for all its employees.

E. EXPOSURE RESPONSE, PREVENTION AND CONTROL

1. Exposure Control Plan (ECP)

CSUSB shall establish, implement and maintain effective exposure control plan that is designed to eliminate or minimize employee exposure and that is consistent with Title 8 CCR 5193.

a. Employees can access ECP from EHS website (http://ehs.csusb.edu)

b. Exposure control plan shall be in writing and will contain:

- Exposure Determination;
- Schedule and Method of implementation of Plan;

- Method of Compliance;
- Hepatitis B Vaccination and Post-Exposure Evaluation and Follow-up;
- Communication of Hazard to Employees;
- Record keeping;
- Procedure for the evaluation of circumstances surrounding exposure incidences;
- An effective procedure for gathering information required by sharp injury log;
- Effective procedure for periodic determination of the frequency of use of the type and brand of sharp involved in the incidents documented on the Sharp Injury Log;
- An effective procedure for identifying current available engineering controls and selecting such controls where appropriate; and,
- An effective procedure for documenting patient safety determinations.

c. The plan will comply with the Bloodborne Pathogens Standard. (Title 8 CCR 5193). This plan is divided into the following sections:

- Exposure Determination
- Sharps Injury Log
- Personal Protective Equipment
- Cardiopulmonary Resuscitation (CPR) Equipment and Care
- Disinfection Process
- Disposal of Infectious Waste
- HBV and Post-Exposure Evaluation and Follow-up
- Communication of Hazards to Employee
- Training
- Record keeping

2. <u>Exposure Determination</u>

a. Occupational exposure to blood or other potentially infectious materials (OPIM): Employee classification shall be determined by representatives from Human Resources, Health Center and Environmental Health and Safety.

b. The following lists job title and the exposure category related to that employee:

CSUSB JOB CLASSIFICATIONS AND ASSIGNED EXPOSURE CATEGORIES	
1 - Athletic Coach / Trainer (AA, PE)	**2** – Infant Toddler Center Teacher (SA, ITC)
2 - Animal Handler (AA, CNS)	**1** - Physician (SA, HC)
1 - Biohazard Waste Technician (AA, CNS)	**2** - Plumber (AF, FS)
2 - Building Service Engineer (AF, FS)	**2** - Police Officer (AF, UP)
2 – Children's Center Teacher (SA, CC)	**2** - Principal Investigator (AA, CNS)
1 - Clinical Aid / Laboratory Technician (SA, HC)	**1** – Nurse (SA, HC)
2 – Community Service Specialist (AF, PS)	**1** - Nursing Faculty (AA, CNS)
1 - Custodian (AF, FS)	**1** – Rec Sports Maintenance Custodian/Specialist (SA, RS)
1 - EHS Officer / Specialist (AF, EHS)	**2** – Rec Sports Other Employees (SA, RS)
1 – Kinesiology Research Faculty (AA, CNS)	**3** – All other job classifications

LEGEND:	
AA – Academic Affairs Division	FS – Facilities Services
AF – Administration & Finance Division	HC – Health Center
SA – Student Affairs Division	PE – Physical Education
CAL – College of Arts & Letters	PS – Parking Services
CNS – College of Natural Sciences	UP – University Police
	ITC – Infant Toddler Center
	CC – Children's Center
	RS – Rec Sports/Student Rec Center
	EHS – Environmental Health & Safety

OSHA CATEGORIES FOR EXPOSURE
1 – Employees whose tasks involve exposure to blood or body fluids.
2 – Employees whose tasks involve no exposure to blood or body fluids but whose employment may require unplanned Category 1 procedure.
3 – Employees whose tasks involve no exposure to blood or body fluids.

c. When the potential for contact with infectious materials exists, universal precautions will be observed in order to prevent contact with blood or OPIM. All blood and OPIM will be considered infectious regardless of the perceived status of the source individual.

3. Sharps Injury Log

a. Sharps Injury Log is a record of each exposure incident involving a sharp. (See Appendix A for Sharp injury Log). The information recorded shall include the following information if known or reasonably available;

i. Date and time of the exposure incident occurred;

ii. The procedure that the exposed employee was performing at the time of incident;

iii. A description of the exposure incident;

- Job classification of the exposed employee;
- Department or work area where the exposure incident occurred;
- The procedure that the exposed employee was performing at the time of the incident;
- How the incident occurred;
- The body part involved in the exposure incident;
- If the sharp had engineered sharps injury protection, whether the protective mechanism was activated, during the activation of the mechanism or after activation of the mechanism, if applicable.
- If the sharp has no engineered sharps injury protection, the injured employee's opinion as to whether and how such a mechanism could have prevented the injury; and
- The employee's opinion about whether any engineering, administrative or

work practice control could have prevented the injury.

iv. Each exposure incident shall be recorded on the Sharps Injury log within 14 working days of the date the incident is reported to the employer.

- Departments shall establish and maintain records of the Sharps Injury Log for a period of 5 years from the date the exposure incident occurred. **A copy shall be included with the Supervisor Injury Investigation Report.**

v. The information in the Sharps Injury Log shall be recorded and maintained in such a manner as to protect the confidentiality of the injured employee.

vi. The data for the frequency of use types and brands of sharps involved in exposure incidents documented should be reviewed annually to determine if there are types involved in injuries at a higher frequency. Consideration should be given to replacement of sharps with higher frequency injuries.

2. Personal Protective Equipment Requirements

Personal Protective Equipment (PPE) is specialized clothing or equipment worn by an employee for protection against hazards. This can include: lab coats gowns, gloves, face shields/mask, eye protection etc.

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

b. CSUSB will provide and require the use of gloves as a protective barrier in all laboratories, first aid and emergency situations in which body fluids are handled. The use of gloves as a personal protective measure is important in the following situations:

- If employee has cuts, abraded skin, chapped hands, or dermatitis.
- When examining abraded or non-intact skin, or patient has active bleeding.
- During cleaning of bodily fluids and decontaminating procedures.

Gloves shall also be worn when it can be reasonably anticipated that the employee may have contact with blood and OPIM (e.g. custodian, plumber, etc.). Only gloves that are of an appropriate quality for the procedure and the appropriate size for workers shall be used. Wash hands with antimicrobial soap after removing gloves.

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

d. Personal Protective Equipment, where necessary, shall be provided by the department at no cost to the employee. Supervisors shall ensure accessibility and proper usage of PPE. Employees failing to utilize any safety equipment deemed necessary by the

supervisor shall be subject to discipline.

e. Dispose of gloves or contaminated PPE in infectious waste container (see Part III "Biohazardous Waste Management" for information on disposal of infectious waste).

3. Communication of Hazards to Employees

Hazards are communicated to the employee through signs, labels and training.

a. Labels and Signs

i. Labels

- Warning labels shall be affixed to containers of regulated waste, refrigerators, and freezers containing blood or OPIM; and other containers use to store, transport or ship blood or OPIM.

- Labels required shall include either the following legend:

Or in the case of regulated waste the legend: BIOHAZARDOUS WASTE or SHARP WASTE.

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

- Labels required shall either be an integral part of the container or shall be affixed as close as feasible to the container by string, wire, adhesive, or other method that prevents their loss or unintentional removal.

- Red bags or red containers may be substituted for labels except for sharps containers or regulated waste red bags. Bags used to contain regulated waste shall be color-coded red. Labels on red bags or red containers do not need to be color-coded.

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

- Individual containers of blood or OPIM that are placed in a labeled container during storage, transport, shipment or disposal are exempted from labeling requirement.

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

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

ii. Signs

- The employer shall post signs at the entrance to work areas specified to use or dispose of biohazardous materials and/or waste, which shall bear the following legend:

Building/Room #:_____

BIOSAFETY LEVEL ☐

ADMITTANCE TO AUTHORIZED PERSONNEL ONLY

Name of INFECTIOUS AGENT:		
Special Requirements BEFORE entering the area:		
Name of Responsible Person(s):		
Title:		
Office/Lab Number:		
Emergency Number:		

For more information, please contact Environmental Health & Safety (909) 537-5179

- These signs shall be fluorescent orange-red or predominately so, with lettering and symbols in a contrasting color, and meet the requirements of Title 8 CCR section 3340 of the code.

4. Cardiopulmonary Resuscitation (CPR) Equipment and Care

a. Maintain a supply of cardiopulmonary resuscitation (CPR) mouth piece devices in the Health Center.

b. In addition, pocket masks, resuscitation bags, or other ventilation devices should be provided in strategic locations.

c. Provide cardiopulmonary resuscitation (CPR) mouthpiece devices for use in resuscitation to employees certified in CPR.

d. Sterilize non-disposable ventilation bag/mask.

- Disassemble bags.
- Soak in disinfecting solution of chlorine for 30 minutes.
- Rinse, and allow to air dry.

5. Disinfection Process

a. Clean and disinfect all surfaces immediately after contact with blood or potentially infectious material. The Medical Waste Management Act requires thorough washing and decontamination through rinsing and/or immersion of surfaces and/or articles in hypochlorite solution with 500 ppm available chlorine, or other effective disinfectants.

- Wear appropriate PPE (e.g. gloves)
- Use disposable cloth for cleaning.
- Place all used material into a properly labeled "Biohazard" bag.
- Wash hands.

NOTE: Use only gloves that are appropriate for the task (e.g. nitrile, vinyl, etc.)

b. Disinfect, on a routine basis, all cans or receptacles intended for reuse which have potential of becoming contaminated with blood or other body fluids.

c. Use appropriate gloves for disinfecting blood spills or potential infectious bodily fluids.

d. Dispose of all potentially contaminated PPE and other contaminated materials in infectious waste container (see Part III of this Plan for information on disposal of (infectious waste).

e. Wash hands with antibacterial soap after removing gloves.

6. Disposal of Infectious Waste

Follow procedures in Part III Biohazardous Waste Management for proper disposal of Infectious Waste.

7. Hepatitis B Vaccine

a. CSUSB shall make available free of charge the Hepatitis B vaccine and vaccination series to all employees who have reasonable potential for occupational exposure, and post exposure follow-up to employees who have had an exposure incident. If a routine booster dose of Hepatitis B vaccine is recommended by the U.S. Public Health Service

(USPHS) at a future date, such booster doses shall be made available at no cost.

b. All employees who decline the Hepatitis B vaccine offered shall sign the Cal-OSHA required waiver indicating their refusal. If the employee initially declines Hepatitis B vaccination but at a later date while still covered under the standard decides to accept the vaccination, the vaccination shall then be made available at no cost.

c. All medical evaluations and procedures including the Hepatitis B vaccine and vaccination series and post-exposure follow-up are:

   i. Made available at no cost to the employee;

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

   iii. Performed by or under the supervision of a licensed physician;

   iv. Provided according to the recommendations of the U.S. Public Health Service PHS).

d. All laboratory tests shall be conducted by an accredited laboratory at no cost to the employee.

8. Post-Exposure Evaluation and Follow Up

Exposure incident means specific eye, mouth, or other mucous membranes, non-intact skin, or parenteral contact with blood or OPIM that resulted from the performance of duties.

a. All exposure incidents shall be reported, investigated, and documented. When the employee incurs an exposure incident, it shall be reported to the:

   - Supervisor
   - Environmental Health & Safety
   - Workers Compensation Medical Provider

b. Following a report of an exposure incident, the exposed employee shall immediately receive a confidential medical evaluation and follow-up, including at least the following elements:

   i. Documentation of the route of exposure, and the circumstances under which the exposure incident occurred;

   ii. Identification and documentation of the source individual, unless it can be established that identification is infeasible or prohibited by law;

   iii. The source individual's blood shall be tested as soon as feasible and after consent is obtained in order to determine HBV and HIV infectivity;

   iv. Post exposure prophylaxes, as recommended by USPHS;

v. Counseling;

vi. Evaluation of reported illnesses

vii. Departments shall establish and maintain records of each employee exposed to blood- borne pathogens to include the following:

a. Name and Coyote ID Number of employees
b. Copy of employee's HBV or waiver of vaccination
c. Record of any exposure incident
d. Copy of physical findings and follow-up procedure as it relates to incident

9. Training

Departments shall determine exposure risk from job classifications into appropriate categories (See List 1-b). Initial and annual refresher training are required for employee who have potential to be exposed to bloodborne pathogen. Following topics are included in the bloodborne pathogen training:

- Copy and Explanation of Standard;
- Epidemiology and Symptoms;
- Modes of Transmission;
- Employer's Exposure Control Plan;
- Risk Identification;
- Methods of Compliance;
- Decontamination and Disposal;
- Personal Protective Equipment;
- Hepatitis B Vaccination;
- Emergency;
- Exposure Incident;
- Post-Exposure Evaluation and Follow-up;
- Signs and labels;
- Interactive Questions and Answers.

a. Departments shall assure an Education and Training Program on possible exposure to blood-borne pathogens is provided. Please contact EHS, ext. 75179, for assistance. Training records shall include the following:

- Dates of training;
- Summary of training session;
- Name of person conducting training and those in attendance;
- Maintain records for three years;
- Provide EH&S Office with copies for central file.

10. Recordkeeping

CSUSB maintains confidential records for employees with occupational exposure to blood, OPIM, or ATP-L. The types of records include employee training records, incident and

investigation reports, and sharps injury records. CSUSB will maintain these records for the following periods of time:

- Employee Training Records – 3 years from the date of training
- Incident and Investigation Reports – during the course of employment
- Sharps Injury Log Records – 5 years from the date of exposure incident

Records are kept confidential and not disclosed or reported without the employee's express written consent to any person within or outside the workplace, except as required by law. Medical records are maintained for at least the duration of employment plus 30 years.

F. DEPARTMENT / AREA SPECIFIC PROCEDURES

These procedures are designed to be specific for the area listed. However, some situations may not have been covered in the procedure. If there are any questions, contact Environmental Health and Safety.

1. University Police

During a medical emergency that may expose the responding Officer to human body fluids, the following pre-response precautions must be taken:

a. All police units shall be equipped with, at a minimum, the following Personal Protective Equipment (PPE), contained in a portable kit:

- Gloves
- Large Zip Lock Bags for storage of used PPE
- Red Infectious Waste/Biohazard Disposal Bags
- Non-contact Ventilators/Pocket Respirators
- Eye/Face Protection
- General First Aid Equipment (Band-Aids, gauze, tape, etc.)
- Sanitary Wipes

b. Officers shall inspect their vehicle for the presence of PPE prior to the beginning of their shift.

c. In the event of a medical emergency that requires the administration of first aid by the Officer, the PPE kit shall be carried to the first aid location and appropriate PPE donned prior to administering first aid.

d. Goggles must be donned when the likelihood of exposure due to the splashing or splattering of body fluids is present.

e. After the response is completed, the used contaminated materials shall be stored in **red biohazard bag** and disposed of as infectious waste at the Student Health Center Infectious Waste Storage Area.

f. Any Officer that receives exposure during the administration of first aid shall be included in the Post Exposure Evaluation and Follow-Up identified in section D-6 (d) of this Plan.

g. Clothing that becomes soiled with human body fluids shall be handled with gloves and placed in **a red biohazard bag for disposal or decontamination**. Advise supervisor and or EH&S.

2. Criminal Investigation - Evidence Handling

Evidence which presents an infectious exposure hazard (i.e. Human Body Fluids) shall be handled as follows:

Evidence shall be handled in accordance with DOJ guidelines.

a. Where possible, potentially infectious evidence shall be handled with a tool (tweezers, tongs, etc.)

b. The investigator handling the evidence shall wear protective gloves (surgical).

c. Other Personal Protective Equipment (masks, face shields, lab coats, goggles, etc.) shall be worn when the collection of evidence may result in the splashing, splattering, or spraying of human body fluids, or if the investigator otherwise feels that such protections is warranted.

d. Evidence shall be placed in resealable containers such as zip lock bags, ampule bottles, etc.

e. Evidence containers shall be marked "Infectious Evidence."

f. Evidence shall be handled by trained personnel only.

g. Evidence shall be stored in a laboratory type refrigerator which has a warning on the door that states "Infectious Materials Inside".

h. Disregarded infectious evidence shall be disposed of through the Student Health Center. All handling etc. shall be in accordance with Part III "Biohazardous Waste Management Plan".

i. See Part III D (5) of this Plan for Trauma Scene Management Guidelines.

3. Athletic Trainers

Injuries often occur during athletic events. In instances where the injury results in evulsions, cuts, compound fractures, etc. (where human body fluid other than sweat is present), special first aid precautions must be taken.

a. A portable first aid kit containing the equipment listed in Section 1 should be available at all athletic events.

b. Personal Protective Equipment, when appropriate, must be used when providing first aid.

4. Medical Personnel

a. All medical personnel should wear lab coats or medical specific clothing when working with patients.

b. Gloves must be donned when examining sores, wounds, sutures, or other body cavities where body fluids may be transferred to the examining medical professional.

c. Goggles and masks must be donned when the likelihood of exposure due to the splashing, spraying or splattering of body fluid is present.

5. Phlebotomy

a. Protective gloves shall be worn.

b. Other protective equipment shall be available for the worker's use (goggles, apron, etc.)

c. Needles and lancets shall not be recapped or broken.

d. Place used sharp needles and lancets in the puncture proof "sharps container" provided in the work area

PART III - BIOHAZARDOUS (INFECTIOUS) WASTE MANAGEMENT

A. PURPOSE

The purpose of this procedure is to provide guidance and describe requirements for the proper management of potentially infectious materials and waste products. Requirements for generators of infectious waste are prescribed in the California Code of Regulations (CCR), Title 22, Division 4, Chapter 21, Articles 1-4, and the California Health and Safety Code. Implementation of this Program will ensure that all infectious wastes generated by CSUSB facilities and activities are managed in consonance with good health and safety practices and in compliance with applicable regulations.

B. DEFINITIONS

1. Biohazardous Waste

Also called Infectious Waste as defined by the California Health and Safety Code, and San Bernardino County Ordinance means any of the following:

Laboratory wastes, including but not limited to, specimen cultures from medical and pathological laboratories, cultures or stocks of infectious agents from research laboratories, and other etiologic agents which pose a substantial threat to health due to their volume and virulence.

Waste from the production of bacteria, viruses, or the use of spores discarded live, attenuated vaccines, and culture dishes and devices used to transfer, inoculate, or mix cultures.

Surgical or pathologic specimens, including human and animal parts and tissues removed surgically or at autopsy, which contain etiologic agents and attendant disposable fomites. Equipment, instruments, utensils, and other disposable materials which are likely to transmit

etiologic agents from the rooms or the enclosures of animals, which have been isolated because of suspected or diagnosed communicable disease.

Carcasses, tissues, or fluids or fluid bloods of animals or humans infected with etiologic agents which may present a substantial hazard to public health if improperly managed.

Any other material which, in the determination of the EH&S Officer or responsible individual presents a significant danger of infection because it is contaminated with, or may be reasonably expected to be contaminated with, etiologic agents.

2. Medical Waste

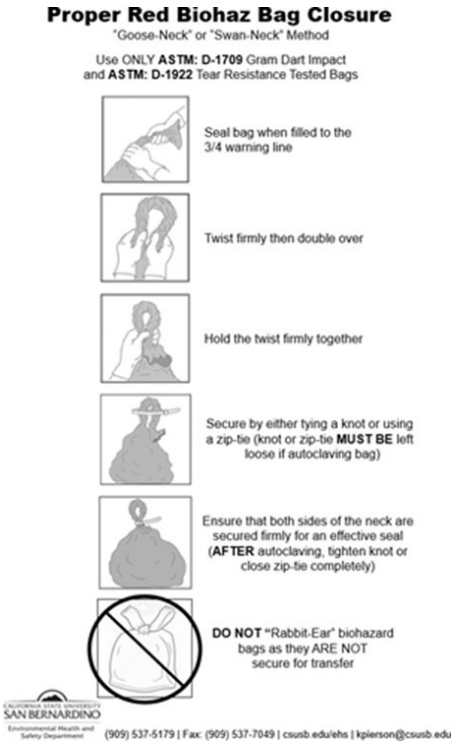
Infectious biohazardous waste or sharps waste.

Waste which is produced or generated as a result of the diagnosis, treatment, or immunization of human beings or animals, in research pertaining thereto, or in the production or testing of biological agents.

3. Biomedical Solid Waste

Includes, but is not limited to, empty specimen containers, bandages, dressings containing non-liquid blood, surgical gloves, decontaminated infectious waste, and other materials which are not considered infectious.

4. Proper Closure for Red Biohazard Bags



RESPONSIBILITIES

1. Supervisors managing activities which generate biohazardous wastes (e.g., Principal Investigators, Lab Supervisors, etc.) are responsible for:

   a. Assuring infectious wastes are stored, handled, and disposed of ac- cording to this procedure.

   b. Training employees under their supervision on the proper handling and storage of infectious materials.

   c. Periodic inspection of inspections and facilities to ensure regulatory compliance.

   d. Maintaining records of employee training.

   e. Maintaining up to date documentation of standard operating procedures, including annual thermometer calibrations and monthly application of Bacillus stearothermophilus (a biological indicator), for each autoclave or other approved sterilization device.

2. Environmental Health & Safety is responsible for:

   a. Developing campus requirements and guidelines, for infectious waste which are consistent with applicable Federal, State, and local regulations and guidelines.

   b. Preparing, documenting, and facilitating the implementation of University's Biohazardous Waste Program, in accordance with the California Health and Safety Code.

   c. Approving specific on-site treatment and procedures (e.g., autoclaving or other approved sterilization techniques) used to decontaminate infectious equipment.

   d. Performing audits of specific waste generating facilities or activities to assess compliance with this procedure.

   e. Promoting guidance to area supervisors as the proper compliance procedures.

   f. Arranging for appropriate disposal of medical wastes.

D. REQUIREMENTS

1. Containment and Storage

   a. Potentially infectious material must be securely contained within Biohazardous Waste Bags ("Red Bags") according to the following:

      1) Biohazardous waste must be segregated from other types of waste at the point of origin.

      2) Biohazardous waste should be "double-bagged" if it contains partially saturated

solid waste or liquids.

3) Bags containing Biohazardous waste must be red in color, and be labeled either as "Biohazardous Waste," or with the international symbol and the word "Biohazard."

4) Bags must be certified by the manufacturer to meet the minimum strength requirements of California Health and Safety Code 117630, and ASTM Standard D 1709 and ASTM Standard D 1922.

5) Bags must be securely sealed so as to prevent leakage or expulsion of the contents during handling, transportation, or storage.

6) Bags should be labeled with the name of originating department.

7) Any spill or leak of a medical/infectious waste must be decontaminated by appropriate procedures, (See Part II of this Plan).

8) Pathological Waste Labeled containers will not be used for any waste other than pathological waste.

b. Sharps, which are used needles, syringes, or other objects having acute rigid corners or protuberances capable of cutting or piercing, shall be placed in containers which meet the following requirements:

1) Container must be leak proof, rigid, puncture resistant, and tightly lidded to prevent loss of contents, prevent tampering, and be secure for disposal.

2) Container, once sealed, cannot be reopened without great difficulty.

3) Sharps containers must be labeled in the same way as infectious waste bags, or be placed in infectious waste bags.

4) Needle and syringe tips shall <u>not</u> be clipped prior to disposal.

5) Needles and syringes shall not be recapped. The entire unit shall be <u>immediately</u> placed in an approved sharps container after use.

c. Use of Secondary Containers

1) All disposable infectious waste bags and sharps containers must be placed in secondary containers such as pails, cartons, drums, dumpsters, or bins for storage.

2) Secondary containers must be leak proof, have tight-fitting covers, and be kept clean and in good repair.

3) Secondary containers must be labeled on the lid and sides with the words, Biohazardous Waste," or with the international biohazard symbol and the word, "Biohazard."

4) Reusable secondary containers must be easily cleanable, and must be washed and decontaminated each time they are emptied, unless they have been completely protected from contamination. The cleaning method should be approved by EHS for compliance with applicable State and local regulations.

5) Storage enclosures for bagged infectious waste must be secured to deny access to unauthorized personnel and exterior doors must be posted in both English and Spanish as follows:

CAUTION - INFECTIOUS WASTE STORAGE AREA - UNAUTHORIZED PERSONS KEEP OUT.
CUIDAD - ZONA DE RESIDUOS INFECTADOS - PROHIBIDA LA ENTRADA A PERSONAS NO AUTORIZADAS.

6) Biohazardous waste should not be stored in CSUSB facilities for more than seven days at temperatures above 0 Degrees C (32 Degrees F.)

2. Disposal of Biohazardous Waste

a. Biohazardous waste generated by the University must be disposed of by being transferred off-campus with a registered hauler for disposal at a State-approved waste disposal facility.

b. Biohazardous wastes shall not be incinerated on-campus.

c. Recognizable tissue must be disposed of by off campus incineration at authorized facilities.

3. Disposal Contract

Thermal Combustion Innovators (TCI), Inc., 241 W. Laurel Street, Colton, CA 92324 is currently under contract to dispose of all CSUSB Biohazardous waste at their permitted facility. The contractor will collect medical wastes once a week from the Health Center and the Animal House, and as necessary from the College of Social and Behavioral Sciences where it is kept below 32 degree Fahrenheit. The contractor shall ensure that all sharps containers and all double-bagged infectious waste will be autoclaved, all animal carcasses will be incinerated, and all services are performed in strict accordance with applicable Federal, State, and local regulations. EH&S will manage this contract and should be contacted at Ext. 75179 for any problems or modifications to this service.

4. Autoclaving

Sterilization by heating in a steam sterilizer (autoclave), so as to render equipment noninfectious, is a method used at CSUSB to treat contaminated equipment before reuse. Infectious waste rendered noninfectious may be disposed of as biomedical solid waste if it does not contain any other hazardous properties. Operation of steam sterilizers, for equipment that does not contain any other hazardous properties, shall be in accordance with the following:

A written standard operating procedure (SOP) for each steam sterilizer should be prepared and followed. SOP should include time, temperature, pressure, type of waste, type of container(s),

closure on container(s), pattern of loading, water content, and maximum load quantity.

Check of recording and/or indicating thermometers during each complete cycle to ensure the attainment of a temperature of 121 Degrees C (250 Degrees F) for one-half hour or longer, depending on quantity and compaction of the load, in order to achieve sterilization of the entire load. Thermometers shall be checked for calibration at least annually.

Use of heat sensitive tape or other devices for each container that is processed to indicate the attainment of adequate sterilization conditions.

Use of the biological indicator Bacillus stearothermophilus placed at the center of a load processed under standard operating conditions at least monthly to confirm the attainment of adequate sterilization conditions.

Maintenance of records of procedures specified in (a), (b), and (d) above for period of not less than three years.

7. Emergency Action Plan (EAP)

Medical waste is stored only in secured labeled areas. Waste is then transported, treated and disposed by our medical waste management company. In the event that our primary medical waste management company (TCI) is incapable of transporting medical waste in a timely manner, our secondary medical waste management company (Clean Harbors Environmental Services) will provide these services.

Clean Harbors Environmental Services
24-hour emergency telephone number (800) 645-8265
(In the event of a spill, contact EH&S first at (909) 537-5179)

In the event of a spill of bio-hazardous materials, the Campus has a variety of capabilities and plans to mitigate any adverse effects. The Campus has a round-the-clock police department and an on-call hazardous materials emergency response team. The Campus also maintains both a general emergency response plan/emergency operations center and a hazardous materials emergency response plan. Members of these teams participate in both training and drills. Furthermore, as a backup, our hazardous waste disposal contractor has emergency response capability and can respond to hazardous materials emergencies. Clean-Up Procedures: In the case of a spill of medical waste, clean up may be done by rinsing or immersion for three minutes using one of the following chemical sanitizers. The concentrations listed below are minimum concentrations; stronger solutions are, of course, more effective.

Chlorine: Commercially available bleach contains about 5% (five percent) hypochlorite. A dilution of one part of the commercial product to 49 (forty-nine) parts water produces a solution of approximately 1000 (one thousand) parts per million (equivalent to 0.1% active ingredient)

Dry calcium hypochlorite tablets for pools: (Pulsar Plus Briquettes) will contain approximately 65% (sixty-five percent) available chlorine. A mixture of 1.5 pounds of Pulsar Plus Briquettes to 1 gallon of water will produce a solution of approximately 1000 (one thousand) parts per million available chlorine.

Ammonia: Commercially available ammonia solutions each contain about 5% (five percent) quaternary ammonia. A dilution of one part of the commercial product to 49 (forty-nine) parts

water produces a solution of approximately 1000 (one thousand) parts per million (equivalent to 0.1% active ingredient)
Note: Chlorine (bleach) and ammonia should never be mixed together. P*henolic solutions of 500 parts per million (0.05%) of the active agent. Iodoform solutions of 100 parts per million (0.01%) of the active agent.*
Trauma Clean-Up:

Trauma Scene: "Trauma scene" means a location soiled by, or contaminated with, human blood, human body fluids, or other residues from the scene of a serious human injury, illness, or death.

Trauma Scene Waste Management Practitioner: "Trauma scene waste management practitioner" means a person who undertakes as a commercial activity for the removal of human blood, human body fluids, and other associated residues from the scene of a serious human injury, illness, or death, and who is registered with the California Department of Health Services.

Registered Trauma Scene Management Practitioner for CSUSB:

Alliance Environmental Group, LLC, Department of Health Services Registration Number 209
24-hour telephone number (626) 626-633-3500 / (877) 858-6220
Contact Name: Armando Delgadillo

ACR Services DKI, Department of Health Services Registration Number 567
Telephone number (909) 883-4884
Contact Name: Michael Benson

Emergency Response Crime Scene Cleaning Department of Health Services Registration Number 85
Telephone number (626) 305-9000/ (866) 305-9001
Contact Name: Ben Mihm

Information provided is complete and accurate at time of most recent revision.

References

California Health & Safety Code, Section 117600 to 118360, aka "The California Medical Waste Management Act"

California Code of Regulations Title 22, Div. 4, Ch. 21, Art. 1-4, "Minimum Standards for Permitting Medical Waste Facilities"
Center for Disease Control (CDC) NIH Handbook

Title 29 Code of Federal Regulations 1910.1030, Bloodborne Pathogens Standard Title 8 California Code of Regulations 5193, Bloodborne Pathogens Standard

For Further Information

Additional information on safe handling practices and associated requirements can be obtained from EH&S. Contact the EH&S Office (ext. 75179) for copies of applicable regulations or further information.

APPENDIX A: SHARPS INJURY REPORTING PROCEDURE AND LOG

ENVIRONMENTAL HEALTH AND SAFETY DEPARTMENT
Phone (909) 537-5179 | Fax (909) 537-7049 | Email: allehs@csusb.edu

SHARPS INJURY REPORTING PROCEDURE
SEPTEMBER 2019

The definition of "sharp" means any object that can be reasonably anticipated to penetrate the skin and to result in an exposure incident (contact with blood or other potentially infectious materials), including but not limited to needle devices, scalpels, lancets, broken glass, broken capillary tubes, exposed ends of dental wires and dental knives, drills and burs.

A Sharps Injury Log is to be maintained to record sharps injuries. The log must include the date and time of the exposure incident, type and brand of sharp involved in the incident and details of the circumstances of the incident, employee job classification, procedure performed at the time of the incident, how the incident occurred, body part involved, if the engineered sharps injury protection was effective (if applicable) or whether such a mechanism could have prevented the injury (in the opinion of the employee).

Should an injury involving sharps occur, please complete the following:

1. CSUSB Supervisor's Injury Illness Report
2. Sharps Injury Log
    a. Maintain 5 years from the date of exposure incident
3. Needle Stick Checklist if applicable

The original Sharps Injury Log and Needle Stick Checklist should be kept for your department files for regulatory agency inspection purposes. Please attach copies to an original Supervisor's Injury Prevention Report and forward to the Environmental Health and Safety and Human Resources Departments for further investigation.

CALIFORNIA STATE UNIVERSITY
SAN BERNARDINO

Environmental Health and Safety Department 909-537-5179

Sharps Injury Log

Please complete a log for each employee exposure incident involving a sharp.

Institution: _____ Department: _____

Address: _____City:_____ State: _____ Zip Code: _____

Date filled out: _____ By: _____ Phone #:_____

Coyote ID #:_____ Date of injury: _____ Time of injury: _____

Optional: Sex: O Male O Female, Age_____

Description of the exposure incident:

_____

_____

_____

_____

Job Classification:
O MD
O Nurse
O Medical Assistant
O Phlebotomist/Lab Tech
O Housekeeper/Laundry
O Student
O Other_____

Department/Location:
O Patient room
O Clinical laboratory
O Medical clinic
O Service/utility area
O Restroom
O Other_____

Body Part: (check all that apply)
O Finger
O Face/head
O Hand
O Torso
O Arm
O Leg
O Other_____

Procedure:
O Drawing blood
O Cutting
O Injection, through skin
O Suturing
O Start IV/set up heparin lock
O Other_____

Identify Sharp Involved:
Type: _____ Brand: _____ Model: _____
e.g. 18g needle/ABC Medical/"no stick" syringe

Did the device being used have engineered sharps injury protection? O Yes O No O Don't know

Was the protective mechanism activated?
O Yes-fully O Yes-partially O No

Did the exposure incident occur?
O before O during O after activation

Did the exposure incident occur?
O During use of sharp
O Between steps of a multi-step procedure
O After use and before disposal of sharp
O While disassembling
O While putting sharp into disposal container
O Sharp in inappropriate place (table, trash, etc)
O Other_____

Exposed Employee: If sharp had no engineered sharps injury protection, do you have an opinion that such a mechanism could have prevented the injury? O Yes O No
Explain:_____

_____

Exposed Employee: Do you have an opinion that any other engineering, administrative or work practice control could have prevented the injury? O Yes O No
Explain:_____

_____

CALIFORNIA STATE UNIVERSITY
SAN BERNARDINO

Environmental Health and Safety Department 909-537-5179

NEEDLE STICK INVESTIGATION CHECK LIST

Identify Sharp Involved:
Type: _____ Brand: _____ Model: _____
e.g. 18g needle/ABC Medical/"no stick" syringe

1.	Were you properly vaccinated at the time of incidence?	Yes	No	N/A
2.	Was the patient cooperative?	Yes	No	N/A
3.	Did you handle the patient effectively?	Yes	No	N/A
4.	Was patient responsible for this incident any way? If yes please explain: _____ _____ _____ _____	Yes	No	N/A
5.	Did your work habit contribute to this incident? If yes, please explain: _____ _____	Yes	No	N/A
6.	Do you have access to ESIP needles? N/A If not, why? _____		Yes	No
7.	Do you have market availability of ESIP needles?	Yes	No	N/A
8.	Was disposal responsible for this incidence?	Yes	No	N/A
9.	Was this injury recorded in your Sharps Injury Log?	Yes	No	N/A

10. What other actions were taken after this incident?

_____
_____
_____
_____

**ESIP – engineered sharps injury protection*

PLEASE COMPLETE THIS FORM IN ITS ENTIRETY. KEEP ORIGINAL FOR DEPARTMENT FILES. ATTACH COPY TO SIIR and/or 268 ACCIDENT REPORT AND SEND TO EHS DEPARTMENT. THANK YOU.