



Administrative Procedure

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Subject: MEDICAL WASTE MANAGEMENT PLAN

1.0. PURPOSE:

The purpose of the California State University Los Angeles Medical Waste Management Program is:

- 1.1. To minimize students, faculty, and staff exposure to medical waste.
- 1.2. To handle, treat, and dispose of medical waste in compliance with the requirements of the California Medical Waste Management Act.
- 1.3. To comply with the regulations pertaining to a small quantity generator that treats medical waste on-site.

2.0. ORGANIZATIONS AFFECTED:

Any organization that generates, treats, or assists in the management of medical waste is affected by this Program. Affected organizations include but are not limited to:

- 2.1. The School of Natural and Social Sciences,
- 2.2. The Student Health Center
- 2.3. The Athletics Department
- 2.4. The Environmental Health and Safety Office
- 2.5. The Department of Facilities Operations:
 - 2.5.1. Custodial Services
 - 2.5.2. Grounds

3.0. REFERENCES:

- 3.1 California Health and Safety Code, Division 20 of Chapter 6.1., Medical Waste Management Act.

Approved:

Date:

- 3.2 Cal/OSHA California Code of Regulations (CCR) Title 8, Section 5192.
- 3.3 Center for Disease Control, Biosafety Level 4.

4.0. POLICY:

It is the policy of the University to provide a safe and healthful, working and educational environment, and to meet all appropriate environmental health and safety regulations.

5.0. DEFINITIONS:

- 5.1. Autoclave - A steam sterilization system whereby steam is brought into contact with waste materials in a controlled manner and for a sufficient amount of time in order to effectively kill pathogenic organisms that contaminate the waste.
- 5.2. Decontamination - The removal of hazardous substances from employees and their equipment to the extent necessary to preclude the occurrence of foreseeable, adverse health effects.
- 5.3. Generator - The facility that creates medical waste.
- 5.4. Hazardous Waste - Any waste that meets the definition of hazardous waste by the United States Environmental Protection Agency (US-EPA), or the California Environmental Protection Agency (Cal-EPA). A hazardous waste meets defined parameters for corrosivity, ignitability, reactivity, and toxicity or, is specifically listed.
- 5.5. Incinerator - A process that uses controlled, high temperature combustion to reduce waste volumes and destroys microorganisms in waste materials.
- 5.6. Large Quantity Generator - A medical waste generator that generates 200 or more pounds per month of medical waste.
- 5.7. Medical Waste - A waste that meets one or more of the following conditions:
 - 5.7.1. Laboratory Wastes - specimen or microbiological cultures, stocks of infectious agents, live and attenuated vaccines, and cultures.
 - 5.7.2. Blood or Body Fluid - liquid blood elements or other regulated body fluids, or articles contaminated with blood or body fluids.
 - 5.7.3. Sharps - syringes, needles, blades, and broken glass.

- 5.7.4. Contaminated Animals - animal carcasses, body parts, bedding materials contaminated with biological agents. Uncontaminated animal carcasses are not considered medical waste.
 - 5.7.5. Surgical Specimens - human or animal parts or tissues removed surgically or by autopsy.
 - 5.7.6. Isolation Waste - waste contaminated with excretion, exudate, or secretions from humans or animals who are isolated due to highly communicable diseases (Center for Disease Control, Biosafety Level 4).
 - 5.8. Medical Waste Hauler - A company which is registered with the Department of Health Services and meets the Medical Waste Haulers requirement listed in Chapter 6.1 Medical Waste Management Act, Article 6.
 - 5.9. Medical Waste Treatment - Any method, technique, or process designed to change the biological character or composition of any medical waste so as to eliminate its potential for causing disease and meets the operating conditions listed in Chapter 6.1, Medical Waste Management Act, Article 9.
 - 5.10. Small Quantity Generator - A medical waste generator that generates less than 200 pounds per month of medical waste
 - 5.11. Uncontrolled Release - An uncontrolled release is the accidental release of a hazardous substance from its container. If not contained, stopped, and removed, the release would pose a hazard to the employees in the immediate area or in areas in the path of the release, or from its byproducts or its effects (such as toxic vapors, fire, over-pressurization, toxic gases, or toxic particulates)
- 6.0. RESPONSIBILITIES:
- 6.1. Department Administrators
 - 6.1.1. Administrators shall ensure that all medical waste is handled, stored, treated, and disposed of properly either by contracting with a medical waste management company to transport, treat, and dispose of the waste off-site or by treating on-site. Permissible on-site treatment is limited to steam sterilization (autoclave). Incineration of medical waste on-site is prohibited.

- 6.1.2. Administrators shall develop written procedures for the handling, storage, and disposal of medical waste in accordance with this program. Administrators of departments that treat medical waste shall also develop written standard operating procedures as outlined in Section 7.2.
- 6.1.3. Written handling, storage, and disposal procedures shall be reviewed annually and revised as necessary. Written on-site treatment procedures shall be reviewed and revised as necessary at least annually and whenever a failure in sterilization occurs. A copy of each written procedure shall be forwarded to the Office EH&S.
- 6.1.4. Department Administrators shall also ensure that personnel involved in the generating, handling, storage and/or disposal of medical waste are adequately trained and that the training is documented. Copies of training documentation shall be forwarded to the Office EH&S.
- 6.1.5. Department Administrators shall promote correct work practices and controls, and shall provide the appropriate personal protective equipment to personnel that generate, handle, store and/or treat medical waste (see Section 7.6.).
- 6.1.6. Department Administrators shall ensure that non-sharps waste is collected in red plastic biohazard bags and that sharps waste is collected in sharps containers (see Section 7.1.).
- 6.1.7. Department Administrators shall provide a safe, secure, and lockable area in which to store containers of medical waste prior to treatment or disposal. Any enclosure, designated area or room where medical waste is stored, shall be posted with signs visible from all directions of approach from a distance of 25 feet. The wording on the signs shall be in English and in Spanish.

**"CAUTION
BIOHAZARDOUS WASTE STORAGE AREA
UNAUTHORIZED PERSONS KEEP OUT"**

**"CUIDADO
ZONA DE RESIDUOS
BIOLOGICOS PELIGROSOS
PROHIBINA LA ENTRADA A PERSONAS NO
AUTHORIZADAS".**

- 6.1.9. Contracts for the Student Health Center's medical waste transportation, treatment, and disposal shall be administered and funded by the Office of Environmental Health and Safety. Other organizations shall provide for the administration, funding, transportation, treatment, and disposal of the medical waste generated within their school/department.
- 6.2. Office of Environmental Health and Safety (Office EH&S)
 - 6.2.1. The Office EH&S shall register the University's Medical Waste Management Program with the Department of Health Services (DHS) and shall renew the registration biennially. The Office EH&S shall also report any changes or revisions to the Program to the DHS.
 - 6.2.2. Written procedures will be maintained on file in the Office EH&S at all times.
 - 6.2.3. Training records and calibration records shall be maintained on file in the Office EH&S for a minimum of three years.
- 6.3. The Biosafety Officer will:
 - 6.3.1. Be responsible for ensuring that the academic and non-academic departments are in full compliance with the University Medical Waste Management Plan.
 - 6.3.2. Consult with and act as a consultant to the Office of Environmental Health and Safety and campus in issues relating to biological safety.
 - 6.3.3. Manage the medical waste generated by the School of Natural and Social Sciences in accordance to the University Medical Waste Management Plan.
- 7.0. PROCEDURES:
 - 7.1. Segregation, Packaging and Storage of Medical Waste and Sharps
 - 7.1.1. Medical waste shall be contained separately from other waste. Sharps shall be separated from non-sharps medical waste.

- 7.1.2. Non-sharps medical waste - Non-sharps medical waste shall be placed in biohazard bags. The bags shall be made of red plastic and shall be imprinted with the words "Biohazardous Waste" or the word "Biohazard" along with the international biohazard symbol. (See 8.3.)
- 7.1.2.1. The bags shall be labeled with the name of the generating department, extension, and the date collection began.
- 7.1.2.2. The bags shall be tied to prevent leakage of the contents.
- 7.1.2.3. Biohazard bags shall be stored, handled or transported in rigid containers. Containers shall be leak resistant, have tight fitting covers and be kept clean and in good repair.
- 7.1.2.3.1. Containers can be any color but shall be labeled with the words "Biohazardous Waste" or the word "Biohazard" along with the international biohazard symbol. Labels shall be placed on the lid and on the sides and shall be visible from any lateral direction.
- 7.1.2.3.2. The containers shall be labeled with the contents, department name, University address, and the date collection started.

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7.1.2.3.3. Containers shall be decontaminated at least monthly or when visible contamination is observed. If carts are used to transfer medical waste, the carts shall be decontaminated when visible contamination is observed. Decontamination procedures are as follows:

- A.) Agitate to remove visible soil.
- B.) Expose to 180 °F (82 °C) water for 15 seconds or
- C.) Expose to chemical sanitizer, (see section 7.5.4.), for 3 minutes.

7.1.2.3.4. Containers shall not be used for the collection or storage of any other material or waste, unless the container is first decontaminated and then all of the labels are remove.

Comment [ST1]:

7.1.2.3.5. Containers shall be stored in secured areas that are not accessible to the general public.

7.1.2.4. Medical waste shall be stored on-site for no more than seven days when stored above 32 °F (0 °C), or for no more than 90 days when stored at or below 32 °F (0 °C).

7.1.3. Sharps

7.1.3.1. All sharps medical waste shall be placed into a sharps container. The containers shall be made of heavy-duty, puncture resistant plastic with a lock-tight lid. Sharps containers shall be imprinted with the words "Sharps Waste" or with the word "Biohazard" along with the international biohazard symbol.

Sharps containers shall be labeled with the name of the generating department, extension, and the date collection began.

- 7.1.3.2. When the sharps container is full, the container shall be taped closed or lid tightened.
- 7.1.3.3. Sharps containers shall be stored in biohazard bags or placed directly into rigid storage containers.
- 7.1.3.4. Full sharps containers shall not be stored for more than seven days.

7.2. On-Site Treatment

- 7.2.1 On-site treatment shall be limited to steam sterilization (autoclave) only. All other forms of on-site treatment shall be prohibited.
- 7.2.2. Standard written operating procedures shall be established for each autoclave (see 8.2.). Process parameters shall be defined in the procedure. Process parameters include:
 - 7.2.2.1. Types of cycles for different medical waste input streams (water loads, recyclable instruments and equipment, and non recyclable materials).
 - 7.2.2.2. Pressure, temperature, and duration for each cycle.
 - 7.2.2.3. Type of container, closure of containers, waste loading patterns, and maximum loading requirements.
- 7.2.3. Procedures shall be established to determine the effectiveness of each autoclave and each autoclave cycle. The results of biological indicators, the results of color change for heat sensitive tape, pressure, temperature, and duration data, shall be obtained and recorded. Required indicators include the following:
 - 7.2.3.1. Heat sensitive tape shall be used on each biohazard bag or sharps container to verify effective exposure to the sterilization cycle.
 - 7.2.3.2. On a monthly basis, a biological indicator shall be placed in the middle of a load to confirm sterilization. Results of indicator change shall be recorded and forwarded to the EH&S Office.

- 7.2.4. Recording or indicating thermometers shall be checked during each cycle to assure that temperature and duration conditions are met. The internal atmosphere of the autoclave must attain a temperature 250 °F. (121 °C.) for at least 1/2 hour. Verification of temperature and duration monitoring shall be recorded. These records shall be maintained by the treating department for a minimum of three years. Thermometers shall be calibrated annually. Calibration records shall be forwarded to the Office EH&S and shall remain on file for a minimum of three years.
- 7.2.5. Special precautions shall be taken to prevent accidental removal of material from an autoclave before it has been sterilized. For example, biohazardous materials shall not be placed in autoclaves overnight in anticipation of autoclaving the next day.
- 7.2.6. Strong oxidizing materials shall not be autoclaved with organic materials such as paper, cloth, or oil.
- 7.2.7. If the autoclave operation fails, waste shall be transferred to another autoclave for treatment or the department shall arrange for a contracted hauler to pick up the medical waste and transport it to an off-site treatment facility.
- 7.3. Disposal of Treated Medical Waste
 - 7.3.1. Treated medical waste shall be disposed of as solid waste.
 - 7.3.2. Sharps must be destroyed before disposal as solid waste.
- 7.4. Spill Response and Decontamination
 - 7.4.1. In the event of an uncontrolled release, the immediate vicinity of the spill shall be evacuated and the EH&S Officer shall conduct a health risks assessment of personnel. If safe to do so, a department representative may stop the flow of any liquids and contain the spill.
 - 7.4.2. If a spill cannot be safely controlled or contained by departmental personnel or if it threatens the safety of humans or the environment, Public Safety and the Office EH&S must be notified immediately by dialing extensions 911 and 3-3531, respectively.
 - 7.4.3. Department personnel shall do an appropriate PPE (Section 7.6).

- 7.4.4. The area shall be decontaminated with a chemical disinfectant. The chemical disinfectant solution shall remain on the contaminated area for at least three minutes and thoroughly contact all contaminated surfaces and cracks (see section 7.5.4.). Floor cleaning procedures that minimize the generation of environmental aerosols shall be used. Wet mopping or wet vacuum pick up is recommended. Water shall be drained to the municipal sanitary sewer system.
- 7.4.5. Solids shall be picked up by mechanical means, i.e. a pan, brush, or forceps. Liquid spills shall be absorbed with an available desiccant designed to handle infectious waste spills. Never use hands to pick up sharps.
- 7.4.6. The Office EH&S shall be notified at extension 3-3531.
- 7.4.7. The sanitized area shall be cleaned by regular mopping. The rinse water shall be disposed of into the municipal sanitary sewer system.
- 7.5. Emergency Action Plan
 - 7.5.1. In the event of a spill or release, that cannot be controlled or contained by University personnel, the EH&S Officer shall contract the services of a medical waste management company to clean up the spill. Public Safety shall provide assistance with evacuation and crowd control.
 - 7.5.2. In the event an emergency, utility failure, or other problem that renders the on-site treatment of equipment inoperable, all medical waste shall be transported by a licensed medical waste hauler to an off-site treatment facility.
 - 7.5.3. In the event that the University becomes isolated due to a major disaster, the generating department shall place all medical waste in rigid containers, fill the containers with liquid disinfectant, (see section 7.5.4.), tightly seal the containers, and store the containers in a safe and secure area until a licensed hauler is able to reach the University and transport the waste to an off-site treatment facility.
 - 7.5.4. The following solutions shall be used as disinfectants when exposed for surfaces for at least 3 minutes:
 - 7.5.4.1. Hypochlorite solution (500 ppm available chlorine)

- 7.5.4.2. Phenolic solution (500 ppm active agent)
- 7.5.4.3. Iodoform solution (100 ppm available iodine)
- 7.5.4.4. Quaternary ammonium solution (400 ppm active agent).

7.6. Personal Protective Equipment and Work Practice Controls

- 7.6.1. Personal Protective Equipment shall be provided for those individuals that work with medical waste. The degree of PPE shall be dictated by the types of hazards that may be encountered. The PPE utilized shall provide adequate protection against medical waste splashes, sprays, spatters, droplets, or aerosols from contaminating the eyes, mouth, face and skin. Types of PPE include gloves, foot coverings, face shields, masks, appropriate respiratory protection, eye protection, and gowns.
- 7.6.2. The following work practice controls shall be observed when treating or disposing of medical waste:
 - 7.6.2.1. Employees shall wash their hands immediately after removing gloves or any other PPE, and after hand contact with medical waste.
 - 7.6.2.2. All PPE shall be removed immediately after leaving the work area. If potentially contaminated, PPE shall be placed in an appropriately designated area or container for storage, washing, decontamination, or disposal.
 - 7.6.2.3. Eating, drinking, smoking, applying cosmetics or lip balm, and handling contact lenses shall be prohibited in work areas where there is medical waste. Food and drink shall not be stored in refrigerators, freezers, cabinets, shelves, countertops, or bench tops where medical waste is stored.
 - 7.6.2.4. All procedures involving medical waste shall be performed to minimize splashing, spraying, spattering, and the generation of droplets of these substances.

7.7. Record Keeping

7.7.1. Each department shall maintain an up to date log for each individual autoclave. The log shall document the maximum temperature achieved, duration of that maximum temperature, results of heat sensitive tape, results of biological indicators (when used), type of waste treated, date of treatment, comments, and signature of operator. The department is to maintain the logs for a minimum of three years. A sample log sheet is shown in 8.1.

7.7.2. Departments that contract services with a licensed medical waste hauler shall maintain the tracking documents for each medical waste pick up. These documents shall be maintained for a minimum of three years.

8.0. APPENDICES:

8.1. Sample Autoclave Operating Log-Sheet

8.2. Sample Autoclave Guidelines

8.3. Biohazard Symbol