Administrative Procedure

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Subject: MEDICAL WASTE MANAGEMENT PLAN

1.0 PURPOSE

The purpose of the California State University, Los Angeles (Cal State LA) Medical Waste Management Plan is:

1.1. To minimize students, faculty, and staff exposure to medical materials and waste.

1.2. To manage, handle, treat, and dispose of medical waste in compliance with the California Medical Waste Management Act and associated California Department of Public Health (CDPH) permitting requirements.

1.3. To comply with local, state, and federal regulations applicable 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 plan and the Cal State LA Biosafety Program. Affected campus organizations include, but are not limited to:

2.1. College of Natural and Social Sciences (NSS)

2.2. Student Health Center (SHC)

2.3. Athletics Department

2.4. Risk Management and Environmental Health and Safety (RMEHS) Department

2.5. Facilities Services Department

2.5.1. Custodial Services

2.5.2. Grounds

2.6. Housing and Residence Life (HRL)

2.7. School of Criminal Justice and Criminalistics

2.8. Patricia A. Chin School of Nursing

2.9. Rongxiang Xu Bioscience Innovation Center, the home of LA BioSpace; operated by University Auxiliary Services, Inc. (UAS)

3.0 REFERENCES

3.1. California Health and Safety Code, Division 104, Part 14, Medical Waste (Medical Waste Management Act)

3.2. Cal/OSHA California Code of Regulations (CCR), Title 8, Division 1, Chapter 4, Subchapter 7, Group 16, Article 109, Section 5192: Hazardous Waste Operations and Emergency Response

3.3. Centers for Disease Control (CDC), Biosafety in Microbiological and Biomedical Laboratories, 6th Edition

4.0 POLICY

It is the policy of the university to provide a safe and healthy working and learning environment. All work involving medical materials and waste, which are classified as biohazardous, must comply with applicable environmental health and safety laws, regulations, and university requirements.

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 enough time to effectively kil pathogenic organisms that contaminate the waste.

5.2. Biohazardous Waste – Any waste containing biological agents or materials that pose a potential risk to human health, animals, or the environment.

5.3. Decontamination – The removal of hazardous substances from employees and their equipment to the extent necessary to preclude the occurrence of foreseeable, adverse health effects.

5.4. Generator – A facility that creates medical waste.

5.5. 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 of corrosivity, ignitability, reactivity, and toxicity, or is specifically listed.

5.6. Incinerator – A process that uses controlled, high-temperature combustion to reduce waste volumes and destroy microorganisms in waste materials.

5.7. Large Quantity Generator – A medical waste generator that generates 200 or more pounds per month of medical waste.

5.8. Medical Waste – A biohazardous waste that meets one or more of the following conditions:

5.8.1. *Laboratory Wastes* – Specimen or microbiological cultures, stocks of infectious agents, containers of live and attenuated vaccines, and cultures.

5.8.2. *OPIM (Other Potentially Infectious Materials)* – Any human body fluids, tissues, organs, or other materials that may contain bloodborne pathogens.

5.8.2.1. *Blood or Body Fluid* – Liquid blood elements, other regulated body fluids, or articles contaminated with blood or body fluids.

5.8.3. *Sharps* – Syringes, needs, blades, and broken glass.

5.8.4. *Contaminated Animals* – Animal carcasses, body parts, and bedding materials contaminated with biological agents. Uncontaminated animal carcasses are not considered medical waste.

5.8.5. *Surgical Specimens* – Human or animal parts or tissues removed surgically or by autopsy.

5.8.6. *Isolation Waste* – Waste contaminated with excretion, exudate, or secretions from humans or animals who are isolated due to highly communicable diseases (CDC, Biosafety Level 4)

5.9. Medical Waste Hauler – A company that is registered with the Department of Health Services (DHS) and meets the Medical Waste Hauler requirements listed in the California Health and Safety Code, Division 104, Part 14.

5.10. Medical Waste Treatment – Any method, technique, or process designed to change the biological character or composition of any medical waste to eliminate its potential for causing disease and meets the operating conditions listed in California Health and Safety Code, Division 104, Part 14.

5.11. Small Quantity Generator – A medical waste generator that generates less than 200 pounds per month of medical waste.

5.12. 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 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 Representative(s) shall:

6.1.1. Ensure all medical waste is properly managed, handled, stored, treated, and disposed of in accordance with applicable regulations. Department representatives are required to contact RMEHS for medical waste services. Departments must **not** independently contract or coordinate with medical waste management vendors.

6.1.1.1. Permissible on-site treatment is limited to steam sterilization (autoclave).

6.1.1.2. Incineration of medical waste on-site is **prohibited**.

6.1.2. Ensure external entities or individuals renting space from the university are informed they are responsible for the proper management, handling, storage, treatment, and disposal of any medical waste they generate. Alternatively, the departments leasing space to external entities or individuals must coordinate with these entities for proper storage and management of medical waste, and contract a licensed medical waste management company for the disposal of the medical waste.

6.1.2.1. Departments responsible for oversight of external entities or individuals renting university space shall maintain tracking documents for each medical waste pickup to verify compliance with all applicable laws and university requirements. These records shall be retained for no less than three (3) years.

6.1.3. Develop written procedures for the handling, storage, and disposal of medical waste under this plan. Department Representatives who treat medical waste are responsible for creating written standard operating procedures that reflect current operations as outlined in section 7.2.

6.1.4. Annually review and revise, as necessary, written handling, storage, and disposal procedures.

6.1.4.1. An annual review of all written on-site treatment procedures is required, with additional reviews following any sterilization failure.

6.1.4.2. A copy of each written procedure is forwarded to RMEHS.

6.1.5. Ensure that personnel involved in the generation, handling, storage, and/or disposal of medical waste complete initial and annual refresher training as assigned by RMEHS.

6.1.5.1. All site-specific and in-person training must be documented and retained for auditing purposes, and training content should be updated as needed to maintain compliance.

6.1.6. Promote correct work practices and controls and provide the appropriate personal protective equipment (PPE) to personnel who generate, handle, store, and/or treat medical waste (see section 7.6).

6.1.7. 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).

6.1.8. Provide safe, secure, and lockable area in which to store containers of medical waste before treatment or disposal.

6.1.8.1. Any enclosure, designated area, or room where medical waste is stored shall be posted with signs, visible from all directions of approach from twenty-five (25) feet. The wording on the signs shall be in English and Spanish.



CAUTION
BIOHAZARD WASTE STORAGE AREA
UNAUTHORIZED PERSONS KEEP OUT

CUIDADO
ZONA DE RESIDUOS BIOLOGICOS PELIGROSOS
PROHIBIDA LA ENTRADA A PERSONAS NO AUTORIZADAS

6.1.9. The Student Health Center (SHC) and other university departments are required to coordinate with RMEHS for medical waste transportation, treatment, and disposal services. External entities are responsible for arranging and funding their own medical waste services, as outlined in section 6.1.2.

6.2. The RMEHS Department shall:

6.2.1. Register the university's Biohazardous Management Plan with the California Department of Public Health (CDPH) and renew the registration biennially. RMEHS shall also report any changes or revisions to the plan to the CDPH.

6.2.2. Maintain relevant written procedures on file at all times.

6.2.3. Maintain training and necessary testing, use logs, and/or calibration records (for registered equipment) on file for a minimum of three (3) years.

6.3. The Biosafety Officer (BSO) shall:

6.3.1. Ensure that the academic and non-academic departments are in full compliance with the university's Biohazardous Management Plan.

6.3.2. Consult with and function as a consultant to RMEHS, committees, and campus on issues relating to biological safety.

6.3.3. Oversee the management of medical waste generated, with the assistance of the hazardous waste technician, following the university's Biohazardous Management Plan (see Appendix 8.1).

7.0 PROCEDURES

7.1. Segregation, Packaging, and Storage of Medical Waste and Sharps

7.1.1. Medical waste is required to be contained separately from other waste.

7.1.2. Sharps are required to be separated from non-sharps medical waste in specialized 'Sharps' containers to prevent accidental stick injury.

7.1.3. Non-sharps medical waste is required to be placed in biohazard bags. The bags shall be made of red plastic and be imprinted with the words "Biohazardous Waste" or the word "Biohazard" along with the international biohazard symbol.

7.1.3.1. The bags are required to be tied, taped, or properly zip-tied to prevent leakage of the contents.

- Proper tying procedures for biohazardous waste bags are outlined in the university's Biohazardous Management Plan.

7.1.3.2. Biohazard bags are required to be stored, managed, handled, or transported in rigid containers. The containers need to be leak-resistant, have tight-fitting covers, and be kept clean and in good working order to prevent exposure.

- Designated biohazard containers can be any color but are required to be labeled with the words "Biohazardous Waste" or the word "Biohazard" along with the international biohazard symbol.
    - Labels must be placed on the lid and all four (4) sides and be visible from any lateral direction.
- Designated biohazard containers are required to be decontaminated at least monthly or whenever visible contamination is observed. Any carts used to transfer medical waste are required to be decontaminated when visible contamination is observed.
- Decontamination procedures are as follows:
    - Agitate to remove visible soil.
    - Exposed to 180°F (82°C) water for at least fifteen (15) seconds or
    - Exposed to a chemical sanitizer for at least three (3) minutes (see section 7.5.5).
    - Collect any cleaning materials and dispose as biohazardous waste, placing items in the corresponding biohazardous bag for proper disposal.
- Designated biohazard containers must be decontaminated and all biohazard labels removed prior to any non-medical waste use.

- Designated biohazard containers must be stored in secure areas not accessible to the public.

7.1.4. Pharmaceutical waste shall be segregated from medical waste and disposed of per Drug Enforcement Administration (DEA) and Environmental Protection Agency (EPA) hazardous waste rules.

7.1.5. Any medical waste is to be stored on-site for no more than seven (7) days when stored above 32°F (0°C), or for no more than ninety (90) days when stored at or below 32°F (0°C).

7.1.6. Sharps

7.1.6.1. All sharps medical waste is required to be placed into a ‘Sharps’ container. Sharps containers are required to be made of heavy-duty, puncture-resistant plastic with a lock-tight lid.

7.1.6.2. Sharps containers must be imprinted with the words “Sharps Waste” or with the word “Biohazard” along with the international biohazard symbol.

7.1.6.3. When the sharps container is full, the container must be taped closed with the lid tightened, ensuring the tamper-resistant mechanism is in place.

7.1.6.4. Sharps containers shall be placed directly into rigid storage containers when transported for disposal.

7.1.6.5. Full sharps containers cannot be stored for more than seven (7) days.

7.1.7. Serological Pipettes can either be collected and treated for biological agent deactivation in autoclavable, reuseable trays or disposed of in biohazardous ‘sharps’ containers for incineration.

7.1.7.1. For autoclavable, the use of biohazard bags is optional only in this instance. Only autoclavable, reusable trays are to be used. Once autoclaved, the serological pipettes will be disposed of as solid waste.

7.2. On-Site Treatment

7.2.1. On-site treatment is limited to steam sterilization (autoclave) only. All other forms of on-site treatment are **prohibited**.

7.2.2. A written Standard Operating Procedure (SOP) is required to be established for each autoclave. Process parameters must 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 material).

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. Autoclave SOPs are 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, are required for recordkeeping and audits. Required indicators include the following:

7.2.3.1. Heat-sensitive tape shall be used on each biohazard bag 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 the indicator change are expected to be recorded and forwarded to RMEHS for record retention.

7.2.4. Recording or indicating thermometers are required to be checked during each cycle to ensure that temperature and duration conditions are met.

7.2.4.1. The internal atmosphere of the autoclave must attain a temperature of 250°F (121°C) for a minimum of 30 minutes.

7.2.4.2. Verification of temperature and duration monitoring shall be recorded. The treatment department is required to maintain these records for at least three (3) years.

7.2.4.3. Thermometers are required to be calibrated annually. Calibration records are required to be forwarded to RMEHS and remain on file for at least three (3) 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 will 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 is required to 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 (Autoclaved Medical Waste)

7.3.1. Treated medical waste shall be disposed of as solid waste.

7.3.2. Treated medical waste should be placed in dark trash bags and immediately taken to dumpsters outside the building for 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 RMEHS specialist shall conduct a health risk 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 RMEHS must be notified immediately by dialing 911 and extension 3-3531, respectively.

7.4.3. Department personnel are required to use appropriate Personal Protective Equipment (PPE) that reflects the hazard present (see section 7.6).

7.4.4. Designated biohazardous areas are required to be decontaminated with a chemical disinfectant.

7.4.4.1. The chemical disinfectant solution must remain on the contaminated area for at least three (3) minutes and thoroughly contact all contaminated surfaces and cracks.

7.4.4.2. Floor cleaning procedures that minimize the generation of environmental aerosols will be used. Wet mopping or wet vacuum pick-up is recommended. Water shall be drained to the municipal sanitary sewer system.

7.4.5. All solid materials, including sharps, must be collected using mechanical means (e.g., pan, brush, or forceps); never use your hands.

7.4.6. Any liquid spills must be absorbed with an available desiccant designed to manage infectious waste spills or an appropriate absorbent pad that can later be disposed of as biohazardous waste.

7.4.7. Departments must report all spills to RMEHS within one (1) hour and submit a written incident report no later than 24 hours after the incident.

7.4.8. After a spill, the sanitized area should be cleaned using regular mopping, and any rinse water may be discharged into the municipal sanitary sewer system.

7.5. Emergency Action Plan

7.5.1. If a spill or release cannot be controlled or contained by university personnel, RMEHS will arrange for a licensed medical waste management company to handle the cleanup.

7.5.2. Public Safety, local law enforcement, or the fire department have the authority to initiate evacuation procedures in the event of an uncontrolled release or emergency.

Public Safety shall also provide support for evacuation and crowd control, as necessary.

7.5.3. In the event of an emergency, utility failure, or other condition that disables on-site treatment equipment, RMEHS shall coordinate the transport of all medical waste by a licensed hauler to an approved off-site treatment facility.

7.5.4. In the event the university becomes isolated as a result of a major disaster, the generating department shall place all medical waste in rigid containers, add liquid disinfectant, ensure the containers are tightly sealed, and store them in a secure location until a licensed hauler can facilitate transport to an off-site treatment facility.

7.5.5. The following solutions shall be used as disinfectants when exposed to surfaces for at least three (3) minutes:

7.5.5.1. Hypochlorite solution (500 ppm available chlorine).

7.5.5.2. Phenolic solution (500 ppm active agent)

7.5.5.3. Iodoform solution (100 ppm available iodine)

7.5.5.4. Quaternary ammonium solution (400 ppm active agent)

7.6. Personal Protective Equipment (PPE) and Work Practice Controls

7.6.1. Appropriate PPE shall be provided to all personnel handling medical waste, with the level of protection determined by the specific hazards present.

7.6.2. The PPE utilized must provide adequate protection against medical waste splashes, sprays, spatters, droplets, or aerosols from contaminating the eyes, mouth, face, and skin.

7.6.3. Types of PPE include gloves, foot coverings, face shields, masks, appropriate respiratory protection, eye protection, and gowns.

7.6.4. The following work practice controls must be observed when treating or disposing of medical waste:

7.6.4.1. Employees are required to wash their hands immediately after removing gloves or any other PPE, and after hand contact with medical waste.

7.6.4.2. All PPE must be removed immediately after leaving the work area. If potentially contaminated, PPE must be placed in an appropriately designated are or container for storage, washing, decontamination, or disposal.

7.6.4.3. Eating, drinking, smoking, applying cosmetics or lip balm, and handling contact lenses are **prohibited** in work areas containing medical waste.

7.6.4.4. Storing food or beverages in refrigerators, freezers, cabinets, shelves, countertops, or benchtops where medical waste is kept is **strictly prohibited**.

7.6.4.5. All procedures involving medical waste are to be performed to minimize splashing, spraying, spattering, and the generation of droplets of these substances.

7.7. Record Keeping

7.7.1. Each department or campus organization is required to maintain an up-to-date log for each autoclave.

7.7.1.1. 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 the operator.

7.7.1.2. All records and logs must be readily available in the event of an audit or records request.

7.7.2. RMEHS shall sign and retain all biohazardous waste manifests for compliance verification purposes.

7.7.3. Departments shall provide all testing, use logs, and/or calibration records to RMEHS.

7.7.4. RMEHS shall maintain training and necessary testing, use logs and/or calibration records (for registered equipment) on file for a minimum of three (3) years.

8.0 APPENDICES

8.1. Biohazardous Management Plan