Administrative Procedure

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Subject: RADIATION SAFETY COMMITTEE

1.0 PURPOSE:

To establish a committee to oversee the implementation of Laser and Radiation Safety programs at California State University, Los Angeles (Cal State LA).

2.0 ORGANIZATIONS AFFECTED:

All organizational units of the University and any persons that are subject to the provisions of Cal State LA's Laser Safety Program or Cal State LA's Radiation Safety Program.

3.0 REFERENCES:

3.1. California Health and Safety Code, Division 20, Various Chapters.

3.2. California Radiologic Control Regulations, Title 17, California Code of Regulations, Chapter 5, Subchapter 4.

3.3. California Radiologic Technology Regulations, Title 17, California Code of Regulations, Chapter 5, Subchapter 4.5.

3.4. California Radiologic Technology Regulations, Title 17, California Code of Regulations, Chapter 5, Subchapter 4.6.

3.5. General Industry Safety Orders, Title 8, California Code of Regulations.

3.6. U.S. Nuclear Regulatory Commission Regulations, Title 10, Code of Federal Regulations, Chapter 1.

3.6. U.S. Food and Drug Administration, Department of Health Education and Welfare Regulations, Title 21, Code of Federal Regulations, Chapter 1, Subchapter J.

3.7. U.S. Department of Transportation Regulations, Title 49, Code of Federal Regulations, Chapter 1, Parts 171 to 178.

3.8. U.S. Environmental Protection Agency Regulations, Title 40, Code of Federal Regulations, Chapter 1, Subchapter F.

3.9. U.S. Department of Labor, Title 29, Part 1910.

3.10. American National Standards Institute (ANSI) Z136.1 - 2007 Standard for the Safe Use of Lasers.

Approved: _____ **Date:** _____

4.0 POLICY:

The Radiation Safety Committee (RSC) will: assist in the formulation of policies and procedures governing the use of ionizing and non-ionizing radiation (lasers, microwaves, UV, etc.); maintain surveillance as to the operational status and methodologies of the radiation and laser safety programs and all laboratories using radiation; and perform other duties as needed to assure the protection of all faculty, staff, students and visitors as well as University resources and reputation.

5.0. DEFINITIONS:

5.1. Active Status - Category assigned to Authorizations actively storing and/or using radioactive material and to Laser Registrations in which Class 3B or 4 lasers are actively being used.

5.2. Application for Authorization to Use Radioactive Material - A formal documented application completed by any individual desiring to possess and use radioactive material or machines that produce ionizing radiation, which upon completion, is returned to the Radiation Safety Officer for presentation to the Committee for review.

5.3. Authorization to Possess and Use Radioactive Material - A formal document prepared by the Radiation Safety Officer granting authorization to possess and use radioactive material or radioactive producing machines. The document profiles the terms and conditions under which the radioactive material is to be used and lists the specific radioisotopes, chemical forms of each, and maximum allowable possession limits for each radioisotope and any other information relevant to the oversight and compliance of the applicant's use of radioactive material or machines that produce ionizing radiation. Authorizations expire at the end of each calendar year, regardless of issue date, after which time the "Authorization" must be renewed.

5.4. Authorization Renewal - Procedure within the authorization process, whereby existing authorizations are extended for an additional calendar year.

5.5. Inactive Status - Category assigned to Authorizations not actively storing or using radioactive material and to Laser Registrations in which Class 3B or 4 lasers are being stored, but not used.

5.6. Ionizing Radiation (Radiation) - Gamma rays and X-rays; alpha and beta particles; high-speed electrons, neutrons, protons, and other nuclear particles; but, not sound or radio waves; or visible, infrared, or ultraviolet light.

5.7. Laser - A device that produces a coherent beam of radiant energy by stimulated emission. An acronym for Light Amplification by Stimulated Emission of Radiation.

5.8. Laser Registration - A formal document prepared by the Radiation Safety Officer granting authorization to use or store Class 3B and 4 lasers. The document profiles the lasers to be used or stored and lists the individuals authorized to use the lasers. Laser Registrations expire at the end of each calendar year, regardless of issue date, after which time the Registration must be renewed.

5.9. Laser Registration Application - A formal documented application completed by any individual desiring to possess or use Class 3B or 4 lasers, which, upon completion, is returned to the Radiation Safety Officer for initial approval and presentation to the Radiation Safety Committee (RSC) for review and final authorization.

5.10. Personnel Monitoring Equipment or Device - Any device designed to be worn or carried by an individual for the purpose of measuring the dose received by that individual, which includes, but is not limited to, film badges, film rings, TLD rings, etc.

5.11. Quorum - The minimum number of committee members that must be present at the time of any vote, for the results of a vote to be considered valid. Additionally, a quorum must be present for compliance with license requirements in order for any Committee meeting to qualify as meeting the quarterly meeting requirements. For this Committee, a quorum shall be considered to be a minimum of four (4) members.

5.12. Radiation Machine - Any machine or device capable of producing ionizing radiation when the associated control devices are operated, but excluding devices that produce ionizing radiation by virtue of containing radioactive material.

5.13. Radioactive Material (Material) - Any material that emits ionizing radiation spontaneously.

5.14. RSC - The Committee with voting membership consisting of the following individuals:

5.14.1. The Director, RM/EHS.

5.14.2. The Radiation Safety Officer (RSO), Secretary.

5.14.3. The Director of the Student Health Center or his/her designee.

5.14.4. One faculty/staff member appointed by the Dean of the College of Engineering, Computer Science, and Technology. The appointed faculty/staff member shall have current or prior authorization for use of radioactive material or radiation producing machines or current or prior laser registration.

5.14.5. Four faculty/staff members appointed by the Dean of the College of Natural and Social Sciences. Appointed faculty/staff members shall have current or prior authorization for use of radioactive material or radiation producing machines or current or prior laser registration. Faculty/staff shall represent the following areas of research:

5.14.5.1. Physics and Astronomy.

5.14.5.2. Chemistry and Biochemistry.

5.14.5.3. Biology and Microbiology.

5.14.5.4. At-large representative from any department or area of research providing the appointee has a current authorization or a prior authorization for the use of radioactive materials or radiation producing machinery.

5.14.6. Appointees will serve a three-year term and may be reappointed with no restrictions or limits on the number of terms.

5.15. Registration Renewal - Procedure within the registration process, whereby existing Laser Registrations are extended for an additional calendar year.

5.16. RSC Chair - Elected by the Committee to preside over Committee meetings. The Chair must be an appointed member of the Committee and cannot be either the Radiation Safety Officer or the Director, RM/EHS.

5.17. Radiation Safety Program - Refers to the requirements of state and federal law applicable to the use of radioactive materials and radiation producing machines as well as the requirements specified in Cal State LA's radioactive materials license issued by the California Department of Public Health.

5.18. Valid Vote - Official voting process used by the Committee whereas a quorum is present and the decision rendered was by simple majority.

5.19. Vote, Voting - Any ratification or refutation of a properly motioned item before consideration of the Committee, whereby such an item for consideration has been properly submitted and the Committee has a quorum present to render, by vote, a binding decision. Alternate voting methods such as "proxy votes" and "votes in absentia" or any other vote which does not require the physical presence of the voting member shall also be valid.

6.0. RESPONSIBILITIES:

6.1. The President will:

6.1.1. Approve the formation of the RSC.

6.1.2. Designate the Director, RM/EHS for overall management oversight of the Laser and Radiation Safety programs and the RSC.

6.2. The Director, RM/EHS shall:

6.2.1. Be a direct liaison between all University Officials and the RSC Chair.

6.2.2. Ensure that all policies and procedures are implemented and followed.

6.3. The RSO shall:

6.3.1. Refer all matters requiring Committee approval to the RSC.

6.3.2. Prepare applications and amendments for review by the RSC as needed.

6.3.3. Maintain minutes of all Committee meetings or appoint a designee to perform such functions.

6.3.4. Conduct annual audits of the radiation and laser laboratories and report findings to audited laboratories and to the RSC.

6.3.5. Review and renew Radioactive Use Authorizations (RUA) and Laser Registrations on an annual basis.

6.4. The RSC shall oversee the implementation and enforcement of the Radiation and Laser Safety Programs. Additional responsibilities shall include:

6.4.1. Familiarity with all pertinent California regulations.

6.4.2. Familiarity with the University's Radioactive Material License.

6.4.3. Familiarity with the University's Radiation Safety Program.

6.4.4. Familiarity with the University's Laser Safety Program.

6.4.5. Review and approval of radioactive use authorization applications for new users applying to use radioactive material.

6.4.6. Review and final authorization of laser registration applications for new users applying to use Class 3B and 4 lasers.

6.4.7. Determining sufficient qualifications for applicants to ensure that research is conducted and duties are performed in a manner that is both safe and compliant with all regulations and license conditions.

6.4.8. Prescribing any special conditions that will be required during a proposed project that incorporates the use of ionizing radiation or Class 3B or 4 lasers.

6.4.9. Reviewing the Radiation Safety Program periodically to determine that all activities are being conducted safely and in accordance with pertinent regulations and license conditions.

6.4.10. Reviewing the Laser Safety Program periodically to determine that all activities are being conducted safely and in accordance with pertinent regulations and license conditions.

6.4.11. Recommending remedial actions to correct deficiencies identified in the Radiation Safety and Laser Safety programs.

6.4.12. Maintaining regularly scheduled meetings, not less than once each quarter, and maintaining accurate records of all actions resulting from such meetings.

6.4.13. Electing the Committee chair.

6.5. The Director, Facilities/Planning & Construction will notify Environmental Health and Safety and/or the Radiation Safety Officer, as appropriate, when planning construction or maintenance projects, which may impact or otherwise involve space where Class 3B or 4 lasers are used or stored or ionizing radiation is utilized.

6.6. The Director, Facilities Services will:

6.6.1. Ensure that all appropriate Facilities Services staff is properly trained in the recognition of signs, labels, and symbols indicating the presence of lasers or radioactive materials.

6.6.2. Ensure that all appropriate Facilities Services staff is trained in notification procedures in the event any circumstance involving the use of radioactive materials or Class 3B or 4 lasers should arise wherein an employee may have legitimate concerns related to the security and/or health and safety of University faculty, staff and/or students.

6.7. Shipping and Receiving will:

6.7.1. Ensure that all shipments of radioactive material arriving at this institution are properly handled and promptly handed over, without exception, to the Radiation Safety Office.

6.7.2. Ensure that all appropriate individuals have proper instruction as to the procedures to be followed in the event that any shipment of radioactive material arrives in a damaged or other such condition where the package may be suspected to be contaminated or leaking radioactive material.

6.7.3. Ensure that all appropriate individuals have adequate training in the recognition of radioactive signs, labels, and other shipping information so as to maintain an appropriate level of care and concern when delivering or working in the vicinity of such labeled items.

6.8. The Dean of the College of Natural and Social Sciences will:

6.8.1. Appoint four faculty/staff members to the RSC.

6.8.2. Promptly appoint replacement membership in the event an appointed member is unable, for any reason, to fulfill the obligations of attending meetings.

6.8.3. Notify all appointees by formal letter of appointment with copies to the RSO.

6.9. The Dean of the College of Engineering, Computer Science, and Technology will:

6.9.1. Appoint one faculty/staff member to the RSC.

6.9.2. Promptly appoint replacement membership in the event an appointed member is unable, for any reason, to fulfill the obligations of attending meetings.

6.9.3. Notify all appointees by formal letter of appointment with copies to the RSO.

7.0. PROCEDURES:

7.1. Meetings

7.1.1. The RSC shall meet as often as necessary to conduct business, but in no event shall meetings be less frequent than once per quarter.

7.2. Items for Consideration

7.2.1. All items for consideration are to be submitted to the RSO at least two (2) business days prior to the next regularly scheduled Committee meeting. The RSO will either act on the items and report such actions to the Committee or refer the items to the Committee for consideration.

7.3. Committee Actions

7.3.1. The RSC shall be responsible for and shall maintain exclusive authority for the following:

7.3.1.1. Review and approval of all new applications to use radioactive material, machines producing ionizing radiation and class 3B and 4 lasers.

7.3.1.2. Review and approval of all amendments to existing authorizations wherein the amendment indicates:

7.3.1.2.1. The use of a new radioisotope.

7.3.1.2.2. An increase in possession limit for an already approved radioisotope wherein such possession may require external monitoring or bioassay procedures.

7.3.1.2.3. A change in procedure for an already approved radioisotope.

7.3.1.2.4. Any amendment for which the RSO prefers to defer to the committee for guidance.

7.3.2. Committee action shall not be specifically required and action may be taken by the RSO, without committee approval, for amendments wherein the proposed change is limited to:

7.3.2.1. A change in designated users.

7.3.2.2. A change in possession limit wherein the proposed use and radioisotope remain unchanged and provided that the change in possession limit does not trigger required external monitoring or bioassays.

7.3.2.3. A change in chemical form for an already approved radioisotope provided that the proposed change shall be limited to labeled nucleotides and/or amino acids and wherein the current authorization to be amended currently recognizes the use of the radioisotope labeled onto one or more nucleotides and/or amino acids.

7.3.2.4. Termination of an authorization due to inactive status.

7.4. RSC Approvals for authorizations and amendments shall be valid providing the following conditions are met:

7.4.1. The approval was by vote.

7.4.2. The vote passed by simple majority.

7.4.3. The Committee membership quorum was present at the time of the vote.

7.4.4. Sufficient time to review the application or amendment was available to Committee members.

7.5. Suspension of Authorizations - The RSC shall have the authority to suspend any authorization to possess and use radioactive material machines which produce ionizing radiation, and the use of any Class 3B or 4 laser when any situation exists which meets one or more of the following conditions:

7.5.1. Repeated violations of state, federal, or University policies, regulations, guidelines or standards wherein sufficient notification of failure to comply has been delivered to the possessor of the authorization and corrective measures have not been enacted within the appropriate time frame.

7.5.2. A willful and flagrant neglect for compliance indicates the potential for citation from any inspection agency.

7.5.3. Any condition deemed detrimental to the health and safety of any individual in the proximity of the procedure, experiment or operating machinery.

7.5.4. Any condition determined to potentially expose the University to unfavorable publicity and/or liability.

7.5.5. Any condition wherein there is a release or potential for release of radioactive material into the environment, or any incident associated with the use of radioactive material that occurs such that the conditions associated with the event would require notification to the Department of Health Services as delineated in CCR, Title 17, Section 30295, “Notification of Incidents”.

7.6. Reinstatement of a Suspended Authorization - The RSC shall reinstate any suspended authorization, by valid vote, providing the following conditions are met:

7.6.1. All investigations into the events surrounding the suspension are finalized and concluded.

7.6.2. All corrective measures have been enacted, documented, and approved by the RSO.

7.6.3. Any involvement by outside agencies, including but not limited to regulatory agencies, has been finalized and approvals to proceed are granted in writing by such agencies.

7.6.4. In circumstances where the events surrounding the suspension involve legal actions of any nature, University Legal Counsel must give clearance in writing to the Committee to reinstate authorization prior to affirmative actions by the RSC, and all parties shall ensure that affirmative actions shall not compromise the University’s reputation or ability to enact defense in any potential legal proceeding arising from the events associated with the suspension.

8.0. APPENDICES:

8.1. Laser Safety Program.