POLICY

TITLE:	**Disposal of Animal Carcasses and Animal Tissues**
Policy Number:	**2014-051**
Responsible Department:	**Institutional Animal Care and Use Committee**
Policy Contact: **Designation:** **E-Mail:**	**Donald E. Walters, Ph.D.** **Chair, Institutional Animal Care and Use Committee** **dewalters@westernu.edu**
Approval Date:	**10/8/14**
Reviewed:	**11/8/17 (No changes); 7/8/2020 (No changes)**
Revised:	**4/11/18 (Added biohazardous & chemical waste disposal)**

Purpose of Policy: To ensure the proper disposal of animal carcasses and that animal carcasses or tissues contaminated with hazardous chemicals, biohazardous material, or radioactive material are 1) not mixed with each other for disposal or with non-contaminated carcasses or tissues, and 2) properly bagged and labeled for disposal by appropriately licensed vendors.

Definitions:

Hazardous Waste is defined by the Code of Federal Regulations and the California Department of Public Health as waste that exhibits one or more of the following four characteristics:

- Ignitable (generally liquids with a flash point below 60^{o}C (140^{o}F)
- Corrosive (generally aqueous wastes with a pH of 2 or less or 12.5 or greater)
- Reactive (wastes that are unstable, explosive, and capable of detonation or react violently with water)
- Toxic (chemicals that pose a hazard to health or the environment)

Hazardous Chemical Waste – Chemical waste is considered hazardous if it is listed on a Federal or State regulations list or if it exhibits one or more of the above characteristics.

Biohazardous Waste – Biological agents that have the capacity to produce deleterious effects upon biological organisms. Such agents include:

- Recombinant DNA that is introduced into animals. Note: WesternU's IACUC does not consider transgenic animals to be biohazardous at this time. Exceptions may be made on a case-by-case basis;
- Synthetic DNA segments which are likely to yield a potentially harmful polynucleotide or polypeptide e.g., a toxin of biologic origin or pharmacologically active agent;
- Microorganisms where there is a deliberate transfer of a drug resistant trait or of recombinant DNA containing genes for the biosynthesis of products potentially toxic for vertebrates;

- microorganisms classified as risk group 2 [RG-2] or RG-3 agents **[RG-4 agents are not allowed on Western University (WesternU) campuses]** whether infectious or defective;
- microorganisms where more than two-thirds of the DNA from RG-2 or RG-3 agents is cloned into other nonpathogenic agents;
- biological products derived from RG-2 or RG-3 microorganisms;
- clinical/medical waste e.g., diagnostic specimens, that are used in research and known or reasonably expected to contain pathogens classified as RG-2, RG-3, or RG-4 agents; and
- culture of more than 10 liters of a biological agent.

NIH Guidelines for Classification of Biohazardous Agents by Risk Group

Risk Group (RG)	Risk to Individual and Community
RG-1	Agent not associated with disease in healthy adult humans
RG-2	Agent associated with human disease which is rarely serious and for which preventive or therapeutic interventions are often available
RG-3	Agent that is associated with serious or lethal human disease for which preventative or therapeutic interventions may be available (high individual risk but low community risk)
RG-4	Agent that is likely to cause serious or lethal human disease for which preventative or therapeutic interventions are not usually available (high individual risk and high community risk)

Biological Waste – Lab ware that is contaminated with any of the biohazardous agents listed above.

Radioactive Waste – For the purposes of this policy, radioactive waste is defined as animal carcasses or tissues that are contaminated with any of the following radioisotopes: ^{3}H, ^{14}C, ^{45}Ca, ^{51}Cr, ^{35}S, ^{32}P, ^{125}I. WesternU is not licensed to possess any other type of radioisotope. If more information is needed, contact the Radiation Safety Officer at 909-469-5592 or dewalters@westernu.edu.

Policy:

Bags that contain animal carcasses or tissues that are not contaminated with hazardous chemical waste, biohazardous waste or radioactive material must be double bagged and placed in a freezer dedicated for this purpose. When a freezer is full, the Animal Facilities Manager will arrange to have the carcasses picked up for disposal by an approved licensed vendor. An Animal Facilities staff member will remain in attendance during the entire process to ensure that only bags that do not contain any of the waste materials described below are removed. The staff member in attendance will be properly trained in how to differentiate bags and freezers containing other types of waste material described below.

Animal carcasses or tissues contaminated with **chemotherapeutic or other chemical waste** that meet the above definition of hazardous waste or hazardous chemical waste must be double bagged in **yellow** chemotherapy waste bags.

Non-biological material that is contaminated with **ethidium bromide** must also be disposed of as hazardous chemical waste and must be placed in yellow chemotherapy waste bags, as does chemical waste that does not fall into another waste category.

Chemotherapy waste bags containing contaminated carcasses or tissues must be placed in a dedicated freezer labeled with the universal symbol for hazardous waste. When a freezer containing carcasses or tissues contaminated with hazardous chemical waste is full, the Director of Environmental Health and Safety (EH&S) will arrange to have the carcasses picked up for disposal by an approved licensed vendor. The Director of EH&S will remain in attendance during the entire process. An Animal Facilities staff member must also be in attendance during this process to allow access to the facility and to assist the Director of EH&S in ensuring that only chemotherapy waste bags are removed for disposal.

Animal carcasses or tissues contaminated with **biohazardous waste** must be double bagged in **red** biohazardous waste bags and placed in a dedicated freezer labeled with the universal symbol for hazardous waste. When a freezer containing carcasses or tissues contaminated with biohazardous material is full, the Director of Environmental Health and Safety (EH&S) will arrange to have the carcasses picked up for disposal by an approved licensed vendor. The Director of EH&S will remain in attendance during the entire process. An Animal Facilities staff member must also be in attendance during this process to allow access to the facility and to assist the Director of EH&S in ensuring that only biohazardous waste bags are removed for disposal.

Radioactive animal carcasses and tissues must be double bagged with the outer bag being yellow with the universal symbol for radioactive material and the words Caution Radioactive Material. Bags containing radioactive animal carcasses or tissues must be placed in a separate freezer dedicated solely to the storage of radioactive carcasses. This freezer must be marked with the universal symbol for radioactive material and the words Caution Radioactive Material. This freezer must also have attached to its lid the following warning: STOP: Never mix the contents of this freezer with the contents of any other freezer or material of any other kind!! **Under no circumstances are radioactive carcasses or tissues to be placed in the same freezer with any other type of waste material.** Contact the Radiation Safety Officer (909-469-5592 or dewalters@westernu.edu) or Alternant Radiation Safety Officer (909-469-5373 or bsaviola@westernu.edu) for instructions on shielding requirements for ^{32}P, ^{125}I or ^{51}Cr.

Radioactive material with a physical half-life of less than or equal to 120 days may decay in storage before disposal in ordinary trash provided that 1) the waste shall be held for decay in storage for at least 10 half-lives; 2) the waste shall be surveyed to determine that its radioactivity cannot be distinguished from background; 3) all radiation labels are removed or obliterated; and 4) a record is made of all radioactive material disposed of in this manner. These records must be retained for a minimum of three years after the record is made.

When freezers containing radioactive carcasses or tissues that are not allowed to decay in storage are full, the Director of Environmental Health and Safety (EH&S) shall arrange to have the material picked up for disposal by an approved licensed vendor. The Director of EH&S will remain in attendance during the entire process. An Animal Facilities staff member must also be in attendance during this process to allow access to the facility and to assist the Director of EH&S in ensuring that only radioactive material is removed for disposal. The staff member must also have successfully completed the Radiation Safety Training for Non-Research Personnel Working Around, but not with, Radioactive Material. This training will be documented and kept on file by the Radiation Safety Officer. **Under no circumstances is a vendor permitted to take anything other than bags labeled Caution Radioactive Material.**

NOTE: Pursuant to 10 CFR § 20.2005, " A licensee may dispose of the following licensed material as if it were not radioactive:

(1) 0.05 microcurie (1.85 kBq), or less, of hydrogen-3 or carbon-14 per gram of medium used for liquid scintillation counting: and

(2) 0.05 microcurie (1.85 kBq), or less, of hydrogen-3 or carbon-14 per gram of animal tissue, averaged over the weight of the entire animal."