



**The University of British Columbia
Board of Governors**

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9

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January 1999

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Responsible Executive:

Vice-President, Academic and Provost

Vice-President, Learning & Research
(UBC Okanagan)

Vice-President, Administration and Finance

Vice-President, Research

Title:

Hazardous Materials Management

Background & Purposes:

As a large teaching and research institution, UBC faces problems that are unique and varied about the acquisition, handling, storage, transportation and disposal of chemical and biological/human/animal materials and wastes resulting from its teaching, research, and operations. This policy has several purposes:

- to set out University requirements for proper disposal of hazardous and special wastes;
- to ensure worker protection;
- to reduce the amount of dangerous substances used in University activities;
- to raise awareness and increase knowledge of all members of the University community about problems of handling, storage, transportation, and disposal of hazardous materials and waste;
- to establish good laboratory practices that teach and practice safe handling, storage, transportation and disposal of special wastes; and
- to ensure compliance with applicable legislation.

1. General

- 1.1. All chemical and biological materials are considered hazardous unless specifically excluded from Schedule 7 of the Transportation of Dangerous Goods Act. Materials classified as special wastes must be disposed in a safe manner in compliance with the Special Waste Regulations of the Waste Management Act, and in consultation with the UBC Environment Services Facility. As all of UBC is considered one site, the rules for handling hazardous materials apply equally to small quantities as they do to large quantities.
- 1.2. Each member of the University community who uses or has responsibility for hazardous materials must handle, store, transport and dispose of this material in a manner that harms neither the environment nor living beings, and that meets or exceeds legal requirements.
- 1.3. Procedures are established for standard methods of handling chemicals, and biological/human/animal materials in all UBC activities. It is the responsibility of Administrative Heads of Unit, Principal Investigators and Supervisors to ensure that appropriate training is given and documented to all students and staff who come into contact with these materials.

- 1.4. Each member who comes into contact with or uses hazardous materials in their work or study must first become familiar with the hazards associated with the material and the appropriate methods for handling, storage, transportation and disposal. Up-to-date training records are to be maintained.
- 1.5. Individual members are expected to conduct themselves and supervise others with the greatest of care, and, if established procedures for the circumstances do not exist, are responsible for seeking guidance from the appropriate source before ordering, handling, storing, transporting or disposing of materials that could be hazardous to the environment or to living beings. In accordance with Section 122 of the Canadian Environmental Protection Act:
 - 1.5.1. “Where a corporation commits an offence under this Act, any officer, director or agent of the corporation who directed, authorized or assented to or acquiesced to or participated in the commission of the offence is a party to and guilty of the offence, and is liable to punishment provided for the offence, whether or not the corporation has been prosecuted or convicted.”
- 1.6. Consideration should be given to substituting less harmful materials for those that are known to be hazardous at the time of acquisition. Hazardous materials should be purchased in quantities small enough that they do not have to be stored at UBC over long periods.
- 1.7. In physical planning for the future research, teaching and operational needs of the University, design elements to address special waste flows should be included to address handling, storage, transportation, emissions and disposal.

2. Definitions

- 5.1. “Member of the University community” means a faculty member, a student, or a member of staff.
- 5.2. “Hazardous material” means any prohibited product, restricted product, controlled product or special waste.
- 5.3. “Regulated medical waste” means a waste stream that includes infectious and non-infectious waste materials generated in the diagnosis, treatment, or immunization of human beings or animals; in research thereto; or in the production of biologicals.
- 5.4. “Hazardous waste” means any product, substance, or organism that is dangerous to the environment or to human beings, and that is no longer used for its original purpose, at the time of disposal, or in storage/transportation prior to treatment or disposal.

PROCEDURES

Approved: January 1999

Revised: June 2005

Pursuant to Policy #1: Administration of Policies, "Procedures may be amended by the President, provided the new procedures conform to the approved policy. Such amendments are reported at the next meeting of the Board of Governors and are incorporated in the next publication of the UBC Policy and Procedure Handbook."

1. General

- 1.1. The number and variety of possibly hazardous materials at UBC are large. Some are created as the result of experimentation. For this reason, the procedures under this policy are meant to provide guidance via illustration and example to individuals at UBC about such areas as chemical, biological, human, and animal materials. For radioisotopes, please see Policy #11. For pesticides, please see Policy #12. Individuals unsure about whether a substance (such as paint, oil, pharmaceutical, battery) is hazardous, or about the appropriate steps to take, should contact the UBC expert listed in the procedures below.
- 1.2. Laws and regulations governing biological materials acquisition, handling, storage, transportation and disposal include, but are not limited to:
 - 1.2.1. Canadian Environmental Protection Act;
 - 1.2.2. Transportation of Dangerous Goods Act;
 - 1.2.3. Provincial Waste Management Act including the Special Waste Regulations and Spill Reporting Regulation;
 - 1.2.4. Greater Vancouver Regional District Bylaws, in particular Sewer Use Bylaw #164 and #167, Air Quality management Bylaw #603 and #725 and Municipal Solid Waste and Recyclable Material Bylaw #181 and #183;
 - 1.2.5. City of Kelowna Bylaws, in particular Consolidated Sanitary Sewer/Storm Drain Regulation Bylaw No. 6618-90 and Solid Waste Management Bylaw No. 7173;
 - 1.2.6. Workers Compensation Board Industrial Health and Safety Regulations;
 - 1.2.7. Workplace Hazardous Materials Information System (WHMIS);
 - 1.2.8. Laboratory Biosafety Guidelines for Health Canada;
 - 1.2.9. Health Canada, Narcotics/Controlled Products Act for pharmaceuticals; and
 - 1.2.10. Containment Standards for Veterinary Facilities.

2. Chemical Materials

- 2.1. The Department of Health, Safety and Environment develops generic procedures for handling chemicals, which are distributed to all labs. For chemicals unique to a particular laboratory, the Principal Investigator must develop written procedures, to be vetted by the Department of Health, Safety and Environment. Each department or unit using chemical materials must develop or adopt procedures that include:
 - 2.1.1. Acquiring minimum quantities only;
 - 2.1.2. Safe and secure storage;
 - 2.1.3. Removing out-of-date materials from inventory;
 - 2.1.4. Inspection of time sensitive materials;
 - 2.1.5. Appropriate labeling consistent with WHMIS requirements;
 - 2.1.6. An annual inventory of materials;

- 2.1.7. Training of faculty, staff and students;
- 2.1.8. Proper use of personal protective equipment, emergency spill and decontamination procedures; and
- 2.1.9. Compliance with University (or host institution) procedures for disposal.

3. Human, Animal, and Biological Materials

- 3.1. The Biosafety Officer develops procedures for handling materials that are used in more than one laboratory. Written procedures are issued to all laboratories. For materials unique to a particular laboratory, the Principal Investigator using human, animal, or biological materials must develop written procedures, to be vetted by the Biosafety Officer, that deal with regulated medical waste. Regulated medical waste includes, but is not limited to, the following categories:
 - 3.1.1. Cultures and stocks of infectious agents, and any materials contaminated with a potentially infectious agent, including, culture dishes and devices used to transfer, inoculate, and mix cultures;
 - 3.1.2. Any human pathological wastes, including waste human blood or blood products generated in medical or research procedures, and other potentially infectious materials, items contaminated with these materials, and any containers that held these potentially infectious materials;
 - 3.1.3. Any animal specimens, carcasses, or tissues;
 - 3.1.4. Any biological material contaminated with an infectious agent;
 - 3.1.5. DNA;
 - 3.1.6. Vaccines, pharmaceuticals;
 - 3.1.7. Wastes from medical or research procedures that were in contact with infectious agents, including slides and cover slips, disposable gloves, and protective equipment;
 - 3.1.8. Sharps: used or new hypodermic needles and syringes (with or without needle attached), scalpels and razor blades. Also, Pasteur pipettes and broken glassware, when contaminated with an infectious agent;
 - 3.1.9. Mixed waste: Biological specimens or material treated with or preserved in chemicals including alcohol or formaldehyde are considered mixed waste (regulated medical waste and hazardous chemical waste);
 - 3.1.10. Bedding for animals; and
 - 3.1.11. Other regulated medical waste solids must be placed in secure, leak-proof packaging and stored in such a manner that will prevent decomposition or deterioration during storage.
- 3.2. It is the responsibility of each generator to set up a workable system prior to generating regulated medical wastes. Principal Investigators, area supervisors, or other employees generating regulated medical waste materials are responsible for compliance with applicable regulations and disposal program requirements. Consult the Biosafety Officer for more information.
- 3.3. Each department or unit using human, animal, or biological materials must develop procedures that include:
 - 3.3.1. Acquiring minimum quantities only;
 - 3.3.2. Safe and secure storage;
 - 3.3.3. Appropriate labeling and an annual inventory of materials;
 - 3.3.4. Training of faculty, staff and students;
 - 3.3.5. Proper use of personal protective equipment, emergency, spill and decontamination procedures; and
 - 3.3.6. Compliance with University (or host institution) procedures for disposal.

4. Resources

4.1. Assistance and advice concerning these matters can be obtained from various sources, including:

- 4.1.1. Local Safety Committees;
- 4.1.2. The Department of Health, Safety and Environment;
- 4.1.3. The University Chemical Safety Committee;
- 4.1.4. The University Biosafety Officer (604.822.7596);
- 4.1.5. The Director of the Animal Care Centre (604.822.6283);
- 4.1.6. The UBC Okanagan Safety and Environmental Officer;
- 4.1.7. The University Biosafety Committee; and
- 4.1.8. UBC Environmental Services Facility (604.822.1281, 604.822.6306, or 604.827.5389)