

 <p>The University of British Columbia Board of Governors</p>	<p><b>Policy No.:</b></p> <p style="text-align: center;"><b>7</b></p>	<p><b>Approval Date:</b> December 4, 2018</p> <p><b>Last Revision:</b> N/A</p>
	<p><b>Responsible Executive(s):</b> Vice-President, Finance &amp; Operations Vice-President, Research &amp; Innovation</p>	
<p><b>Title:</b></p> <p style="text-align: center;"><b>Occupational and Research Health and Safety</b></p>		
<p><b>Background &amp; Purposes:</b></p> <p>UBC must comply with occupational health and safety legislation, as well as various regulatory requirements applicable to the safe and lawful use of Hazardous Materials and Wastes in UBC Activities, including Biological Materials, Radiation Sources, and Chemical Materials. Accordingly, this Policy aims to:</p> <ul style="list-style-type: none"> <li>• articulate UBC’s commitment to provide healthy and safe workplace, teaching, and research environments for UBC Members; and</li> <li>• identify responsibilities and standards required of UBC, acting through its Administrative Heads of Unit, UBC departments, Supervisors (including Principal Investigators), and UBC Members involved in the use and disposal of Hazardous Materials and Wastes in UBC’s workplace, teaching, and research environments.</li> </ul>		
<p><b>Related Policies:</b></p> <ul style="list-style-type: none"> <li>• Policy #3 (Discrimination and Harassment)</li> <li>• Policy #6 (Environmental Protection Compliance)</li> <li>• Policy #8 (Disaster Management)</li> <li>• Policy #12 (Pest Control)</li> <li>• Policy #14 (Response to At-Risk Behaviour)</li> <li>• Policy #87 (Research)</li> <li>• Policy #131 (Sexual Assault and Other Sexual Misconduct)</li> </ul>		

*Defined terms are capitalized in this Policy and Procedures.*

## 1. SCOPE OF THE POLICY

- 1.1 This Policy applies to UBC Members, acting in their UBC capacity, when engaged in activities (collectively, “**UBC Activities**”):
- 1.1.1 on UBC’s campuses;
  - 1.1.2 under the administrative control of UBC;
  - 1.1.3 utilizing UBC’s facilities or equipment;
  - 1.1.4 supported by Research Funds processed or secured through UBC; or

- 1.1.5 authorized under licenses issued to UBC and involving Biological Materials or Radiation Sources.

## **2. GENERAL POLICY**

- 2.1 UBC aims to eliminate unnecessary risks, injuries, and occupational diseases, from UBC's workplace, teaching, and research environments.
- 2.2 UBC accepts Applicable Standards as minimum standards and may establish and enforce more stringent standards, as it deems appropriate for UBC Members.
- 2.3 Each UBC Member who engages in or is responsible for a UBC Activity involving Hazardous Materials and Wastes must:
  - 2.3.1 Comply with this Policy and the Procedures;
  - 2.3.2 Understand the Occupational Health and Safety Program, the Biosafety Program, the Radiation Safety Program, and the Chemical Safety Program, prior to carrying out or supervising any UBC Activities; and
  - 2.3.3 Procure, handle, store, transport, and dispose of Hazardous Materials and Wastes in a manner that harms neither the environment nor living beings.
- 2.4 Each UBC Member engaged in UBC Activities involving, or potentially involving, Hazardous Materials and Wastes should endeavour to:
  - 2.4.1 Substitute less harmful materials for those that are known to be Hazardous Materials and Wastes prior to the time of acquisition; and
  - 2.4.2 Acquire or purchase Hazardous Materials and Wastes in sufficiently small quantities to minimize the period of storage at or by UBC.

## A. GENERAL PROCEDURES

**Approved: December 4, 2018**

*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." Note: the most recent procedures may be reviewed at <http://universitycounsel.ubc.ca/policies/index/>.*

### A1. SCOPE OF GENERAL PROCEDURES

- A1.1 The Procedures apply to UBC Members when engaged in UBC Activities in workplace, teaching, and, research environments at or of UBC.

### A2. DEFINITIONS

- A2.1 "**Administrative Head of Unit**" means a Director of a service unit; a Head of an academic department or unit; a Director of a centre, institute, or school; a Principal of a college; a Dean; an Associate Vice-President or the equivalent; the Registrar; the University Librarian; a Provost; a Vice-Principal, a Vice-President or the equivalent, not otherwise identified as a member of the Responsible Executive(s).
- A2.2 "**Animal Care Committee**" means the animal care committee referenced in UBC Policy and Procedure #87 (Research).
- A2.3 "**Applicable Standards**" means the legislation and standards applicable to particular UBC Activities, including: Workers Compensation Act; those relating to the Occupational Health and Safety Program; and those relating to the use of Biological Materials, Radiation Sources, and Chemical Materials.
- A2.4 "**Areas of Responsibility**" means any faculty, department, unit, or area of responsibility and administrative control of an Administrative Head of Unit or Supervisor.
- A2.5 "**Biomedical Waste**" means waste generated by:
- A2.5.1 human or animal health care facilities;
  - A2.5.2 medical or veterinary research and teaching establishments;
  - A2.5.3 health care teaching establishments;
  - A2.5.4 clinical testing or research laboratories; and
  - A2.5.5 facilities involved in the production or testing of vaccines,
- and includes:
- A2.5.6 human anatomical waste consisting of human tissue, organs, and body parts;
  - A2.5.7 animal waste, including:
    - A2.5.7.1 animal tissues, organs, body parts, carcasses, and bedding; and

- A2.5.7.2 animal blood and blood products, consisting of:
  - A2.5.7.2.1 animal fluid blood and blood products;
  - A2.5.7.2.2 items saturated or dripping with animal blood;
  - A2.5.7.2.3 body fluids contaminated with animal blood; and
  - A2.5.7.2.4 animal body fluids removed for diagnosis or during surgery, treatment, or autopsy;
- A2.5.7.3 microbiology laboratory waste consisting of:
  - A2.5.7.3.1 laboratory cultures;
  - A2.5.7.3.2 stocks of specimens of micro-organisms (including viruses);
  - A2.5.7.3.3 live or attenuated vaccines;
  - A2.5.7.3.4 human, plant, or animal cell cultures used in research; and
  - A2.5.7.3.5 laboratory material that has come into contact with any of the above;
- A2.5.8 human blood and blood products, consisting of:
  - A2.5.8.1 human fluid blood and blood products;
  - A2.5.8.2 items saturated or dripping with human blood;
  - A2.5.8.3 body fluids contaminated with human blood; and
  - A2.5.8.4 human body fluids removed for diagnosis or during surgery, treatment, or autopsy; and
- A2.5.9 clinical and laboratory waste sharps consisting of needles, syringes, blades, or laboratory glass capable of causing punctures or cuts.
- A2.6 **“Biological Materials”** means organisms, including genetically modified organisms, biological products, microorganisms (viruses, bacteria, and parasites etc.), human/animal/plant tissues, cells, blood and bodily fluids or bodily wastes, fungi, and other organisms/genetic systems that are potentially harmful to humans, animals, plants, and the environment.
- A2.7 **“Biosafety Committee”** is the UBC compliance oversight committee on biosafety created by the Vice-President, Research & Innovation to ensure compliance with the Biosafety Program as set forth in the Biological Materials Procedures.
- A2.8 **“Biosafety Officer”** is the individual authorised to oversee Biological Materials safety under the Biological Materials Procedures.
- A2.9 **“Biosafety Permit”** is a permit issued by the Biosafety Committee under the Biological Materials Procedures.

- A2.10 "**Biosafety Permit Holder**" means a person issued a Biosafety Permit under the Biological Materials Procedures.
- A2.11 "**Biosafety Program**" means UBC's program of administrative measures to manage and control risks and hazards arising from the use of Biological Materials and the production of Biomedical Waste, as detailed in the Biosafety Program Manual.
- A2.12 "**Biosafety Program Manual**" means the manual produced by UBC detailing the Biosafety Program set out in the Biological Materials Procedures.
- A2.13 "**Chemical Materials**" means any pure substance or mixture of substances with a defined composition of elements and/or molecules, including nanoparticles.
- A2.14 "**Chemical Safety Advisor**" is the individual authorized to oversee Chemical Materials safety under the Chemical Materials Procedures.
- A2.15 "**Chemical Safety Committee**" is the UBC chemical safety advisory committee on chemical materials created by the Vice-President, Research & Innovation to advise and make recommendations to the Vice-President, Research & Innovation, Office of Research Services and Risk Management Services with respect to the Chemical Safety Program as set forth in the Chemical Materials Procedures.
- A2.16 "**Chemical Safety Program**" means UBC's program of administrative measures to manage and control risks and hazards arising from the use of Chemical Materials, as detailed in the Chemical Safety Program Manual.
- A2.17 "**Chemical Safety Program Manual**" means the manual produced by UBC detailing the Chemical Safety Program set out in the Chemical Materials Procedures.
- A2.18 "**Emergency Procedures**" means a plan of action(s) to be taken in a certain order in response to a contemplated emergency event (i.e., disaster response plans, building emergency response plans, and other emergency and risk management procedures).
- A2.19 "**Funding Terms**" means the policies, rules, and regulations that govern the use of Research Funds imposed by various sources including UBC policies and procedures, the provisions of a contract for Research Funds, or the policies of the organization providing the Research Funds.
- A2.20 "**Hazardous Materials and Wastes**" means materials and wastes posing a risk to the health of people, animals, or the environment through exposure to the material or substance producing such risk, including Biological Materials, Radiation Sources, and Chemical Materials.
- A2.21 "**Joint Occupational Health and Safety Committees**" mean the committees established by UBC in accordance with the Workers Compensation Act set out in the Occupational Health and Safety Procedures.
- A2.22 "**Local Safety Teams**" mean site or department specific occupational health and safety teams established by UBC to provide area specific safety information to the relevant Joint Occupational Health and Safety Committee set out in the Occupational Health and Safety Procedures.

- A2.23 "**Occupational Health and Safety Program**" means UBC's program of administrative measures intended to maintain a healthy and safe workplace as detailed in the Occupational Health and Safety Program Manual.
- A2.24 "**Occupational Health and Safety Program Manual**" means the manual produced by UBC detailing the Occupational Health and Safety Program set out in the Occupational Health and Safety Procedures.
- A2.25 "**Principal Investigator**" means the UBC Researcher who has primary responsibility for the design, conduct, and supervision of a Research project.
- A2.26 "**Radiation Emitting Device**" means equipment that: (i) contains Radioactive Material; or (ii) through the process of operation emits energy resulting from nuclear transformation.
- A2.27 "**Radiation Sources**" means Radioactive Material or Radiation Emitting Devices, including lasers and X-rays.
- A2.28 "**Radioactive Material**" means matter that emits particles or energy while undergoing spontaneous nuclear transformation.
- A2.29 "**Radiation Safety Committee**" is the UBC compliance committee on radioisotopes and radiation hazards, created by the Vice-President, Research & Innovation, to ensure compliance with the Radiation Safety Program as set forth in the Radiation Sources Procedures.
- A2.30 "**Radiation Safety Program**" means UBC's program of administrative measures to manage and control risks and hazards arising from the use of Radiation Sources, as detailed in the Radiation Safety Program Manual.
- A2.31 "**Radiation Safety Program Manual**" means the manual produced by UBC detailing the Radiation Safety Program under the Radiation Sources Procedures.
- A2.32 "**Radiation License**" is a license granted to UBC by the Canadian Nuclear Safety Commission authorizing the use of Radiation Sources.
- A2.33 "**Radiation Safety Officer**" is the person authorized to oversee radiation safety under the Radiation Sources Procedures.
- A2.34 "**Radiation Safety Permit**" is a permit issued by the Radiation Safety Committee under the Radiation Sources Procedures.
- A2.35 "**Radiation Safety Training**" is a program of training on the proper use of Radiation Sources approved by the Radiation Safety Officer.
- A2.36 "**Radiation Safety Permit Holder**" is a person issued a Radiation Safety Permit under the Radiation Sources Procedures.
- A2.37 "**Research**" means any disciplined enquiry or systematic investigation intended to extend knowledge or to establish facts or principles that is conducted by UBC Members acting in their UBC capacity.

- A2.38 "**Research Funds**" means any funds designated to pay expenses related to the conduct of Research, including funds directed to UBC through third party donations, grants, awards, and other contractual funding arrangements, as well as funding from internal UBC sources.
- A2.39 "**Responsible Executive(s)**" means the Vice-President, Finance & Operations and Vice-President, Research & Innovation.
- A2.40 "**Supervisor**" means a person who manages, instructs, directs, or controls other UBC Members acting in their UBC capacity when engaged in UBC Activities, including studying, and may include Biosafety Permit Holders, Radiation Safety Permit Holders, and Principal Investigators.
- A2.41 "**UBC Activities**" is defined in Section 1.1 of this Policy.
- A2.42 "**UBC Committee(s)**" means collectively the following UBC compliance committees: the Biosafety Committee and the Radiation Safety Committee; and UBC advisory committee: the Chemical Safety Committee.
- A2.43 "**UBC Executive**" means UBC's senior leadership team consisting of UBC's President, Deputy Vice Chancellor, Vice-Presidents, Provosts, and University Counsel.
- A2.44 "**UBC Member**" means any full-time or part-time faculty, adjunct or clinical faculty, post-doctoral fellow, staff, student, visiting academic or researcher, any person holding an appointment at UBC, or any other person having a contractual obligation to adhere to UBC's Board of Governors' policies and procedures.
- A2.45 "**UBC Researcher**" means a UBC Member who conducts, supervises, or otherwise participates in Research.
- A2.46 "**Workers Compensation Act**" means Workers Compensation Act, (RSBC 1996, Chapter 492) and related regulations, as amended from time to time.

### **A3. ROLES, RESPONSIBILITIES, AND ACCOUNTABILITY**

- A3.1 **UBC Executive:** The UBC Board of Governors has delegated to the UBC Executive the following occupational health and safety responsibilities of an employer under the Workers Compensation Act, to:
- A3.1.1 ensure the health and safety of UBC Members engaging in UBC Activities in the workplace, research, and teaching environments at or of UBC;
  - A3.1.2 provide adequate orientation and training to Supervisors and other UBC Members, to ensure that they are made aware of:
    - A3.1.2.1 all known or reasonably foreseeable health or safety hazards related to Hazardous Materials and Wastes;
    - A3.1.2.2 compliance with Applicable Standards; and
    - A3.1.2.3 their individual rights and duties under this Policy or Procedures.

- A3.1.3 establish as appropriate the Occupational Health and Safety Program, the Biosafety Program, the Chemical Safety Program, the Radiation Safety Program, and the Emergency Procedures, to:
  - A3.1.3.1 support Supervisors in the implementation of effective health and safety programs;
  - A3.1.3.2 provide adequate information, instruction, training, and orientation to Supervisors and other UBC Members;
  - A3.1.3.3 regularly inspect its workplace, teaching, and research environments, and take action, as required, to improve or address unsafe conditions or conduct when reported;
  - A3.1.3.4 initiate an immediate investigation into incidents/accidents/conduct through the procedures established for the area in which the incident/accident/conduct has occurred, except to the extent that such investigation jeopardizes any parallel investigation undertaken through one of the Related Policies (i.e., Policy #131 – Sexual Assault and Other Sexual Misconduct);
  - A3.1.3.5 communicate with the UBC community or affected groups about events or situations when potentially harmful conditions or conduct arise or are discovered, except to the extent that such disclosure jeopardizes any parallel reporting undertaken through one of the Related Policies (i.e., Policy #131 – Sexual Assault and Other Sexual Misconduct);
  - A3.1.3.6 ensure that workplace, teaching, and research health and safety considerations and resources form an integral part of the design, construction, purchase, and maintenance of all buildings, equipment and work processes, including the physical planning for the future research, teaching, and operational needs of UBC, so that design elements are included to address health and safety issues (e.g., ergonomics), handling, storage, transportation, emissions, and disposal of Hazardous Materials and Wastes;
  - A3.1.3.7 ensure that the physical space or facilities being used in UBC's workplace, teaching, and research environments are appropriate for the nature of the UBC Activities being carried out in them;
  - A3.1.3.8 provide access to appropriate first aid and first aid facilities;
  - A3.1.3.9 comply with Applicable Standards; and
  - A3.1.3.10 establish the Local Safety Teams to support the Joint Occupational Health and Safety Committees.
- A3.2 **Administrative Head of Unit:** Each Administrative Head of Unit, acting under the authority of their respective Responsible Executive(s), and through their Supervisors, must:



- A3.2.1 share in the accountability for addressing non-compliance with the Policy and the Occupational Health and Safety Program, as applicable, by UBC Members involved in UBC Activities under their Area of Responsibility; and
  - A3.2.2 cooperate with both Risk Management Services and the Office of Research Services, as applicable, with any workplace, teaching, and research health and safety audit, and any inspection or investigation involving their Supervisor(s) conducted in accordance with the Occupational Health and Safety Program.
- A3.3 **The Supervisor:** Each Supervisor is responsible under the Applicable Standards for their Area of Responsibility and must:
- A3.3.1 be accountable for the health and safety of UBC Members under their direct supervision and acting in their UBC capacity when engaged in UBC Activities;
  - A3.3.2 be aware of Applicable Standards and all known or reasonably foreseeable health and safety hazards pertinent to the Areas of Responsibility where such UBC Members conduct UBC Activities;
  - A3.3.3 formulate and document specific safety rules, guidelines, and procedures for all Areas of Responsibility under their supervision;
  - A3.3.4 ensure that the Emergency Procedures are in place to mitigate any hazards specific to their Areas of Responsibility, and understand, follow, and communicate to UBC Members under their supervision about Emergency Procedures;
  - A3.3.5 remove or mitigate unique hazards associated with the UBC Activities under their supervision with consultation from the applicable Local Safety Team and/or Joint Occupational Health and Safety Committee;
  - A3.3.6 provide workplace orientation and training in the safe operation of equipment, handling of Hazardous Materials and Wastes, and performance of day-to-day tasks;
  - A3.3.7 conduct regular inspections to identify hazardous conditions or conduct and ensure that equipment and materials are properly handled, stored, and maintained;
  - A3.3.8 promptly mitigate or correct unsafe work practices, conduct, or hazardous conditions;
  - A3.3.9 ensure all accidents, incidents, or personal security concerns are investigated within two (2) work days;
  - A3.3.10 promptly report any accidents, incidents, or conduct to the appropriate UBC authority and Risk Management Services; and
  - A3.3.11 consult and cooperate with the appropriate Local Safety Team, Joint Occupational Health and Safety Committee, and/or safety representative(s) for the workplace.

- A3.4 **UBC Members:** Each UBC Member must:
- A3.4.1.1 comply with Applicable Standards and any rules, restrictions, guidelines, or directives established by their Supervisor, Risk Management Services, or the Office of Research Services;
  - A3.4.1.2 be safety-conscious in all UBC Activities;
  - A3.4.1.3 take all reasonable and necessary precautions to ensure their own safety and the safety of others around them;
  - A3.4.1.4 be familiar with the procedure to refuse unsafe work provided for under the Workers Compensation Act, if a UBC Member applies as a “worker” under the Workers Compensation Act;
  - A3.4.1.5 request training when unfamiliar with a task;
  - A3.4.1.6 correct unsafe conduct and conditions;
  - A3.4.1.7 report as soon as possible any accident, injury, conduct, unsafe condition, or insecure condition to a Supervisor;
  - A3.4.1.8 participate in inspections and investigations at the request of UBC; and
  - A3.4.1.9 participate in such committee, if elected or appointed to a Joint Occupational Health and Safety Committee, or a Local Safety Team, or other such health and safety committee.
- A3.5 **Risk Management Services:** Risk Management Services is the department responsible for monitoring and implementing the requirements of the Workers Compensation Act and its applicable occupational health and safety regulations, the Occupational Health and Safety Program, the Emergency Procedures, and the Applicable Standards by:
- A3.5.1.1 acting as a central resource and auditor of this Policy and Procedures, and any Emergency Procedures;
  - A3.5.1.2 reporting any Research related issue of non-compliance with this Policy or Procedures to the Office of Research Services;
  - A3.5.1.3 reporting any existing issue or concern identified starting with the Local Safety Team or the Joint Occupational Health and Safety Committees, Administrative Heads of Unit, through to the Responsible Executive(s), and, as necessary and required, ultimately up to the UBC Executive, as part of their duties under the Occupational Health and Safety Program and in accordance with the Workers Compensation Act; and
  - A3.5.1.4 attending meetings of and reporting to the Responsible Executive(s), as required by the UBC Executives.
- A3.5.2 The actual implementation and maintenance of the Occupational Health and Safety Program, the Emergency Procedures, guidelines or directives will be

the responsibility of those identified under the General Procedures or the other Procedures, as applicable.

- A3.6 **Office of Research Services:** the Office of Research Services is the department responsible for:
- A3.6.1.1 endorsing Research grant applications on behalf of UBC;
  - A3.6.1.2 ensuring UBC Activities involving Research comply with Funding Terms and Applicable Standards;
  - A3.6.1.3 managing access to Research Funds in cooperation with the University-Industry Liaison Office;
  - A3.6.1.4 addressing non-compliance with Funding Terms or Applicable Standards, or both, in UBC Activities involving Research, to Risk Management Services;
  - A3.6.1.5 reporting any existing issue or concern identified by the appropriate UBC Committee(s) to the Vice-President, Research & Innovation and, as necessary and required, ultimately up to the UBC Executive, as part of their duties under the Occupational Health and Safety Program; and
  - A3.6.1.6 attending meetings of and reporting to the Responsible Executive(s), as required by the UBC Executives.

#### **A4. APPLICABLE LEGISLATION AND EXTERNAL STANDARDS**

- A4.1 Applicable Standards may be amended from time to time, and will vary depending on the nature of the UBC Activities, the context, any substances or materials involved, including Hazardous Materials and Wastes, and possibly a variety of other factors, and may include some of the more commonly applicable legislation and standards listed below, categorized by subject matter. The list below is not intended to be an exhaustive list and is also subject to change or amendments, from time to time. In the event of any uncertainty, UBC Members should clarify Applicable Standards with their Supervisor.
- A4.2 Generally Applicable to Hazardous Materials and Wastes:
- A4.2.1 Hazardous Waste Regulation 63/88, (including B.C. Reg.179/2016);
  - A4.2.2 Occupational Health and Safety Regulation, B.C. Reg. 296/97;
  - A4.2.3 Transportation of Dangerous Goods Act, S.C. 1992, c. 34; and
  - A4.2.4 Transportation of Dangerous Goods Regulations, (including Amendments SOR/2016-95 and SOR/2017-137).
- A4.3 Occupational Health and Safety:
- A4.3.1 Occupational Health and Safety Regulation, B.C. Reg. 296/97;

A4.3.2 The Hazardous Products Act and Regulations (R.S.C., 1985, c. H-3), which govern the Workplace Hazardous Materials Information System (WHMIS) 2015;

A4.3.3 Safety Standards Act and Regulations, S.B.C., 2003 c. 39; and

A4.3.4 Workers Compensation Act, RSBC 1996, Chapter 492.

#### A4.4 Biological Materials:

A4.4.1 Health of Animals Act, S.C. 1990, c. 21;

A4.4.2 Human Pathogens and Toxins Act, S.C. 2009, c. 24;

A4.4.3 Human Pathogens and Toxins Regulations, SOR/2015-44;

A4.4.4 New Substance Notification Regulations (Organisms), SOR/2005-248;

A4.4.5 Plant Protection Act, S.C. 1990, c. 22; and

A4.4.6 The Canadian Biosafety Standard for Facilities Handling or Storing Human and Terrestrial Animal Pathogens and Toxins, 2nd ed., 2015, Government of Canada.

#### A4.5 Radiation Sources:

A4.5.1 General Nuclear Safety and Control Regulations, SOR/2000-2002;

A4.5.2 Nuclear Safety and Control Act, S.C. 1997, c. 9;

A4.5.3 Packaging & Transport of Nuclear Substance Regulations, 2015, SOR/2015-145; and

A4.5.4 Radiation Protection Regulations, SOR/2000-203.

#### A4.6 Chemical Materials:

A4.6.1 Chemical Weapons Convention Implementation Act, S.C. 1995, c. 25;

A4.6.2 Controlled Drugs and Substances Act, S.C. 1996, c. 19;

A4.6.3 Prohibition of Certain Toxic Substances Regulations, 2012, SOR/2012-285; and

A4.6.4 The Hazardous Products Act and Regulations (R.S.C., 1985, c. H-3) which govern the Workplace Hazardous Materials Information System (WHMIS) 2015.

### **A5. GENERAL NON-COMPLIANCE**

A5.1 UBC Executive will consider allegations of non-compliance with this Policy or Procedures made against those to whom this Policy and Procedure applies and, where appropriate, investigate such allegations or issue of non-compliance under the Policy

and Procedures. Issues of non-compliance may affect the following: portfolios of several UBC Executive; investigatory or disciplinary actions undertaken through one of the Related Policies or other UBC policies and procedures; or criminal processes, and may be subject to Section A.6.1.

- A5.2 Any UBC Member who is non-compliant with this Policy or Procedures may be subject to disciplinary action including the suspension or termination of such UBC Member's: (i) use of Hazardous Materials and Wastes, including Biological Materials, Radiation Sources, or Chemical Materials; or (ii) involvement in certain UBC Activities.
- A5.3 The Responsible Executive(s) shall meet, at a minimum, semi-annually to prepare a consolidated report to the UBC Executive as part of the Occupational Health and Safety Program set forth in the Occupational Health and Safety Procedures.
- A5.4 If there is an incident of persistent non-compliance with any Applicable Standards or Funding Terms, then in accordance with Section A.3.6., UBC, through the Office of Research Services, may suspend access by such non-compliant Principal Investigator or UBC Researcher to the applicable Research Funds until the incident is adequately addressed, mitigated, and/or remedied.

## **A6. REPORTING OF CONCERNS**

- A6.1 UBC will consider allegations of non-compliance with this Policy or these Procedures made against those to whom this Policy applies and, where appropriate, investigate such allegations. If the allegations relate to matters addressed by another UBC policy or procedures, then investigation will be conducted in accordance with the policy deemed most suitable by UBC.
- A6.2 UBC Members are expected to report in good faith any information pertaining to possible non-compliance with this Policy and the Procedures to their Supervisor, Risk Management Services, or the Office of Research Services, as applicable. In addition, UBC Members must cooperate fully with UBC in any process under this Policy or these Procedures. UBC will not tolerate any retaliation against anyone who, in good faith, makes an allegation, gives evidence, or otherwise participates in a process under this Policy or these Procedures.

## **B. OCCUPATIONAL HEALTH AND SAFETY PROCEDURES**

**Approved: December 4, 2018**

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### **B1. SCOPE OF THE OCCUPATIONAL HEALTH AND SAFETY PROCEDURES**

B1.1 These Occupational Health and Safety Procedures apply to UBC Activities.

### **B2. OCCUPATIONAL HEALTH AND SAFETY PROGRAM**

B2.1 UBC has developed and will maintain the Occupational Health and Safety Program. Each of the Responsible Executive(s) is responsible for the operation of the Occupational Health and Safety Program within their Areas of Responsibility. However, direct oversight of particular aspects of the Occupational Health and Safety Program may be delegated by the Responsible Executive(s) to another Administrative Head of Unit, as appropriate.

### **B3. JOINT OCCUPATIONAL HEALTH AND SAFETY COMMITTEES**

B3.1 The Joint Occupational Health and Safety Committees under the Occupational Health and Safety Program are mandated to advise, assist, and make recommendations to the applicable Administrative Head of Unit to improve occupational health, safety, and personal security within their Area of Responsibility.

B3.2 Each Joint Occupational Health and Safety Committee must:

B3.2.1 develop terms of reference specific to its duties and functions as prescribed under the Workers Compensation Act;

B3.2.2 at a minimum meet monthly; and

B3.2.3 monitor UBC Activities for compliance with Applicable Standards and other UBC policies, procedures, restructures, directives, and guidelines.

### **B4. LOCAL SAFETY TEAMS**

B4.1 The Local Safety Teams under the Occupational Health and Safety Program are mandated to provide operational support for health and safety at UBC by: (i) identifying and recommending corrective measures regarding unsafe working conditions; (ii) conducting inspections, incident/accident investigations; and (iii) recommending health and safety initiatives to a UBC specific site, faculty, department, or unit.

B4.2 Each Local Safety Team shall develop terms of reference to be approved by the applicable Administrative Head of Unit for their Area of Responsibility.

## **B5. OCCUPATIONAL HEALTH AND SAFETY PROGRAM ADVISORS**

- B5.1 The Occupational Health and Safety Program Advisor is responsible for providing the necessary resource materials and guidance (e.g., templates, check lists, best practices) to UBC specific site, faculties, departments, or units to support them in developing and maintaining the Occupational Health and Safety Program. Additional Local Safety Program Advisor positions may be established with responsibility to distribute the necessary resource materials and guidance to site-specific areas within a UBC faculty, department, or unit.

## **C. BIOLOGICAL MATERIALS PROCEDURES**

**Approved: December 4, 2018**

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### **C1. SCOPE OF THE BIOLOGICAL MATERIALS PROCEDURES**

- C1.1 These Biological Materials Procedures apply to the use, possession, storage, transfer, import or export, and disposal of Biological Materials and Biomedical Wastes in UBC Activities, including Research and teaching with cultured animal cells, cell lines, recombinant DNA, parasites, toxins, microorganisms (i.e., viruses and bacteria), genetically modified organisms, animal or human specimens, primate body fluids (i.e., blood, prions), and culturing or isolating Biological Materials from the natural environment, such as soil and sewage.
- C1.2 These Biological Materials Procedures do not apply to UBC Activities involving the use of human pathogens and toxins pursuant to licenses issued to third parties (i.e., affiliated hospitals).

### **C2. BIOSAFETY PROGRAM & COMMITTEE**

- C2.1 UBC has developed and will maintain a Biosafety Program. The Vice-President, Research & Innovation is responsible for:
  - C2.1.1 establishing terms of reference for the Biosafety Committee;
  - C2.1.2 ensuring the composition of the Biosafety Committee complies with the terms of reference; and
  - C2.1.3 maintaining oversight of the Biosafety Committee.
- C2.2 The Biosafety Committee is mandated to ensure UBC Activities involving Biological Materials are conducted in a safe manner, in conformity with the Biosafety Program, and in compliance with all Applicable Standards. To fulfil such mandate the Biosafety Committee is authorized to:
  - C2.2.1 exercise control and oversight over the acquisition, use, and disposal of Biological Materials;
  - C2.2.2 issue, deny, suspend, or terminate Biosafety Permits;
  - C2.2.3 accredit and monitor UBC facilities to ensure compliance with this Policy and Procedures;
  - C2.2.4 assist in the design of laboratories and training of personnel, and serve as educational resource on matters promoting biological safety for UBC Members;



- C2.2.5 develop and implement a process to investigate and sanction incidents of non-compliance with this Policy or Procedures relating to the acquisition, use, storage, or disposal of Biological Materials;
- C2.2.6 post all related processes approved by the Biosafety Committee where it is easily accessible by UBC Members engaging in UBC Activities involving Biological Materials; and
- C2.2.7 liaise with the Animal Care Committee, the Chemical Safety Committee, and the Radiation Safety Committee, on matters within the scope of this Policy, through the chair of the Biosafety Committee.

### **C3. BIOSAFETY OFFICER**

- C3.1 The Biosafety Officer's duties and functions are set out in detail in the Biosafety Program Manual and include: (i) general oversight of the Biosafety Program; (ii) monitoring all educational, medical, and Research sites over which UBC has administrative control for compliance with the Biosafety Program; (iii) communicating with applicable regulators; (iv) reporting compliance issues and regulatory changes to the Biosafety Committee; and (v) developing and providing a repository of procedures for handling Biological Materials commonly used in laboratories.

### **C4. USE OF BIOLOGICAL MATERIALS**

- C4.1 A UBC Member must not conduct UBC Activities involving the acquisition, use, or disposal of Biological Materials unless such activities are authorized, in advance, by either: (i) Biosafety Permit; or (ii) written exemption granted by the Biosafety Committee.
- C4.2 Any Principal Investigator using or proposing to use Biological Materials in UBC Activities must consult with the Biosafety Committee prior to commencing such activities.
- C4.3 Every UBC Member who works with, or who supervises individuals who work with, Biological Materials pursuant to a Biosafety Permit must comply with the Biosafety Program Manual.

### **C5. BIOSAFETY PERMIT HOLDER**

- C5.1 The Biosafety Permit Holder is primarily responsible for the safety of others in any UBC Activity involving Biological Materials. A Biosafety Permit Holder must: (i) be aware of all hazards associated with their UBC Activities and introduce the controls necessary to minimize such hazards; (ii) ensure all personnel under their direction are trained to work with the Biological Materials in a safe and lawful manner; (iii) maintain up-to-date records of all such training; and (iv) develop and implement procedures that include:
  - C5.1.1 acquiring minimum quantities only;
  - C5.1.2 safe and secure storage;

- C5.1.3 appropriate labeling and an annual inventory of Biological Materials;
  - C5.1.4 sharing and transferring materials only after verifying that the recipient has the appropriate licensing and permits in place;
  - C5.1.5 training of UBC Members under their supervision or working under the auspices of their Biosafety Permit;
  - C5.1.6 proper use of personal protective equipment, emergency, spill, and decontamination procedures;
  - C5.1.7 ensuring UBC Activities involving Biological Materials are performed only in appropriate spaces; and
  - C5.1.8 ensuring engineering controls used under the auspices of the Biosafety Permit (including autoclaves and biosafety cabinets) are included in programs of testing, certification, or validation as required by the Biosafety Program and Applicable Standards.
- C5.2 Each Biosafety Permit Holder must, prior to generating Biomedical Waste, establish a system, compliant with the Biosafety Program Manual and Applicable Standards, to handle, decontaminate, and dispose of such Biomedical Waste.
- C5.3 Each Biosafety Permit Holder must maintain their Biosafety Permit to include current lists of: (i) all personnel working on projects listed on the permit; (ii) all Biological Materials in their possession; and (iii) all areas where Biological Materials are stored and manipulated.

## **C6. NON-COMPLIANCE WITH THE BIOLOGICAL MATERIALS PROCEDURES**

- C6.1 The Biosafety Committee may deny, suspend, or terminate a Biosafety Permit, and at its discretion instigate any non-compliance actions contemplated under the General Procedures.

## **D. RADIATION SOURCES PROCEDURES**

**Approved: December 4, 2018**

*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." Note: the most recent procedures may be reviewed at <http://universitycounsel.ubc.ca/policies/index/>.*

### **D1. SCOPE OF THESE RADIATION SOURCES PROCEDURES**

- D1.1 These Radiation Sources Procedures apply to the use of Radiation Sources in UBC Activities and to the acquisition, use, possession, storage, transfer, import, or export of Radiation Sources.
- D1.2 These Radiation Sources Procedures do not apply to the use of Radiation Sources pursuant to licenses issued by the Canadian Nuclear Safety Commission to other institutions, such as, for example, where UBC Members engage in clinical or medical applications on human subjects pursuant to a license held by an affiliated hospital.

### **D2. RADIATION SAFETY PROGRAM & COMMITTEE**

- D2.1 UBC has developed and will maintain a Radiation Safety Program. The Vice-President, Research & Innovation is responsible for:
  - D2.1.1 establishing terms of reference for the Radiation Safety Committee;
  - D2.1.2 ensuring the composition of the Radiation Safety Committee complies with the terms of reference; and
  - D2.1.3 maintaining oversight of the Radiation Safety Committee.
- D2.2 The Radiation Safety Committee is mandated to ensure UBC Activities involving Radiation Sources are conducted in a safe manner, in conformity with the Radiation Safety Program, and in compliance with all Applicable Standards. To fulfill such mandate the Radiation Safety Committee is authorized to:
  - D2.2.1 exercise control and oversight over the acquisition, use, and disposal of Radiation Sources;
  - D2.2.2 issue, deny, suspend, or terminate Radiation Safety Permits;
  - D2.2.3 develop and implement a process to investigate and sanction incidents of non-compliance with this Policy and the Procedures relating to the use of Radiation Sources; and
  - D2.2.4 liaise with the Animal Care Committee, the Chemical Safety Committee, and the Biosafety Committee, on matters within the scope of this Policy, through the chair of the Radiation Safety Committee.

### **D3. RADIATION SAFETY OFFICER**

- D3.1 The Radiation Safety Officer's duties and functions are set out in detail in the Radiation Safety Program Manual and include: (i) the general oversight and monitoring of all aspects of radiation safety in UBC Activities; (ii) reporting to the Radiation Safety Committee on compliance issues and pertinent regulatory changes; and (iii) communicating with applicable regulators.
- D3.2 The Radiation Safety Officer has the authority to order that any unsafe or unauthorized use of Radiation Sources by any UBC Member be modified or cease immediately.
- D3.3 In the event the Radiation Safety Officer issues an order contemplated in Section D3.2: (i) the Radiation Safety Officer must notify the Radiation Safety Committee; and (ii) the Committee must meet to consider, and confirm, modify, or set aside, such order so issued.

### **D4. USE OF RADIATION SOURCES**

- D4.1 A UBC Member must not use, possess, store, transfer, import, or export Radiation Sources in UBC Activities unless such activity is: (i) authorized under a Radiation Safety Permit; (ii) limited to the use of a Radiation Emitting Device not containing Radioactive Material; or (iii) conducted pursuant to a license(s) issued by the Canadian Nuclear Safety Commission to other institutions or affiliate hospital.
- D4.2 A Principal Investigator must not use any UBC services or facilities, accept funds, or request that accounts be opened by UBC Finance for Research using Radiation Sources unless: (i) such activity is authorized under a Radiation Safety Permit; or (ii) such activity is conducted pursuant to a license(s) issued by the Canadian Nuclear Safety Commission to other institutions.
- D4.3 Every UBC Member who works with, or who supervises individuals who work with, Radiation Sources pursuant to a Radiation Safety Permit must: (i) comply with the Radiation Safety Program Manual; and (ii) complete Radiation Safety Training prior to handling Radiation Sources.

### **D5. RADIATION SAFETY PERMIT HOLDERS**

- D5.1 The Radiation Safety Permit Holder is primarily responsible for radiation safety in all of the areas specified on their Radiation Safety Permit and accordingly must:
  - D5.1.1 ensure the conditions stated in the Radiation Safety Permit are met;
  - D5.1.2 ensure procedures complying with the Radiation Safety Program Manual are implemented in every laboratory or workplace in which Radiation Sources are used pursuant to their Radiation Safety Permit, including procedures requiring: (i) the acquisition of minimum quantities only; (ii) safe and secure storage of materials; (iii) appropriate labeling and completion of an annual inventory of materials; (iv) compliance with Applicable Standards related to contamination control, transfer of Radioactive Material, and disposal of radioactive waste; (v) proper use of personal protective and exposure monitoring equipment; and (vi) laboratory-specific training;

- D5.1.3 ensure all UBC Members using Radiation Sources under their supervision: (i) are authorized to use the Radiation Sources under the Radiation Safety Permit and a list of such authorized personnel is maintained; (ii) comply with the Radiation Safety Program Manual; (iii) receive Radiation Safety Training; and (iv) are informed of the risks associated with exposure to ionizing radiation;
- D5.1.4 designate specific work and storage areas for Radioactive Materials and ensure such areas are kept clean, are properly labeled, have adequate ventilation, and are adequately shielded;
- D5.1.5 ensure engineering controls used under the auspices of the Radiation Safety Permit are included in programs of testing, certification, or validation as required by the Radiation Safety Program and Applicable Standards;
- D5.1.6 report to the Radiation Safety Officer: (i) all radiation incidents; (ii) annual exposure estimates for each authorized user; and (iii) inventories of all Radioactive Materials maintained, purchased, transferred, and disposed of over the course of each calendar year;
- D5.1.7 maintain records of contamination control, including wipe test data, for all areas where Radioactive Materials are used under the auspices of their Radiation Safety Permit; and
- D5.1.8 provide, immediately upon request by the Radiation Safety Officer, the Radiation Safety Committee, a Transport Canada Inspector, or a Canadian Nuclear Safety Commission Inspector, all records pertaining to the purchase, receipt, use, transfer, and disposal of Radiation Sources originally acquired under their Radiation Permit.

## **D6. Non-Compliance With the Radiation Sources Procedures**

- D6.1 The Radiation Safety Committee may deny, suspend, or terminate a Radiation Safety Permit, and at its discretion instigate any non-compliance actions contemplated under the General Procedures.

## **E. CHEMICAL MATERIALS PROCEDURES**

**Approved: December 4, 2018**

*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." Note: the most recent procedures may be reviewed at <http://universitycounsel.ubc.ca/policies/index/>.*

### **E1. SCOPE OF THE CHEMICAL MATERIALS PROCEDURES**

- E1.1 These Chemical Materials Procedures apply to the specific acquisition, handling, use, possession, storage, transfer, import or export, and disposal of Chemical Materials in UBC Activities.

### **E2. CHEMICAL SAFETY PROGRAM & UBC ADVISORY COMMITTEE ON CHEMICAL SAFETY**

- E2.1 UBC has developed and will maintain a Chemical Safety Program. The Vice-President, Research & Innovation is responsible for:

- E2.1.1 establishing terms of reference for the Chemical Safety Committee;

- E2.1.2 ensuring the composition of the Chemical Safety Committee complies with the terms of reference; and

- E2.1.3 maintaining oversight of the Chemical Safety Committee.

- E2.2 The Chemical Safety Committee is mandated to ensure UBC Activities involving Chemical Materials are conducted in a safe manner, in conformity with the Chemical Safety Program, and in compliance with all Applicable Standards. To fulfill such mandate the Chemical Safety Committee is authorized to:

- E2.2.1 oversee Chemical safety and the acquisition, use, and disposal of Chemical Materials in Research;

- E2.2.2 impose conditions on the use of the Chemical Materials;

- E2.2.3 order that Research involving the unsafe use of Chemical Materials be suspended or terminated;

- E2.2.4 consider and advise on best practices for the safe handling of Chemical Materials including transportation, handling, storage, workplace safety, disposal, and transferring of materials and effluents;

- E2.2.5 take whatever steps it deems necessary to ensure the correct and safe use of Chemical Materials;

- E2.2.6 review and report to the Vice-President, Research & Innovation, or their delegate, policies, and guidelines for the use of Chemical Materials by all faculty, staff, and students of UBC;

- E2.2.7 advise on current and future needs for the safe transportation, handling, storage, workplace safety, recycling, disposal, and transferring of materials Chemical Materials and effluents;
- E2.2.8 review Applicable Standards related to chemical hazards, environmental issues and waste management, and to assess the impact on UBC Activities;
- E2.2.9 review risk assessments of Research involving Chemical Materials, relating to the acquisition, use, and disposal of Chemical Materials for Research, in conjunction with the Office of Research Services and Risk Management Services, as applicable; and
- E2.2.10 liaise with the Animal Care Committee, the Biosafety Committee and the Radiation Safety Committee, on matters within the scope of this Policy, through the chair of the Chemical Safety Committee.

### **E3. CHEMICAL SAFETY ADVISOR**

- E3.1 The Chemical Safety Advisor's duties and functions are set out in detail in the Chemical Safety Program Manual and includes the authority to order that any use of Chemical Materials, by Principal Investigator or any UBC Member, be modified or cease immediately.
- E3.2 In the event the Chemical Safety Advisor issues an order contemplated in Section E3.1: (i) the Chemical Safety Advisor must notify the Chemical Safety Committee; and (ii) the Chemical Safety Committee must meet to consider, confirm, modify, or set aside, such order so issued.

### **E4. USE OF CHEMICAL MATERIALS**

- E4.1 Every UBC Member using Chemical Materials in UBC Activities must comply with the Chemical Safety Program Manual.
- E4.2 A Principal Investigator and/or Supervisor responsible for a laboratory in which Chemical Materials are utilized must develop and implement written laboratory-specific procedures consistent with Applicable Standards and the Chemical Safety Program Manual.
- E4.3 Each Administrative Head must implement procedures compliant with Applicable Standards and the Chemical Safety Program Manual for any Area of Responsibility using Chemical Materials.

### **E5. NON-COMPLIANCE WITH THE CHEMICAL MATERIALS PROCEDURES**

- E5.1 The Chemical Safety Committee may take any steps necessary under the Chemical Materials Procedures, and at its discretion instigate any non-compliance actions contemplated under the General Procedures.