

## UBC DEPARTMENT OF MATERIALS ENGINEERING

### Personal Safety Orientation Worksheet

#### Introduction

The purpose of this document is to provide a safety orientation overview for laboratory and technical personnel. This deals with policies, requirements and resources for safe and responsible work practices. Every new grad student, employee or visiting scholar working in a laboratory or in a related technical capacity is required to read and complete the questions in this document. The questions are intended to draw your attention to the more important safety and procedural aspects of working in this department, particularly the resources available to you to be able to comply with policies and regulations, and to respond to problems and emergencies.

New legislation (2007) in British Columbia requires that any new worker be given a safety orientation and training **BEFORE** commencing any work. *This document constitutes part of the required safety orientation, but only a part. It deals with general aspects common to most laboratories and technical services in the department. Specific training for the particular work you will do has to be provided by your supervisor. This also must be provided prior to commencing that work.* Due to the diverse nature of the academic research setting, all required training probably cannot reasonably be provided at the beginning. However, training must be provided as required prior to beginning a particular type of work.

#### Instructions for Completing this Worksheet

Read the appended UBC policies. Make sure you know how to access the cited information. Answer all the questions. You should complete this form with the aid of your supervisor or another designated person in your group or work area. *You are to return the completed original document to your supervisor **PRIOR** to beginning any kind of work.* Your supervisor is to review the completed document and return it to you for correction if there are any errors. The final original document must be forwarded to the departmental safety program administrator who will keep it on file. Please keep a copy for your own information and records. The appended information regarding UBC policies on Sustainable Development, Environmental Protection Compliance, University Safety, Disaster Management and Hazardous Materials are to be kept by you for reference. Don't copy and return them. Carefully read policy 7.

There are several resources for you to draw upon for procedural, policy and safety information. These include:

(1) The departmental website safety page (see: <http://www.mtrl.ubc.ca/safety/index.php>)

(2) Departmental safety manual (a copy is in all labs and on the MTRL website)

- (3) Laboratory chemical safety manual (a copy is in all chemical labs and on the MTRL website)
- (4) Experienced personnel in your laboratory
- (5) Your supervisor
- (6) Technical staff
- (7) Material Safety Data Sheets (WHMIS)
- (8) Safety inspection forms
- (9) UBC Risk Management
- (10) Training courses (eg Laboratory Chemical Safety Course) through Risk Management
- (11) UBC policies (7 in particular is appended; policies 5, 6, 8 and 9 are also directly relevant ) and may be viewed by searching [ubc.ca](http://ubc.ca) > policies.
- (12) MTRL Safety and Environment Committee

*All questions need to be answered. If you are unable to answer any of these questions, discuss with senior lab personnel or your supervisor or his/her designated representative for further information. You are required to complete this worksheet as part of your departmental safety training. The supervisor or designated alternate needs to review the completed worksheet.*

Your name: \_\_\_\_\_ Date \_\_\_\_\_

Supervisor name: \_\_\_\_\_  
\_\_\_\_\_

Reviewed by supervisor or designate (**print name and sign**): \_\_\_\_\_  
\_\_\_\_\_

Position (grad student, undergrad research assistant, employee, visitor): \_\_\_\_\_

**A. Your activities**

1. Provide a brief description of the type of work you expect to be doing:

.....  
.....  
.....  
.....  
.....  
.....  
.....

**B. Emergency telephone numbers and information**

1. Write out the emergency telephone numbers for whom to call for each of the following:

Fire/Police/Ambulance .....

Hazardous materials emergency (fire dept.) .....

Campus security.....

UBC first aid.....

Student health service.....

Plant operations trouble calls.....

2. Provide three examples of situations where you would need to call Plant Operations trouble calls: .....

.....

.....  
3. In the event of an emergency where you would call 911, you will be asked for the building civic address. What is the Forward building's civic address (number, street name and postal code)? .....

**C. Required reading**

1. Have you read UBC policies 5-9 (appended)?    Yes    No

2. Has your supervisor or designated training provider reviewed UBC policy 7 with you?  
      Yes    No

3. Have you reviewed the safety information on the MTRL website? See:  
<http://www.mtrl.ubc.ca/safety/index.php>    Yes    No

4. Have you located and reviewed the departmental Safety Manual (copy in your lab)?  
      Yes    No

5. If chemicals are in use in your lab have you reviewed the Laboratory Chemical Safety Manual? In your lab or available online at:  
[https://www.chem.ubc.ca/sites/default/files/wysiwyg\\_uploads/facilities/safety/resources/chemical\\_lab\\_safety\\_manualdec2013.pdf](https://www.chem.ubc.ca/sites/default/files/wysiwyg_uploads/facilities/safety/resources/chemical_lab_safety_manualdec2013.pdf)  
                                  Yes    No    Not applicable (no one in my lab uses chemicals)

6. Have you read the departmental safety rules?    Yes    No  
Available online at: <http://mtrl.sites.olt.ubc.ca/files/2014/06/Department-Safety-Rules.pdf>

7. Where are the completed safety inspection forms kept in your lab?  
.....

8. Have you reviewed the latest semi-annual safety inspection form in your lab? (There is a short monthly form and a longer semi-annual form.) Yes No

9. Have you reviewed the emergency procedures booklet posted in your lab? Yes No

10. Have you located and perused the departmental safety bulletin board? Yes No

**D. Fire safety**

1. Indicate the location of the fire alarm(s) nearest your lab(s)/area(s).

.....  
.....

2. List the locations of each fire extinguisher and its class (A, B, C or D) in your lab/area.

Location..... Class.....

Location..... Class.....

Location..... Class.....

3. What types of fires is a class ABC fire extinguisher suitable for?

.....

4. List the location in the hallway of the fire extinguisher nearest to your lab.

.....

5. List the locations of the fire exit(s) nearest your lab(s)/area(s)

.....

6. What two things must you do if a fire erupts and you determine that it is too big to try to put out? .....

7. What will you do when you hear a fire alarm bell ringing?

.....

8. May you use an elevator when the fire alarm rings? .....

9. What is the maximum permissible combined volume of flammable solvent containers (full or part full) that may be stored outside a flammables cabinet in a lab? See the Laboratory Chemical Safety Manual, in your lab or available online (See Part C above).

Answer: .....

10. Find out who the Forward Building Emergency Director is and provide his/her contact information:

Name..... Room no. .... Phone .....

e-mail.....

11. Provide the name and contact information for the fire floor warden on *your* floor:

Name..... Room no. .... Phone .....

e-mail.....

12. Where is the assembly area where everyone is to meet after a building evacuation?

.....

**E. First aid and medical emergencies**

1. Every lab has a first aid kit. Where is the one in your lab located?

.....

2. Each first aid kit has a Treatment Record Sheet. Have you been told how to fill out this form?

Yes No

3. List the names and contact information of the Forward building first aid attendants:

Name ..... Room no. .... Phone no. ....

4. Have you been informed about:

When to call UBC First Aid versus 911? Yes No

When to seek help from a departmental first aid attendant? Yes No

5. You might decide to seek medical attention for a work-related injury or illness. This might occur immediately after the event or at a later time. You must report this!

(a) To whom are you to report? .....

(b) If this person is not available, to whom must you report instead? .....

(c) Within what period of time must you report (if physically able to do so)? .....

**F. Personal protective equipment**

1. What personal protective equipment (PPE) will you likely need in your work?

- Safety glasses (for impact).....
- Safety goggles/glasses (for chemical splashes).....
- Lab coat.....
- Gloves.....
- Fit-tested respirator.....
- Fit-tested dust mask.....
- Steel toed shoes.....
- Other.....

2. Is it permissible to wear a respirator without first having been fit-tested? .....

3. Is it permissible to wear a dust mask without first having been fit-tested? .....

4. How long is respirator or dust mask fit-testing certification valid for? .....

5. What one piece of personal protective equipment must you and all visitors to labs put on as they enter a lab? .....

**G. Chemical spills**

1. List the location of the eyewash station in, or nearest to your lab/area (if present) .....

2. List the location of the safety shower in your lab or nearest to your lab/area (if applicable). .....

3. What is the difference between an external spill and an internal spill? .....

4. What determines if a spill is reportable to government agencies or not? See the Laboratory Chemical Safety Manual, Part C above. ....

5. What number must you call in the event that you have or encounter a “large” (e.g. ~1 L or so of a flammable solvent) chemical spill?

Answer: .....

6. Where is the spill cart kept? .....

7. Have you familiarized yourself with the contents of the spill cart?      Yes    No

8. Have you been informed on when and how to report a chemical spill to Risk Management?  
Yes    No

See also the Laboratory Chemical Safety Manual, Part C above

**H. Workplace Hazardous Materials Information System (WHMIS)**

1. Are you familiar with WHMIS?    Yes    No
2. Have you been shown how to obtain an MSDS sheet for a chemical?    Yes    No
3. Have you been told how to label samples and wastes so that they are compliant with WHMIS?  
Yes    No

**I. Safety and technical help**

1. Technical and administrative staff have training and expertise in their fields. They may be very helpful for safety advice and training requirements information. Provide the names **and contact information for each of the following:**

	Name	Room no.	Phone	e-mail
Stores keeper				
Electronics technician				
Machinist				
Machinist				
Machinist				
EM lab technician				
Administrative manager				
Department head				

2. Write out the phone number and website address for the Risk Management

.....

3. Write out the contact information for the departmental safety and environment committee co-chairs:

Name..... Room no. .... Phone .....

e-mail.....

Name..... Room no. .... Phone .....

e-mail.....

4. Provide the name of one person in your lab who will inform you about safety requirements:

.....

5. Provide the name of one person in your lab who will be able to inform you about proper waste disposal procedures (if applicable):.....

**J. Accidents and Incidents**

1. What is the difference between an accident and an incident?.....

.....

.....

2. To whom are you required to report accidents and incidents? .....

.....

3. What is the key purpose on an accident/incident investigation? .....

.....

**K. Some key laboratory operations**

1. Is it permissible to:

Store food or beverages in any laboratory                      Yes    No

Consume food or beverages in any laboratory                      Yes    No

2. Are you permitted to wear gloves (for protection against chemicals) outside of a laboratory, i.e. may you walk out of a lab with gloves on?                      Yes    No

3. What should you do if equipment you want to use has exposed wiring? .....

4. Briefly describe the required training you must have before using compressed gases (this training must be provided by your supervisor or someone competent in your lab). This involves being (a) told how to do, (b) shown how to do, and (c) observed doing the following:  
Operate a.....and change the.....

5. It is permissible to transport compressed gas cylinders within labs or elsewhere within the building with the regulator attached or without a cylinder cap. True False

6. What must you do before you may use liquid nitrogen? .....

7. Legs must be fully covered and shoes must cover the whole of the feet in a lab:  
True False

8. Is earphones use permitted in labs? ..... In offices? .....

9. If you notice someone in the department outside normal weekday hours whom you believe should not be here, what should you do?  
(a) Confront them and ask them to leave if they are not authorized to be here.  
(b) Call campus security for assistance.  
(c) Leave them be and continue to go about your business.

10. Which of the following statements is true:  
..... (a) A set of project planning sheets is only needed once as part of the initial safety training.  
..... (b) A new set of project planning sheets is needed for each new project.  
Briefly explain why. ....

11. Has someone explained your lab's working alone policy to you? Yes No

12. What will happen if liquid nitrogen is stored in a sealed vessel? .....

13. If you work in a lab that uses chemicals (to any extent) where can you find information about incompatible storage guidelines? .....  
.....

14 (a). In general it is permissible to pour aqueous solution wastes down the sink drains:

True False

(b) In general it is permissible to pour organic waste down the sink drains:

True False

(c) In general it is permissible to dispose of solid chemical wastes to the garbage cans.

True False

15. Describe how to dispose of clean, broken glass waste. ....  
.....

16. Organic solvent waste must be collected into a plastic “gasoline can” for disposal. This requires a tag. You also need a sticker on the tag called a ..... From whom can you obtain the tags and stickers? .....

17. Aqueous wastes must be collected into 20 L plastic cans supplied by which facility on campus? ..... These require a tag and the same sticker as for organic wastes: True False

18. What should be done with used needles, razor blades and other “sharps”? .....  
.....

**L. Workplace bullying and harassment**

1. WorksafeBC introduced regulations on workplace bullying and harassment in 2013. All personnel must understand this. Review the information on the following websites:

<http://www.hr.ubc.ca/respectful-environment/files/UBC-Respectful-Environment-Statement.pdf>

<http://bullyingandharassment.ubc.ca/>

2. Based on the information on the websites and in your own words define workplace bullying and harassment. \_\_\_\_\_

---

---

---

3. If you feel you are being harassed what should you do? \_\_\_\_\_

---

---

---

---

---

4. If you notice someone else being harassed what should you do? \_\_\_\_\_

---

---

---

---

---

5. You should keep notes on such events. What should you include in those notes? \_\_\_\_\_

---

---

**M. Declaration**

Indicate with your signature below that you have completed the following requirements:

- a) I have reviewed the department safety manual and website safety page
- b) I have read UBC policies 5-9
- c) I have read the Emergency Procedures sheet
- d) I have read through a semi-annual safety inspection report in my lab/area
- e) I have read through the departmental safety rules
- f) I have read through the information on bullying and harassment in the workplace.

Your signature.....

 <p><b>The University of British Columbia Board of Governors</b></p>	<p><b>Policy No.:</b></p> <p style="text-align: center;">7</p>	<p><b>Approval Date:</b> January 1985</p> <p><b>Last Revision:</b> March 1994</p>
	<p><b>Responsible Executive:</b> Vice-President, Administration and Finance</p>	
<p><b>Title:</b></p> <p style="text-align: center;"><b>University Safety</b></p>		
<p><b>Background &amp; Purposes:</b></p> <p>To articulate the University's objective of providing a safe, healthy and secure environment for all members of faculty and staff, students and visitors, and to delineate responsibility for achieving it.</p>		

## 1. General

- 1.1. The University aims to provide a safe, healthy and secure environment in which to carry on the University's affairs. All possible preventive measures are taken to eliminate accidental injuries, occupational diseases and risks to personal security.
- 1.2. Compliance with the Workers Compensation Act, WHMIS and related legislation is the minimum standard acceptable. All students and members of faculty and staff are encouraged to strive to exceed these minimum legal standards and to eliminate unnecessary risks.

## PROCEDURE SUMMARY

**Approved: January 1985**

**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. The University

- 1.1. It is the responsibility of the University acting through administrative heads of unit to:
  - 1.1.1. provide a safe, healthy and secure working environment;
  - 1.1.2. ensure regular inspections are made and take action as required to improve unsafe conditions;
  - 1.1.3. ensure that health, safety, and personal security considerations form an integral part of the design, construction, purchase and maintenance of all buildings, equipment and work processes;

- 1.1.4. provide first aid facilities where appropriate;
- 1.1.5. support supervisors and safety committees in the implementation of an effective health, safety and security program;
- 1.1.6. ensure compliance with WCB and other applicable legislation;
- 1.1.7. establish department or building safety committees;
- 1.1.8. communicate with the university community or affected groups about events or situations when potentially harmful conditions arise or are discovered;
- 1.1.9. ensure adequate resources are available to implement appropriate procedures.

## **2. The Supervisor**

2.1. It is the responsibility of supervisory staff to:

- 2.1.1. formulate specific safety rules and safe work procedures for their area of supervision;
- 2.1.2. ensure that all employees under their supervision are aware of safety practices and follow safety procedures;
- 2.1.3. provide training in the safe operation of equipment;
- 2.1.4. inspect regularly their areas for hazardous conditions;
- 2.1.5. correct promptly unsafe work practices or hazardous conditions;
- 2.1.6. be responsive to concerns expressed about personal security and investigate any accidents, incidents or personal security concerns which have occurred in their area of responsibility;
- 2.1.7. report any accidents or incidents involving personal security to the appropriate University authority;
- 2.1.8. participate, if requested, on department or building safety committees.

## **3. Individual Students and Members of Staff and Faculty**

3.1. It is the responsibility of individual students and members of faculty and staff to:

- 3.1.1. observe safety rules and procedures established by supervisory staff, administrative heads of unit and the University;
- 3.1.2. be safety-conscious in all activities, be they work, study or recreation;
- 3.1.3. report as soon as possible any accident, injury, unsafe condition, insecure condition or threats to personal security to a supervisor or administrative head of unit;
- 3.1.4. use properly and care for adequately personal protective equipment provided by the University;
- 3.1.5. participate, if elected or appointed, on departmental or building safety committees.

## **4. Detailed Procedures**

- 4.1. The University Health and Safety Committee and UBC Okanagan Health and Safety Committee work to achieve these objectives by providing education and reviewing policies and procedures.
- 4.2. Department/Area/Building Safety Committees carry out the safety programs within their areas and make recommendations to ensure that the safety objectives of the University can be achieved. (Terms of Reference for these committees available through the Department of Health, Safety and Environment.)
- 4.3. The Department of Health, Safety and Environment and the Department of Parking and Security Services assist departments to implement and maintain effective health, safety and personal security programs, liaise with the regulatory authorities on behalf of the University and support the activities of the University's Safety Committees.

4.4. For more information, please consult with the Department of Health, Safety and Environment and/or the Department of Parking and Security Services.

## **5. Definitions**

- 5.1. An *administrative head of unit* is a Director of a service unit, a Head of an academic department, a Director of a centre, institute or school, a Principal of a college, a Dean, an Associate Vice President, the Registrar, the University Librarian, a Vice President or the President.
- 5.2. A *supervisor* is a person, not necessarily an administrative head of unit, who has been delegated supervisory responsibility for others working or studying at UBC.