**Safe Work Procedure Guidance Document**

**Overview**

A safe work procedure incorporates all the information from the risk assessment in a manner that allows one to carry out the task safely. It is a detailed record of the step by step process of how to conduct a task. Before writing a safe work procedure, there must be a completed Risk Assessment. Once the procedure is written, individuals need to be trained on the procedure and that training needs to be documented.

**General Procedure**

These steps are to be completed by the supervisor:

1. Identify all personnel carrying out the task/group of similar tasks
2. Conduct a Risk Assessment for the specific task or group of similar tasks. The objective of the hazard and risk assessment is to determine the hazards and risks associated with conducting the task(s).
	* Note: The risk assessment should be based on what is reasonably anticipated for that workplace for work activity. A single risk assessment can be completed for either one worker or a group of workers who perform the exact same tasks; however, if at any time, there is a change in location, timing, equipment, environment or any other factor that could affect the worker’s safety, a new risk assessment will be required and changes to the safe work procedure may be necessary.
3. Develop a Safe Work Procedure to carry out the task(s) using the template provided in this document. This procedure will incorporate findings from the risk assessment and identified controls.

*Note: If multiple tasks similar in nature produce a comparable result for the risk assessment, a single general Safe Work Procedure can be written.*

1. Submit the completed Safe Work Procedure (SWP) for review to the Department Head. The SWP will undergo review as per Figure 1. Note: the Department Head and the Joint Occupational Health and Safety Committee (JOHSC) can seek guidance from a subject matter expert.

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Figure 1: Safe Work Procedure Approval Process

1. Train all applicable workers on the approved Safe Work Procedure and document the training using the Job Specific Training Documentation in Appendix J.
2. Ensure documented training records are readily available indicating that the worker has been trained in the task/procedure that will be carried out.

**Instructions for completing the Safe Work Procedure:**

The UBC Safe Work Procedure Template is to be used alongside the UBC Risk Assessment Template.

Complete the sections in the Safe Work Procedure template with the aid of the supporting documentation provided in the Appendices of this document: Safe Work Procedure Guidance Document.

**Appendix A: Purpose**

*Describe the content of this document in 2-5 lines.*

e.g This document describes safe work procedures for running column chromatography in a chemistry lab.

**Appendix B: Scope**

*Identify who this document applies to: Faculty, Staff, Paid Students, Volunteers, Visiting Researchers, etc.* e.g. This document applied to all UBC employees (faculty, staff and paid students)

**Appendix C: Regulations**

*Identify the relevant sections of the any or all of the following regulations as it pertains to the work. Some examples regulations and relevant sections are listed below.*

* [Workers Compensation Act](http://www.bclaws.ca/Recon/document/ID/freeside/96492_00)
	+ [Section 115: General Duties of Employers, 116: General Duties of Workers, General Duties of Supervisors 117](http://www.bclaws.ca/Recon/document/ID/freeside/96492_03#section115)
* [WorkSafeBC Occupational Health and Safety Regulation](https://www.worksafebc.com/en/law-policy/occupational-health-safety/searchable-ohs-regulation/ohs-regulation/part-04-general-conditions)
* [Transportation of Dangerous Goods Regulations](https://www.tc.gc.ca/eng/tdg/clear-tofc-211.htm)
* [Human Pathogens and Toxins Act](http://laws.justice.gc.ca/eng/acts/H-5.67/)
* [Radiation Protection Regulations](http://laws.justice.gc.ca/eng/regulations/SOR-2000-203/index.html)
* [Nuclear Substances and Radiation Devices Regulations](http://laws.justice.gc.ca/eng/regulations/SOR-2000-207/index.html)

**Appendix D: Definitions**

*Copy and paste any definitions below that will apply to your safe work procedure. Define any additional terminology that will be used in the document.*

Administrative Controls

* The modification of work processes or activities to minimize risk

Engineering Controls

* The modification of the physical work environment to minimize risk

Hazard

* A potential source of harm to a person that can lead to a risk of injury or occupational disease

Risk

* The chance of injury or occupational disease

Risk Assessment

* The process where hazards are identified, their risk evaluated, and controls for the risk are determined to eliminate the hazard or minimize the risk

Supervisor

* Refers to the person directly responsible for overseeing the tasks of the worker

Worker

* Refers to all employees of UBC including faculty, staff, and paid students

**Appendix E: Responsibilities**

*Copy and paste the relevant personnel and their associated responsibilities into your safe work procedure. Do not delete any responsibilities listed within each category, however, you may add additional items.*

Department Head

* Review and approve safe work procedures outlined in this document prior to their implementation

Supervisor

* Identify all workers who carry out this task under your supervision
* Conduct a risk assessment to identify the potential hazards associated with the task and their associated risks
* Implement controls using the hierarchy of controls to minimize the risk due to the hazard
* Ensure safe work procedures are documented
* Ensure proper training has been provided to workers PRIOR to commencing work (e.g. safe work procedures, use of equipment or tools, personal protective equipment requirements, identifying and reporting hazards etc.) and that the training has been documented
* Ensure workers have access to and understanding of any required documentation such as manuals, Safety Data Sheets (SDS) etc.
* Educate workers on emergency procedures, contacts and numbers. If emergency contact information is not posted at the workplace, provide the worker with a copy to carry with them. The worker must know what to do in case of emergency/injury.
* All personnel must be adequately educated and trained to carry out their roles.
* Ongoing consultation with Joint Occupational Health and Safety Committee in the review and revision of this procedure to ensure the content is adequate and relevant to current research.
* Communicate risks that may arise outside of those that are predetermined

Workers

* Understand and follow this Safe Work Procedure
* Complete the required training for the task
* Use proper Personal Protective Equipment
* Report any unsafe conditions to their supervisor
* Report all incidents in [CAIRS](http://www.cairs.ubc.ca)

**Appendix F: Training Requirements**

*Copy and paste the Minimum Training Requirements into your Safe Work Procedure.*

Minimum Training Required:

1. [Mandatory Training Courses](http://rms.ubc.ca/training-and-general-education-courses/mandatory-training-for-all-ubc-workers/)
	* (<http://rms.ubc.ca/training-and-general-education-courses/mandatory-training-for-all-ubc-workers/>)
2. Workers have access to and are familiar with site specific safety and emergency procedures and contact information
3. Job Specific Training on this Safe Work Procedure. Training is documented as per Appendix A.

*List any other training requirements as required by the task. See some examples below:*

Additional Training Required

1. [Program Specific Training Courses](http://rms.ubc.ca/training-and-general-education-courses/mandatory-training-for-all-ubc-workers/#What%20training%20is%20required%20for%20working%20in%20a%20lab?) (as required by the task)
	* (<http://rms.ubc.ca/training-and-general-education-courses/mandatory-training-for-all-ubc-workers/>)
2. Bear Awareness Course

**Appendix G: Materials/Equipment**

*List the materials and equipment that would be used to perform your tasks. Some categories of examples are listed below:*

* Personal Protective Equipment
* Tools
* Equipment
* Apparatus
* Chemicals
* Materials (Wood, Sheet Metal, Concrete, etc.)

**Appendix H: Safe Work Procedure**

**Before Commencing Work:**

*Outline steps associated with personal protective equipment, equipment set up, meetings that occur before work commences etc.*

**Commencing Work/Work Procedure:**

*Outline your methodology used to carry out your task in a clear systematic process.*

**Post Procedure:**

*Outline items related to methods of disposal, expectations of housekeeping etc.*

**Other Important Information**

*Identify other important information that can help protect staff against injury and damage*

**Appendix I: Emergency Rescue and Evacuation Procedures**

**Emergency Contact Information**

*List all relevant emergency agencies and associated number to summon them. See examples below:*

* Fire Department (911)
* Police (911)
* Canadian Coast Guard
* or any other predetermined emergency assistance agency

**Mode of Emergency Communication**

*Identify the mode of communication used to contact emergency services*

* Cell phone
* Radios: Two-way (Walkie-Talkie) or HAM
* Satellite phone
* Closest landline phone identified within short walking distance, etc.

**First Aid**

*Name and certification level of first aid attendant*

* **Name of Person**: Occupational First Aid Level 2 certificate

**Procedures**

*List procedures associated with all reasonably possible emergencies. Some examples for remote locations are given below.*

Emergency Requirements Before Departure

1. Conduct a risk assessment in any workplace in which a need to rescue or evacuate workers may arise
	1. If the risk assessment shows a need for evacuation or rescue, appropriate written procedures must be developed and implemented, and a worker assigned to coordinate their implementation. Procedures should consider, but are not limited to:
		1. High angles
		2. Confined spaces and risk entrapment
		3. On or over water
		4. Restricted
2. Emergency exit routes must be designed and marked to provide quick and unimpeded exit
3. Provide a list of all required materials, equipment, rations, emergency gear, etc., and check that all persons have them packed adequately for the duration of the trip
4. Have a written procedure for checking the well-being of a worker assigned to work alone or in isolation:
	1. Must include the time interval between checks and the procedure to follow in case the worker cannot be contacted, including provisions for emergency rescue
	2. A person must be designated to establish contact with the worker at predetermined intervals and the results must be recorded by the person
5. In areas with no cell phone coverage an alternate communication plan must be developed. Some options include:
	1. a personal locator beacon (that is registered with the Canadian Beacon Registry) should be used (assists responders in search and rescue operations)
	2. A satellite phone
	3. Closest landline phone identified within short walking distance
6. If an ambulance is not able to access the workplace, appropriate upgrading includes replacing a Level 2 attendant with a Level 3 attendant and supplying ETV equipment to facilitate preparing a patient for transport
	1. The ETV should be appropriate for the terrain to be traversed and the injured or ill worker's condition
7. Communicate and train workers on the written procedure for checking the worker's well-being
	1. Document all training as a training record
8. **ALWAYS LEAVE A RECORD OF PLANS**

Working On Remote Land – Risk of Terrain or Wilderness

Work in a position that cannot be reached by a standard stairway or elevator (rock scaling, etc.), and thus limited ambulance access, must have a procedure for contacting emergency responders and providing immediate care.

**Procedure:**

1. Conduct a risk assessment based on the nature of terrain, such as but not limited to:
	1. Heights and High Angles
	2. Rocky or loose ground
	3. Slippery
	4. Hazardous flora and fauna
2. Communicate terrain risks to all persons prior to navigating, in case the work is unsafe to some
3. In response to an emergency:
	1. Provide immediate first aid until a senior authorized attendant is present
	2. Radio/call for medical assistance
	3. Activate a locator beacon or high visibility equipment if present

Working Under Thermal Conditions – Heat Stress

Where there is or may be exposure to thermal conditions which could cause heat stress, or core body temperature exceeding 38°C (100°F), conduct a heat assessment and implement control strategies.

**Procedure:**

1. Provide and maintain an adequate supply of cool potable water close to the work area for the use of a heat exposed worker
2. If a worker shows signs or reports symptoms of heat stress or strain, the worker must be removed from the hot environment and treated by an appropriate first aid attendant
3. In response to an emergency:
	1. Provide immediate first aid until a senior authorized attendant is present
	2. Radio/call for medical assistance
	3. Activate a locator beacon or high visibility equipment if present

Working On, Near or Over Water

A worker who is employed under conditions which involve working on, near or over water, must wear a personal flotation device (PFD) or lifejacket with sufficient buoyancy to keep the worker's head above water.

* If the water is too shallow to allow the lifejacket or PFD to function effectively, provide other acceptable safety measures that will protect the worker from the risk of drowning
* If a personal fall protection system, guardrail, or safety net is being used in accordance with the Occupational Health and Safety Regulation, a PFD does not need to be worn.

**Procedure:**

1. If someone gets swept away by a rogue wave (waves in the open ocean that overtake others and add together to create a larger than normal wave – these large surges can catch people working in the intertidal area off guard):
	1. Have someone keep their eyes on the person and point to them to identify their location
	2. Call the Coast Guard using a VHF radio to inform them that someone has fallen in the water
	3. Using a buoyant heaving line, throw one end to them to assist them back to shore
	4. Do NOT jump in after them as it is very difficult to make a water rescue in cold, surging waters
	5. If you are with others, make sure that everyone stays back and are not in danger of falling
	6. Once back on land, the person may require treatment for hypothermia and other possible injuries; be sure to have back up on the way from the Coast Guard or other available services
2. If workers are required to work in places from which they could fall and drown, and are not protected by guardrails or other means of fall protection permitted by the Occupational Health and Safety Regulation, the employer must provide:
	1. A suitable rescue boat, equipped with a boat hook, available at the site and capable of being used for rescue at all times
	2. A buoyant apparatus attached to a nylon rope not less than 9 mm (3/8 in) in diameter, and not less than 15 m (50 ft) in length
	3. A sufficient number of workers who are available when work is underway to implement rescue procedures and who are properly equipped and instructed in those procedures
3. In response to an emergency:
	1. Provide immediate first aid until a senior authorized attendant is present
	2. Radio/call for medical assistance
	3. Activate a locator beacon or high visibility equipment if present

Working On, Near or Over Water - Boat Specific (Working from within a Boat)

Important: The following section excludes diving and commercial fishing operations.

Boating operations must be conducted by personnel with required training and, where applicable, Operator Licenses, and only:

1. During daylight hours
2. In appropriate weather, current and sea conditions
3. From a vessel with the necessary maneuverability to ensure the worker's safety, and which is under the control of a competent master

**Procedure:**

1. The supervisor must ensure that all safety equipment is aboard the vessel and operational before leaving the dock. Equipment includes, but may not be limited to:
	1. Fuel
	2. Bailer, pumps
	3. Throw rope
	4. Anchor
	5. Personal floatation device (CSA Approved)
	6. Life-ring and rope
	7. Wire for unplugging cooling system of engines
	8. Running lights at night
	9. Paddles
	10. Lanyard for kill switch
	11. VHF radio
	12. Safety kits
	13. Charts and maps
2. The supervisor must ensure that:
	1. The propulsion system is disengaged if a worker falls overboard into water
	2. A worker overboard is continually monitored
	3. There is continuous voice communication between the driver and supervisor if different
	4. All crew members are familiar with their duties and responsibilities with respect to the work safety, and they may terminate the work if worker safety is jeopardized
3. The supervisor must establish procedures, train, and assign responsibilities to each crewmember to cover all emergencies including:
	1. Crewmember overboard
	2. Fire on board
	3. Flooding of the vessel
	4. Abandoning ship
	5. Calling for help

Working On, Near or Over Water - Boat Specific (Working from within a Boat)

**Procedure (cont’d):**

1. Before leaving on a voyage/expedition the supervisor must ensure that the vessel is capable of safely making the passage, due consideration being given to:
	1. The seaworthiness of the vessel
	2. The stowage and securing of all cargo, skiffs, equipment, fuel containers and supplies
	3. Ballasting
	4. Present and forecast weather conditions
2. If workers are required to work in places from which they could fall and drown, and are not protected by guardrails or other means of fall protection permitted by this Regulation, the employer must provide:
	1. A suitable rescue boat, equipped with a boat hook, available at the site and capable of being used for rescue at all times
	2. A buoyant apparatus attached to a nylon rope not less than 9 mm (3/8 in) in diameter, and not less than 15 m (50 ft) in length
	3. A sufficient number of workers who are available when work is underway to implement rescue procedures and who are properly equipped and instructed in those procedures
3. In response to an emergency:
	1. Provide immediate first aid until a senior authorized attendant is present
	2. Radio/call for medical assistance
	3. Activate a locator beacon or high visibility equipment if present

Remote Rescue and Evacuation – Air Transport Restriction

**Procedure:**

1. If air transportation is the primary or only method for transporting an injured worker, all of the following requirements must be met:
	1. before the start of operations in a workplace, arrangements must be made with an air service to ensure that an appropriate aircraft is reasonably available to the workplace during those operations;
	2. the arrangements must include procedures for
		1. the employer to determine the availability of appropriate aircraft before the start of each work day, and
		2. the air service to notify the employer if an appropriate aircraft ceases to be available;
	3. a system must be provided that enables the pilot of the aircraft and the first aid attendant attending to an injured worker to communicate at all times when the aircraft is in transit to the location of the injured worker and during transport of the injured worker to medical treatment.
2. In response to an emergency:
	1. Provide immediate first aid until a senior authorized attendant is present
	2. Radio/call for medical assistance
	3. Activate a locator beacon or high visibility equipment if present

**Training Requirements**

*All staff/participants must successfully complete the training requirements*

Provide a list of relevant training required to carry out the emergency rescue and evacuation procedures. Note: This training needs to be documented.

**Onsite Trained Specialists**

*Provide the name, skill and certifications of members of the research team that have any specific training that may be useful in an emergency.*

**Name of Person**: Member of local Search and Rescue team and is a local Fire Chief with 25 years experience.

**Appendix J: Job Specific Training Documentation**

Prior to conducting Job Specific Training, the Supervisor/Trainer with Subject Matter Expertise must ensure:

* [Mandatory training courses](http://rms.ubc.ca/training-and-general-education-courses/mandatory-training-for-all-ubc-workers/)  have been completed
* [Program specific safety courses](http://rms.ubc.ca/training-and-general-education-courses/mandatory-training-for-all-ubc-workers/#What%20training%20is%20required%20for%20working%20in%20a%20lab?) as required by the task have been completed

In order to conduct Job Specific Training the Supervisor/Trainer with Subject Matter Expertise must:

1. Instruct the worker to read the relevant protocol/procedure for individual tasks/techniques
	1. Ensure safety measures ([hierarchy of controls](http://rms.ubc.ca/health-safety/research-safety/general-lab-safety/#What%20is%20the%20hierarchy%20of%20controls?)) are integrated into the protocol/procedure. This means the procedure details:
		1. Elimination
		2. Substitution
		3. Engineering Controls
		4. Administrative Controls
		5. Personal Protective Equipment
2. Demonstrate how to do the task as per the protocol/procedure and have the worker observe
3. Instruct the worker to perform the task while you observe them and verify that the workers’ performance meets expectations for safety
4. Document the training using the table below

**By writing your name and initials on the table below, you acknowledge that you have received/provided job specific training as per the steps listed above.**

|  |  |  |
| --- | --- | --- |
| **Protocol/Procedure Name or Number** | **Read by trainee** | **Proficiency Witnessed by Supervisor/Trainer** |
| **Full Name** | **Initial** | **Date** | **Full Name** | **Initial** | **Date** |
|  |  |  |  |  |  |  |
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