

2018

Health and Safety Manual





Facilities Services

Emergency Contact Number

SFU Emergencies and First Aid

778-782-4500

SFU Non-Emergency

Burnaby Campus Security	778-782-3100
EHRIS	778-782-3867
Facilities Services Front Desk	778-782-3582
Buildings & Grounds Superintendent	778-782-3176
Buildings & Grounds Manager	778-782-9886
Mechanical Superintendent	778-782-3293
Mechanical Assistant Superintendent	778-782-4573
Electrical Superintendent	778-782-4083
Electrical Manager	778-782-3007
Electrical Foreman	778-782-3663
Central Stores Manager	778-782-3169
Energy Management (Ventilation Controls)	778-782- 5176

University Health and Safety Policy

The safety of all members of the university community as well as visitors to campus is a major concern of the university. It is, therefore, the policy of the university to:

1. Protect the safety of all faculty, staff, students and visitors against unsafe conditions and occupational hazards;
2. Formulate and carry out continuing effective safety programs appropriate to university operations;
3. Give priority to a safe work environment in the planning, direction and implementation of university activities; and
4. Comply with all relevant statutes, regulations and standards of regulatory authorities representing occupational health and safety.

(Refer to GP 17)

Facilities Services Commitment to Health and Safety

The University safety policy, procedures and the regulations, codes and statutes of the regulatory authorities, apply to all members of the university community (university employees, students, visitors, contractors and sub-contractors). This manual is intended for Facilities Services' employees carrying out their job functions. Designated construction areas may have requirements in excess of this manual.

Facilities Services' Management has issued the following statement with respect to its commitment to Occupational Health and Safety.

Facilities Services will conduct its operations in a manner which demonstrates the utmost respect for health, safety and the environment and is committed on working in a spirit of cooperation and consultation with all employees in achieving its mission and vision of engaging the world.

In conjunction with the SFU Environmental Health and Research Safety Office, Facilities Services will cooperate with governmental agencies and comply with all applicable legislations, regulations, SFU policies and procedures with respect to safety, health and environmental protection. We will strive to create a culture of awareness and effectively communicate our "safety culture" to employees, the university community, clients, consultants, contractors, vendors and regulatory agencies.

The Facilities Services' health and safety program will be evaluated on a regular basis, and all policies, procedures and performance will be reviewed, to identify opportunities for improvement.

Every employee shall be responsible and accountable to themselves and one another for health, safety and loss control during their day-to-day work assignments. We look forward to the cooperation of all employees as each works diligently and safely to safeguard the well-being of everyone.



Larry Waddell, MBA
Chief Facilities Officer
December 1, 2017



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Facilities Services

Introduction

Facilities Services is a service department reporting to the Vice President Finance and Administration. The senior administrative manager of the department is the Chief Facilities Officer. There are three units, Campus Planning & Development, Maintenance & Operations and Administration & Real Estate Services which have varying responsibilities on the three campuses.

Collectively these units are responsible for the stewardship of Simon Fraser University's lands and buildings. Responsibilities include campus planning, real estate and property management, development of new buildings, maintenance, operation and renovation of buildings, grounds and utility systems, space and system inventory record keeping, and support for sustainability initiatives across all three campuses.

Facilities Services also provide maintenance and operational services on a fee or cost recovery basis to student residences, food services and a variety of auxiliary units. In all, the above services are provided for more than 432,000 square meters of campus, 156.8 hectares of land, serving approximately 32,700 students.

Who are we?

Facilities Services is a diverse and dynamic group of professionals who pride themselves on being dedicated to the provision of support services necessary to promote excellence in the teaching, research and public service activities at Simon Fraser University.

Our 150 staff members plus 140 external contract employees, are our most valuable asset. Our credentials vary widely; we are comprised of skilled technicians and trades persons, custodians, groundskeepers, mechanics, electricians and carpenters, operating engineers, maintenance professionals, clerical assistants, engineers, architects, technologists, managers, administrators and more. We seek creative and innovative solutions to meet our customers' needs. We strive to provide reliable and timely service at competitive costs and continually aim for high levels of service. We pride ourselves in our ability to support the facility and operations needs of this world class institution.

Health and Safety

With 260 active staff members and contractor working around campus, Facilities Services takes health and safety at the upmost highest priority. Workplace health and safety is a legislated obligation shared by everyone at Facilities Services. The University President carries the obligation to establish and maintain the health and safety standards for the University; Managers and Supervisors carry the obligation to ensure the health and safety standards are enacted and enforced in the workplace, and Employees carry the obligation to fulfill and comply with the health and safety standards prescribed by the University and Facilities Services

Facilities Services (FS) has developed a comprehensive Health and Safety program that will be implemented and maintained by all FS staff and contract members. The program will be evaluated, reviewed and updated on a regular basis with the collaboration of the FS Local Joint Health and Safety Committee, Managers and EHRS. All documentation and records will be kept and maintained by FS staff for their activities conducted by staff and contractors.



Roles and Responsibilities

For Facilities Services' Health and Safety program to be implemented successfully, one major aspect of the program is to assign roles and responsibilities to all levels of the organization. It is important that every party maintain their roles and responsibilities in order to ensure due diligence and a proper functioning safety management system. The following roles and responsibilities are expected to be maintained by each group or individual.

Responsibilities

Officers, Directors and Assistant Directors

- Provide management with the necessary support, resources and leadership for the overall planning, implementation and execution of the University and regulatory/legislative requirements.
- Take all reasonable measures to ensure that SFU Facilities Services complies with all pertinent legislation requirements and standards.
- Incorporate adequate provisions for safe work practices and conditions in operational policies and procedures, as well as in programs and projects.
- Monitor and evaluate safety performance within their areas of responsibility and provide recommendations, as required.
- Ensure Facilities Services Health and Safety program is consistent with the SFU Health and Safety policy.
- Lead by example and demonstrate positive safety behaviours at all time.
- Participate in the development, implementation and maintenance of health and safety activities at Facilities Services.
- Encourage and promote health and safety throughout the University.
- Participate in various university and external health and safety training and orientation
- Participate and promote emergency preparedness and drills in the University.
- Where required or possible, participate or conduct incident/near miss investigations.
- Participate in the annual or regular review and update on the University's health and safety program.
- Ensure contractors are qualified, competent and reputable for hire and to perform the required project/work in a healthy and safe manner.
- Maintain an open communication with all levels of employee, student and faculty regarding health and safety.

Superintendents, Managers, Project Managers and Supervisors

- Know and understand all regulatory health and safety requirements pertaining to the work being conducted.
- Ensure employees and contractors are made aware of all known or foreseeable hazards and risks in their work area, and ensure that appropriate control measures are implemented.
- Ensure employees and contractors receive adequate orientation, training and instruction to safely perform their work.
- Ensure employees and contractors have demonstrated competency in the knowledge of the training/orientation provided by the University.
- Ensure contractors are qualified and competent for hire and to perform the required project/work in a healthy and safe manner.
- Ensure that guidelines, practices and instructions are provided to all employees/contractors under their direction.
- Allocate the necessary resource for equipment, materials and staff in order to meet the objectives of the Facilities Services' Health and Safety Program.
- Maintain an open communication with all levels of employees regarding health and safety.
- Lead by example and demonstrate positive safety behaviours at all time.

Facilities Services

- Participate in management development, implementation and review of Facilities Services' Health and Safety programs for ongoing suitability, adequacy, and effectiveness, as well provide recommendations to continuously improve the programs.
- Plan and execute all activities in a manner that promotes compliance with the University's policy and regulatory requirements.
- Ensure work areas are inspected at regular intervals to prevent the development of unsafe conditions and practices.
- Provide feedback and comments to help continuously improve the current health and safety management system in place.
- Authorize the necessary actions to correct unsafe practices and conditions.
- Coach and mentor new and young employees in the workplace.
- Ensure all incidents and near misses are reported, investigated and recommendation(s) are implemented to prevent future reoccurrence.
- Participate in LJHSC meeting, Facilities Services' Manager Meeting, Toolbox Talk and other health and safety related meetings.
- Ensure that first aid and/or medical treatments are received for all employee's injuries and/or illness, and the appropriate documentations are completed and submitted.
- Encourage and promote health and safety throughout the University.
- Participate in various university and external health and safety training and orientation
- Participate and promote emergency preparedness and drills in the university.
- Participate in the regular review and update on the Facilities Services' Health and Safety programs.

Facilities Employees

- Understand and comply with the University's Health and Safety policies, programs, safe work practices, procedures and legislative requirements.
- Not perform any task or activity that is considered hazardous or known to be hazardous, before requesting advice/consultation with their supervisor as to the safe manner to proceed.
- Participate and promote emergency preparedness and drills at the University.
- Report all injuries or illness that occurred during work hours and work premises.
- Participate in workplace inspection, incident/near miss investigation, health and safety meetings/review, training, orientation, risk assessment, and any other health and safety related activities.
- Report any concerns, unsafe acts/conditions, incidents, near misses, deficiencies, and any other health and safety related matters to the direct supervisor, manager or LJHSC.
- Provide feedback and comments to help continuously improve the current health and safety management system in place.
- Follow and use all control measures required to perform a task or activity in a safe and healthy manner.
- Encourage and promote health and safety throughout the University.
- Maintain and inspect all tools and equipment to ensure good working condition, remove any damaged or defective tools and equipment from the workplace for servicing or discarding.
- Maintain all health and safety program's documentation related to their scope of work.
- Follow all SFU procedures, practices and manufacturer's requirements.
- Behave in a manner that ensures the safety of themselves and everyone.
- Obtain medical treatment for injuries or illness occurred from work and follow the precaution/requirements from the medical provider.
- Complete and submit all health and safety documentation from the University or regulatory agency in a timely manner.

Environmental Health and Research Safety (EHRS)

- Develop, institute and maintain health and safety programs, policies and procedures to ensure compliance with regulation/legislation and university requirements.
- Review and provide assistance to departments and areas to ensure that effective health and safety programs and committees are maintained.
- Review all feedback/comments from SFU employees and contractors, prior to recommending for implementation to supervisor and managers.
- Conduct workplace inspections of the University's facilities at appropriate intervals to identify potential hazards and provide the necessary recommendations.
- Lead or participate in all incident/near miss investigation and advise the Board of all reportable incidents.
- Provide or arrange training on health and safety related subjects for Facilities Services' employees.
- Provide feedback, comments and recommendations for health and safety matters on campus to management.
- Conduct health and safety orientation for new and young employees, as well as contractors and consultants.
- Encourage and promote health and safety throughout the university.

Facilities Services Local Joint Health and Safety Committee (Facilities Services LJHSC)

- Lead or participate in the development, implementation and maintenance of the health and safety programs, policies and procedures, to ensure compliance with regulation/legislation and university requirements.
- Review and provide assistance to departments and/or areas to ensure that effective health and safety programs and committees are maintained.
- Ensure that the monthly LJHSC meetings are scheduled and held in an appropriate manner.
- Lead or participate in all incident/near miss investigation and advise the Board of all reportable incidents.
- Provide feedback, comments and recommendation for health and safety matters on campus to management.
- Encourage and promote health and safety throughout the University.
- Participate and promote emergency preparedness and drills in the university.
- Report all injuries or illness that occurred during work hours and work premises.
- Participate or lead in workplace inspection, incident/near miss investigation, health and safety meetings/review, training, orientation, risk assessment, and any other health and safety related activities.
- Report any concerns, unsafe acts/conditions, incidents, near misses, deficiencies, and any other health and safety related matters to the direct supervisor or manager.
- Work cooperatively with employees that bring up any concerns, unsafe acts/conditions, incidents, near misses, deficiencies, and any other health and safety related matters to ensure they are appropriately addressed.

Prime Contractors

- Ensure employees and sub-contractors are competent and reputable for hire and to perform the required project/work in a healthy and safe manner.
- Encourage and promote health and safety throughout their project site.
- Maintain an open communication with their contractors, employees and SFU representative.
- Provide all relevant health and safety documentation to SFU representative, prior to the start of project and/or during project.
- Maintain all health and safety related documentation and program at all times on their project site.

- If required, maintain the Joint Occupational Health and Safety Committee in their project site for the whole duration of the project.
- Ensure they have completed SFU Contractor Safety Orientation and SFU Contractor Safety Checklist, prior to start any work with the university.
- Ensure that their Health and Safety programs is established, implemented and maintained while working for SFU.
- Provide their own orientation to their employees and sub-contractors, including information from SFU Contractor Safety orientation.
- Investigate all near miss and incidents internally and ensure reportable incidents are reported to the Board or the applicable regulatory agency
- Inform SFU representative when a regulatory agency is visiting their project site and submit copies of any regulatory documents.
- Maintain all health and safety related documentation and program at all times on the project site.
- Conduct inspections as indicated from their health and safety program and regulation.
- Follow all emergency and first aid procedures established and implemented in the project site that was developed with the University and the Prime Contractor.
- Work cooperatively with their employees and sub-contractors that bring up any concerns, unsafe acts/conditions, incidents, near misses, deficiencies, and any other health and safety related matters to ensure they are appropriately addressed.
- Perform work that meets all regulatory and legislative requirements.
- Follow all SFU procedures, practices and requirements when work will cross with the University.

Contractors and Consultants

- Ensure sub-contractors are competent and reputable for hire and to perform the required project/work in a healthy and safe manner.
- Ensure employees and sub-contractors are orientated, well trained and instructed to perform their assigned duties/tasks.
- Encourage and promote health and safety throughout their project site.
- Report any concerns, unsafe acts/conditions, incidents, near misses, deficiencies, and any other health and safety related matters to the direct supervisor or manager.
- Report all incidents and near misses to their direct SFU representative in a timely manner.
- Investigate all near miss and incidents internally and ensure reportable incidents are reported to WorkSafe BC or the applicable regulatory agency.
- Inform SFU representative when a regulatory agency is visiting their workplace.
- Provide all relevant health and safety documentation to SFU representative prior to the start of work and during work.
- Maintain all health and safety related documentation and program at all times on campus.
- Conduct inspections as indicated from the health and safety of SFU, regulation and their company.
- Maintain an open communication with their contractors, employees and SFU representative.
- Follow all emergency and first aid procedures from the university.
- Work cooperatively with employees that bring up any concerns, unsafe acts/conditions, incidents, near misses, deficiencies, and any other health and safety related matters to ensure they are adequately addressed.
- Ensure SFU Contractor Safety Orientation and SFU Contractor Safety Checklist are completed, prior to start any work with the university.
- Ensure a Health and Safety program is established, implemented and maintained while working for SFU.



Facilities Services

Legislation

SFU Facilities Services understands the importance of operating their organization in accordance to the strict requirement from BC legislation and regulation. SFU Facilities Services will ensure that the organization will always operate their business in compliance to, WorkSafe BC and the Worker Compensation Act of BC, as well as any other applicable legislation or standards. SFU Facilities Services will ensure compliance by incorporating the requirements from the regulation/legislation and the University's health and safety program in their project/work, planning, development, bidding, scheduling, and operation.

WorkSafe BC

Link: <https://www.worksafebc.com/en>

Worker Compensation Act of BC

Link: http://www.bclaws.ca/civix/document/id/complete/statreg/96492_00

University Guidelines and Practices

The university has established guidelines and practices for all employees and contractors to follow. The guideline/practices is created for the purpose of protecting and ensuring the health and safety of all employees, contractors, students, faculty and the general public.

SFU Facilities Services Guidelines

The following rules have been established to ensure that Facilities Services main requirements are easily laid out for all staff, contractor, consultant and visitors to review. The below rules are to be followed at all times on SFU Campus:

- Employees/contractors must arrive for work fit and capable of performing their assigned tasks. Employees/contractors who arrive for work and are unable to perform their assigned duties due to intoxication, fatigue, substance abuse or for other personal reasons unrelated to the work will be sent home.
- Employees/contractors who have sustained a non-workplace injury which affects their ability to perform their normally assigned duties must advise their Supervisor of any prescribed limitations.
- Employees/contractors must immediately report all work related injuries and illness to their Supervisor, regardless of severity, and complete the SFU Workplace Incident Report form.
- Employees/contractors must report all incidents and near misses immediately to their Supervisor,
- Any unsafe conditions and/or unsafe acts must be immediately corrected and reported to their immediate Supervisor.
- Employees/contractors has the right to refuse any unsafe work, task or act.
- Equipment and machinery must be shut down and locked-out before adjusting, repairing or servicing unless a specific work procedure is in place which permits operating of the equipment during such task. Shut down equipment and machinery before fueling.
- No one is permitted to work alone in an isolated area and/or undertake hazardous tasks alone unless prior arrangements have been made for periodic checks with another individual or a form of communication to summon assistance is readily available.
- Engaging in horseplay, fighting, rowdiness, vandalism or theft is strictly prohibited and can result in disciplinary action.
- Acts of sexism, discrimination, bullying/harassment or racism is not tolerated and can result in disciplinary actions.
- Possessing or working under the influence of alcohol or illegal drugs on the worksite is strictly prohibited and can result in disciplinary actions.
- Good housekeeping is an ongoing requirement and all employees/contractors must ensure housekeeping is performed and maintained regularly.
- Smoking is permitted only in designated areas.
- Operate equipment and vehicles only if assigned as a designated operator.
- Where operator certification is required, only certified operators may use equipment.
- All drivers of university vehicles must possess a valid BC driver's license.
- Posted speed limits, traffic signs and campus driving practices must be obeyed. As well the use of electronic devices while operating a vehicle or equipment is not permitted.
- Seat belts and any safety devices are mandatory at all times while operating vehicles and equipment.
- No person may remove, impair or disable any safety devices on any tools or equipment.
- Use only tools and equipment which are appropriate and suitable for the task.
- Immediately remove from service of any equipment and/or tool which is defective or require service.
- Hazardous materials must be used in accordance with the manufacturer's instructions.

Failure to follow the above rules and requirements can lead to disciplinary action from SFU



Facilities Services

Practices

Practices are guidelines that provides information on how a job or task can or cannot be performed. However, it does not provide a step by step procedure. The following list of practices should have procedures developed and reviewed prior to conducting the task:

- Manual Materials Handling
- Chainsaws
- Circular Power Saws
- Scaffolds and Ladders
- Housekeeping
- Tools, Machinery and Equipment
- Lab access
- Concrete Cutting
- Concrete Grinding
- Chipping and Jack Hammers
- Drills
- Electrical Powerlines
- Electrical Cords and Plugs
- Electrical Safety
- Excavations
- Fall Protections
- Hammer Drills
- Confined Space
- Lead
- Specialized PPE (i.e. Fall Protection)
- Grinders
- Guardrails
- Ladders
- Pneumatic Nail Gun
- Powered Hand Tools
- Powered Equipment
- Fueling Vehicles
- General Hand Tools
- Lighting
- Powder Actuated Tools
- Shrouds
- Housekeeping
- Fire Extinguishers
- Compressed Gas Cylinder
- Forklifts
- Powered Manlift
- Asbestos
- Flammable and Combustible Liquids
- General PPE (i.e. safety glasses)

Refer to the Practices' files for the specific and detail practice.



Safe Work Programs

Safe Work Programs are a supplementary component that is part of the main health and safety program. These programs lay out in detail the purpose, scope, responsibilities, requirements and standards in their specialized areas. Safe Work Programs are developed based on SFU's risk assessment or by regulatory requirements.

Asbestos

Asbestos is a naturally occurring fibrous material that was a popular building material from the 1950s to 1990s. It was used extensively because it is an excellent insulator, has good fire resistant properties, high tensile strength and its resistant to chemical erosions.

Asbestos is known to be containing in some of SFU's building materials. The asbestos containing material (ACM) does not pose a threat to any person's health or safety, as long they are not disturbed (i.e. sanding, drilling, scraping, scratching, coring, cutting or broken apart). SFU has established an Asbestos Exposure Control Plan that addresses location of ACM materials on campus, the health and safety of the building occupants, staff and contractors involved with renovation work, general repairs and routine maintenance.

SFU maintains an Asbestos Inventory that tracks building materials which contains asbestos fibres. However, there are areas in the University that have not been tested or assessed for asbestos. It is the University's standard practice to sample materials that are in question, prior to any disturbance. To view the inventory, please contact the EHRS department: 778-782-3011.

SFU has adopted and implemented the following processes on identifying ACM, prior to working on any building materials:

1. Posting
Some of the mechanical rooms or equipment rooms have a posted sign placed on the wall. As soon as a person walks into any of these rooms, the first thing they will see is the posted sign. This sign will identify the location of the potential ACM in the room.
2. Labelling
Some building materials containing ACM have been labelled/stamped with either a red or black stylized "A" with a circular border, and spaced at 15' intervals. *** Not all building materials that have been identified as ACM are labelled/stamped. ***
3. Sampling and Testing
Materials that are in question and does not have any labels confirming ACM is present must be sampled and tested for asbestos. All sampling and testing must be conducted by a qualified person as defined by WorkSafe BC.



Facilities Services

A Supervisor must ensure that all employees under their direction have taken appropriate asbestos training and have been made aware of the possible presence of asbestos. All employees and contractors must follow asbestos safe work procedure and be adequately trained on safe asbestos handling practices, prior to working on or near any ACM.

If any person discovers ACM which has been disturbed, they must immediately close off the area, leave and notify their Supervisor and EHRS.

Link: <https://www.sfu.ca/srs/ehs/facilities-trades/asbestos-management.html>

Refer to the Asbestos Exposure Control Plan for further information.



Facilities Services

Mould Control

Fungi or “mould” refers to eukaryotic, spore-bearing, multicellular organisms which are often microscopic, but can grow into macroscopic, intertwined filaments or hyphae visible to the human eye. Mould is naturally present in nearly every environment on earth and is generally ubiquitous both indoors and outdoors. Due to this fact, everyone is exposed to mould routinely throughout their life.

Moulds will grow (indoors or outdoors) if sufficient oxygen, carbon-based nutrients, temperature, and moisture are present. Therefore, moisture/water is generally the determining factor as to whether or not mould will grow indoors.

Currently no regulations specifying allowable limits or concentrations of airborne mould exist in British Columbia or Canada. This is due to variations in people’s sensitivity level and non-consensus among governing bodies regarding numerical limits for moulds in workplaces as well as residential environments. However, in British Columbia, WorkSafeBC provides regulations which are applicable to mould at worksites.

Various service units and departments are required to communicate and coordinate in an effective and timely manner in order to control and prevent mould hazards within buildings on SFU campuses. Maintenance and Operations staff play a critical role in the prevention of, reporting and remediation of water/moisture and mould related issues as they relate to IAQ, including: participating in training provided by EHRS related to mould prevention, investigation and remediation; conducting inspections of buildings while carrying out normal work activities, for signs of water/moisture ingress and mould issues; responding to leaks, report mould concerns, and contain and conduct minor repair work on mould impacted areas (e.g. applying poly sheeting or encapsulant, etc.)

Work that is conducted with mould must only be performed by a qualified and trained person, as defined in the SFU Mould Control Program (MCP). This includes SFU Employees, Contractors, Consultants and Analytical Laboratories. The university will provide employees with the appropriate training prior to assigning any work duties that deals with mould.

If any person discovers mould, they must leave the area and then notify their Supervisor and EHRS (778-782-3011) immediately.

Link: <https://www.sfu.ca/srs/ehs/air-quality/mould-faqs.html>

Refer to the Mould Control Program for further information.



Facilities Services

Hearing Conservation

The objective of a Hearing Conservation program is to minimize occupational hearing loss by providing hearing protection, training and hearing testing to employees. Protecting the hearing of a person is important to maintain the quality of personal life and work. Loss of hearing can lead to various health concerns not only the difficulty or loss in hearing.

Any noise concerns should be reported to the immediate supervisor. If required, EHRS or a qualified consultant can perform a noise assessment to the area and identify noise levels. Engineering controls and/or hearing protection must be utilized when the noise level reaches or exceeds:

- 85 dBA Lex daily noise exposure level, or
- 140 dBA peak sound level.

Prior to the use of any hearing protection equipment, training must be provided to the user for effective use. Hearing protection can be obtained through the direct Supervisor, Manager or SFU Central Stores.

To ensure the SFU Hearing Conservation program is maintained, an annual hearing test will be provided by the University. All permanent employees are required to take the hearing test to determine their ability to hear. This test can track the employees hearing condition and help determine solutions to prevent further occupational hearing damage. Hearing test result will be reviewed with the individual to explain the test record, identify any concerns and recommend corrective actions, if required.

SFU has many location that will require hearing protection to be worn. Some areas and activity that requires hearing protection includes, but are not limited to:

- Operating power tools.
- Working in active shops.
- Testing alarm systems.
- Working beside or close to generators.
- Operating mobile equipment.
- Operating snow vehicles.
- Scaffold installation and dismantling.
- Working beside or inside a construction area.
- Tasks that involves the impact of metal objects.



Lead

Lead is a natural metal that, due to its wide historical use in industrial, commercial and residential applications, is present in air, water and soil. Everyone absorbs some lead from the food they eat and the air they breathe. At Simon Fraser University, there is a potential for additional exposure by workers, contractors and building occupants.

Lead does not present a hazard if it is left intact. The health risks occurs when they are chipped, sanded, drilled, scraped, cut, peeled or otherwise damaged/disturbed. When lead is disturbed the dust or airborne/loose material can be released into the work environment. Lead enters the body through ingestion or inhalation. Inhalation occurs when you breathe in lead fumes or lead-contaminated dust particles. Ingestion occurs when lead-contaminated skin, hair, clothing, objects or surfaces come into contact with food, drink, chewing gum or any object placed in the mouth (i.e., pen, cigarette).

Once in the body, lead is stored primarily in the bones and slowly eliminated over time. Chronic lead exposure can affect the brain and nervous system, the reproductive system in men and women, the digestive system, the kidneys and the body's ability to make blood. Signs and symptoms include:

- short term memory loss, depression, fatigue, insomnia, headaches, stupor, slurred speech;
- nausea, abdominal pain, constipation, poor appetite, weight loss;
- loss of coordination and numbness and tingling in the extremities.

WorkSafe BC lists an 8-hour time weighted average (TWA) exposure limit for lead of 0.05 mg/m³. Lead is also recognized as having adverse reproductive effects and is classified a 2A carcinogen (probable for humans).

Prior to conducting any work on painted surfaces (indoor or outdoor), the surface must be tested for lead or conduct the work assuming the surface contains lead. Any work that is conducted on lead the employees or contractors must be qualified and trained to perform the work, as well follow all procedures/practices established by the university or their employer.

If any person discovers lead base paint that has been disturbed without adequate protection (i.e. workers or the public), they must stop the work immediately, close off the area with applicable warning sign, leave the area and then notify their Supervisor and EHRS: 778-782-3011 immediately.

Link: <https://www.sfu.ca/srs/ehs/facilities-trades.html>

[Refer to the Lead Exposure Control Plan for more information.](#)



Facilities Services

Confined Space

As defined by WorkSafe BC and adopted by SFU, a confined space is an area, other than an underground work area, that:

- Is enclosed or partially enclosed,
- Is not designed or intended for continuous human occupancy,
- Has limited or restricted means for entry or exit that may complicate evacuation, rescue, first aid or other emergency response services, and
- Is large enough and so configured that a person could enter the space to perform their assigned task(s).

Prior to entering any confined spaces there are various items that must be fulfilled which includes, but not limited to:

- Employees or contractors to be qualified, competent and trained to perform work inside a space, as well to follow all procedures/practices for confined space entry.
- A risk/hazard assessment to be completed for the space by a qualified person and reviewed with all parties involved.
- The space's atmosphere to be tested to ensure safe entry (i.e. oxygen level at 20.9% by volume)
- Standby person and emergency communication has been established and implemented.

Confined spaces must be adequately labelled with precaution indicated on the signs to prevent accidental entry. These spaces should always be closed off with limited access ability (i.e. locked). Any person that has concern of a confined space or discover unauthorized entry or open, must immediately inform the entrant to evacuate immediately (while standing outside the space), close the area off (if no person is inside the space) and inform their Supervisor and EHRS: 778-782-3867 immediately.

Some common confined spaces identified in SFU includes, but not limited to:

- Electrical Pits
- Boiler Tanks
- Sump Pump Pits or Tanks,
- Excavation or Trenches
- High Voltage Pull Pits
- Valve Access Manholes
- Storm Lines or Drains
- Sewage Lines or Drains
- Strobic Fume Hood Exhaust Unit
- Fire Sprinkler Valve Chambers

Contact EHRS for the inventory of SFU Burnaby Campus's Confined Spaces.

Link: <https://www.sfu.ca/srs/ehs/facilities-trades/confined-space-entry.html>

[Refer to the Confined Space Program for more information.](#)



Fall Protection

Falls are one of WorkSafe BC highest injury rate that accounts for 17% of injuries. Fall Protection is an important component of a Health and Safety program and must be implemented in a workplace where a fall hazard height of 10' or more is present, or where a fall from a lesser height involves a greater risk of injury (i.e. falling into a vat of corrosives). When selecting a control measure for fall protection ensure to consider the fall protection hierarchy of control:

1. Elimination,
2. Guardrail,
3. Fall Restraint,
4. Fall Arrest, and lastly
5. Other procedures acceptable to the Board.

Prior to any person working at heights, they must be adequately trained and competent to use and maintain the fall protection equipment for their scope of work.

When working at heights, it is best to identify the highest point where work will be conducted in the workplace. A Fall Protection Plan must be completed and made available in the work area where a height of 25' or greater is present. A Fall Protection Plan is also required when the top 4 fall protection hierarchy of control measure cannot be implemented. EHRS is available to assist in any Fall Protection Plan development, review and implementation, if required. A copy of the Fall Protection Plan should also be submitted to EHRS: 778-782-3867 in conjunction to the department's management.

Accessing roofs is a common task for SFU Facilities Services and contractors to conduct routine maintenance work/service. Before any person can access to SFU roofs, the person must contact (1 day advance notice) to at least one of the following:

Facilities Services - Buildings and Grounds	778-782-3179
Facilities Services - Mechanical	778-782-3293
Facilities Services - Electrical	778-782-3294
SFU Campus Planning and Development	778-782-4552
SFU Environmental Health and Research Safety	778-782-3867

For information on the roof's engineered anchor points and hazards, each roof entry point (i.e. doorway) has the roof access plan and map available for review. Ensure to review the plan and map prior to stepping on the roof. The roof's engineered anchor points are meant for fall protection use and are annually inspected and maintained by a qualified contractor and Professional Engineer.

Some of the precaution while working on a roof includes, but not limited to:

- **Fume Hood Exhaust Stacks** – stay 15' away in any direction.
- **Air Intake** – Do not perform any work near the intake that may generate hazardous or irritating odours, fumes, vapours or gases.
- **Antennas and Dishes** – These equipment can generate radio frequency, microwave and/or some other form radiation, ensure to stay 10' away from those equipment in any direction.
- **Skylights** – Do not step or place any object on top of the skylights. Skylights are not rated for normal human impacts. Use guardrails, maintain 6.5ft clearance or utilize other fall protection.
- **Other exhaust stacks** – Ensure to verify with your supervisor or manager to determine what is exhausted out of the stack. Determine the appropriate controls prior to working near the exhaust stacks.



Facilities Services

While working on the roof a Fall Protection Plan is required when working near the leading edge, as well when work will be 6.5' away from the edge.

Fall Protection Equipment is available from each department. Some of the satellite shops may have some equipment available. Equipment are to be signed out with the department manager and returned at the end of every shift. Equipment must be inspected prior to each use and in accordance to the manufacturer's requirements.

Link: <https://www.sfu.ca/srs/ehs/facilities-trades/fall-protection.html>

Refer to the Fall Protection Program for more information.

Ladders are used by Facilities Services on a daily basis. Prior to using the ladder, the employee or contractor must be trained to use the ladder properly and in accordance to the manufacturer standards. At a minimum ladders should be setup and used in accordance with, but not limited to the following:

Extension Ladders

- Level, sturdy and stationary.
- 4:1 ratio
- 3 points of contact maintain while climbing.
- Extend 3' above the next level
- Secured at the top and the bottom, of brace at the bottom with a helper.
- Legible manufacturer labels
- Rung lock to be set in position.

Step Ladders

- Fully open with the spread brace locked in.
- Not to use the top 2 rungs of the ladder including the top cap.
- Anti-slip safety feet at the bottom.
- Legible manufacturer labels.
- 3 points of contact while climbing.

Depending on the height of the ladder, fall protection equipment may be required to be used with the ladder.

The two most common scaffold used at SFU are stationary and mobile scaffold (with wheels). Scaffold are to be installed and dismantle only by trained and competent employees or contractors. Scaffold components must not be mixed with other scaffold equipment and must be inspected prior to any installation, dismantle or use. At a minimum, the following scaffold practice must be followed, but not limited to:



Facilities Services

Mobile Scaffold

- Lock wheels prior to use.
- No person on the scaffold while moving.
- Used on a level and stable surface.
- No climbing on the bracing.
- Ladders installed.
- Guardrails around all 4 sides.
- Toe boards installed where there is a hazard of rolling objects on the platform.
- Install outriggers when the height of the scaffold exceeds 3 times its minimum base dimension
- Installed, dismantle and used in accordance to the manufacturer.

Stationary Scaffold (i.e. System or Frame & Brace)

- Installed on a level and sturdy surface.
- No climbing on the braces.
- Ladders or proper access installed.
- Caging to be installed when ladder is 7'- 6" or greater.
- Guardrails around any fall hazard.
- Guardrail between the scaffold platform and the building wall when spacing is 12" or more.
- Engineered by a P.Eng when:
 - Over 125' in height.
 - Over 80' in height with stairways
 - Supports a temporary floor.
 - Enclosed or covered.
 - Cantilevered from a structure.
 - Support by a catenary line
 - A needle beam scaffold, or
 - An outrigger scaffold.

When the scaffold is close to high voltage or where electrical charges are likely to induce in the scaffold, the scaffold must be effectively grounded.

In addition scaffold must be installed, dismantled and used in accordance to CSA Z797-09 (2014) or any other applicable standards that are acceptable to the Board.

Ergonomics (manual material handling)

Proper ergonomic is key to eliminate or mitigate potential work related musculosketel disorders/injuries (MSI). Ergonomics can be prevented through engineering, equipment, proper work practices and administrative controls.

Risk assessments are conducted to determine the workplace risk of MSI. Where risk of MSI are identified, procedures/practices are established to prevent injuries. Employees must be trained in these procedure/practices prior to conducting any work/task that has a risk to MSI. Where there are task, equipment or work that is concerning to MSI, the immediate supervisor must be notified to help provide solution or alternative means to reduce or remove the risk of MSI.

The following practices are to be followed for manual material handling, but not limited to:

- Use powered equipment (i.e. forklift) to conduct the lift where possible and practicable.
- Ergonomic non-powered equipment (i.e. dolly) should be used where powered is not optional.
- Large, heavy or awkward lifts should be performed by two person, at a minimum.
- Twisting or jerking motion while conducting a lift should be avoided as much as possible.
- Hold the object by the base and square/tight to the body and finally raise it off the ground with the legs instead of your back.
- Position any work to waist or slightly higher height for long period of work on a table or sorting.



Link: <https://www.sfu.ca/srs/ehs/ergonomics.html>

Refer to the Ergonomics Program for more information.



Facilities Services

Traffic Management

Where there are potential to disrupt the normal traffic of walkways or roadways a Traffic Management Plan must be developed, approved and implemented prior to the disruption. Where a disruption is on SFU owned roadways or walkways, the Traffic Management Plan must be submitted to SFU Traffic Safety Manager for review and approval. A submitted Traffic Management Plan to SFU will require at least a 1 week turn around. Any other roadways or walkways must be submitted to the municipal government for review and approval. Traffic Management Plans submitted to the municipal government still needs to be provided to SFU Traffic Safety Manager.

The temporary road/walkway signs, signaling and coordination of traffic must only be conducted by trained and certified Traffic Control Person (TCP). Training must be provided through a qualified trainer, consultant or company accredited by WorkSafe BC. TCP must be trained prior to working on any roadways or walkways.

All traffic control equipment, arrangements and procedures must meet the requirements of the latest edition of the "Traffic Control Manual for Work on Roadways" (the "Traffic Control Manual) issued by the Ministry of Transportation.

Link: <https://www.sfu.ca/srs/security/traffic-safety.html>

Refer to the Traffic Management Program for more information.



Facilities Services

Hot Work

Any work activity that can potentially generate sparks or an open flame is considered as hot work. Appropriate control measures must be in place prior to conducting any hot work to prevent and mitigate any fire or explosions. Any employee or contractor that perform hot work must be adequately trained on the equipment, have a fire suppression/prevention equipment at the hot work area, follow SFU hot work protocols and any other hot work procedures/practices.

Before any hot work can begin, a Hot Work permit must be issued and obtained. To request for a Hot Work permit provide a 1 day advance request to EHS. At a minimum, all hot work must have an appropriate fire extinguisher available at the work area.

The following general steps must be followed for most hot work activities:

1. Request and obtain Hot Work Permit from Facilities Services.
2. Contact security prior to the start of hot work and have available an appropriate fire extinguisher.
3. Adequately protect/control the work environment from any potential fire or explosion hazards.
4. Conduct the hot work activity.
5. Once all hot work activity in the work area has been completed, clean up the work area and remove all hot work activity debris, equipment and tools. Ensure there are no potential for any burning materials left behind.
6. Conduct the 1 hour fire watch at the work area.
7. When the 1 hour fire watch has been successfully completed with no incident, contact Campus Security and inform them the hot work (including the fire watch) has been successfully completed.
8. Security will confirm and will conduct their fire watch for each hour and for the next 4 hours.

Before starting work, ensure that air intake, sprinkler system, smoke detector or emergency systems are properly protected or deactivated. Any systems in the building must only be deactivated or altered by SFU Facilities Services' Electrical trade staff. A 1 day advance notice should be provided to Facilities Services' applicable department to provide the system deactivation.

Link: <https://www.sfu.ca/srs/ehs/facilities-trades/hot-work-requirements.html>

Refer to the Hot Work Program for more information.



Lock Out

When work is required to be performed in or on an equipment, space or area that has a potential energy source that can cause injury, illness or death, an effective lock out system must be in place. An energy source can be:

- Kinetic
- Liquid
- Mechanical
- Electrical
- Thermal
- Chemical
- Radiation
- Materials
- Biological
- Electrochemical

To lockout an energy source, each employee or contractor must be issued with a personal lock and be open with a unique key, or by a master key held by the Supervisor (for emergency use only). Combination locks are strictly prohibited. The personal lock will be applied on the energy ignition switch, source or device, once the energy source has been properly shut off/removed and verified. Removing personal lock should only be conducted by the employee owning the lock or in emergency by the Supervisor.

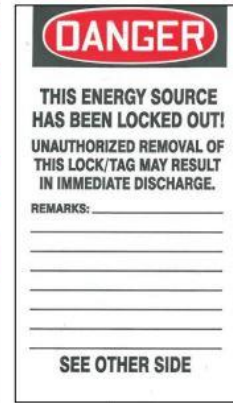
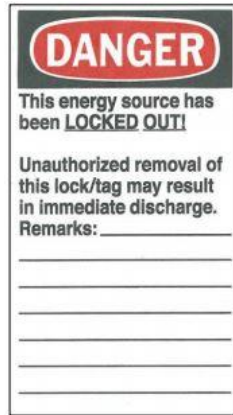
The follow general lockout protocol should be followed to ensure a proper lockout:

1. Notify all affected personnel that a lock-out is required and the reason for locking out.
2. If the equipment is operating, shut down the system (depress stop button, open toggle switch, turn valve etc.). Operate the switch, valve, or other energy isolating device so that the energy source(s) (water, electricity, etc) is disconnected or isolated from the system.
3. Stored energy such as that in capacitors, springs, elevated machine members, rotating flywheels, hydraulic systems, and air, gas, steam or fluid pressure, etc., must also be dissipated or restrained by methods such as grounding, repositioning, blocking, blinding, blanking, bleeding, etc. Stop buttons on equipment are not acceptable isolating devices.
4. Lock-out the energy isolating device with the personal lock. More than one person may apply a personal lock using "Scissors".
5. Tag the lock, identifying the date of application and the individual applying the lock.
6. After ensuring that no personnel can be exposed, operate the push button or other normal operating controls to ensure that the system will not operate. If no energy source is activated, then the lockout is successful.



Facilities Services

SFU approved Lockout Tags:



Link: <https://www.sfu.ca/srs/ehs/facilities-trades/lockout-procedures.html>

Refer to the Lockout Program for more information.



Facilities Services

Workplace Bullying and Harassment

Bullying and Harassment is an occupational health and safety issue that poses a potential risk to the physical and mental health and safety of employees. It can lead to lower productivity, physical illness, and increased risk of injury.

Workplace Bullying and Harassment is defined as: **any inappropriate conduct or comment by a person towards a worker that the person knew or reasonably ought to have known would cause that worker to be humiliated or intimidated, but excludes any reasonable action taken by an employer or supervisor relating to the management and direction of workers.**

Examples on the forms of bullying and harassment:

- Verbal aggression, insults, or calling someone derogatory names
- Vandalizing a worker's personal belongings
- Sabotaging another person's work
- Spreading malicious rumours
- Carrying out harmful or offensive initiation practices or hazing
- Making personal attacks based on a worker's private life or personal traits
- Making aggressive or threatening gestures
- Cyber-bullying is another form of bullying and harassment. It can include sending harassing emails or text messages, or posting humiliating or intimidating information on social media or websites.

Forms of bullying and harassment must not be tolerated and any person subjected to those must inform the accuser to immediately stop. If the accuser does not stop then the incident must be immediately reported to the direct Supervisor or Manager. When the Supervisor or Manager cannot resolve the incident, then it must be escalated to SFU Safety and Risks Services: [778-782-4978](tel:778-782-4978) or by submitting the online report form: <http://www.sfu.ca/srs/ehs/bh/wbh-webform.html>. As a final resource, if the incident cannot be resolved by any SFU representative then WorkSafe BC shall be notified by the person subjected to the incident: [604-276-3100](tel:604-276-3100) or [1-888-621-7233](tel:1-888-621-7233) or by submitting the online report form: https://online.worksafebc.com/anonymous/wcb.BullyingAndHarassment.web/Default.aspx?_ga=1.167728184.749643441.1479668976

Link: <https://www.sfu.ca/srs/ehs/bh/wbh-program.html>

Refer to the Bullying and Harassment Program for more information.



Facilities Services

Contractor Management

When the university hires contractors other than a Prime Contractor, it retains the responsibility for compliance to WorkSafe BC regulation and the Worker Compensation Act. Contractor Management is a system to ensure the safety and compliance of contractors working in SFU.

There are 3 classifications for contractors:

- Prime Contractor
 - SFU Contractor Safety Orientation is required.
 - Will have a fully enclosed site.
 - Contractually, they are the owner of the site.
 - Safety on site is their responsibility, including first aid and emergencies.
 - Interface with the university services must be coordinated with SFU.
- Continuing Service Contractor
 - Worksite risks remain the same or may vary.
 - SFU Annual Contractor Safety Orientation is required.
 - SFU safety policy updates distributed as required.
 - SFU delegates the safety responsibility, but accountability remains with SFU
 - SFU EHRS Program Managers may monitor work area periodically for compliance and public safety.
- Single Project Contractor
 - SFU Contractor Safety Orientation is required and annually if it is longer than a year.
 - Responsible for their contractors under their direction and to pass SFU protocols and requirements to them.
 - SFU safety policy updates distributed as required
 - SFU delegates the safety responsibility but accountability remains with SFU
 - SFU EHRS Program Managers may monitor work area periodically for compliance and public safety.

All contractors, consultants or companies hired by the university is required to go through and successfully complete SFU Contractor Safety Orientation, before performing any work. Orientation are presented by EHRS and for scheduling contract EHRS: [778-782-3867](tel:778-782-3867). SFU Contractor Safety Checklist must also be completed by the contractors, consultants and companies hired by the university. The checklist must be reviewed, understand and submitted to EHRS with all relevant documentation, prior to starting any work on campus. Contact Facilities Services: [778-782-3253](tel:778-782-3253) or EHRS: [778-782-3867](tel:778-782-3867) for a copy of the Contractor Safety Checklist.

Link: <http://www.sfu.ca/srs/ehs/facilities-trades/contractor-management.html>

[Refer to the Contractor Management Program for more information.](#)



Working Alone

Working alone or in isolation in certain circumstances, situations or environments can increase the risk to the negatively affect the health and safety of the individual. To minimize or eliminate the risk of an individual working alone, special arrangement must be made with the individual and his/her Supervisor/Manager. Special arrangements includes, but not limited to:

- Risk Assessment
Prior to performing any work alone or in isolation the Supervisor/Manager must identify any potential risks for the working alone task with the worker. Campus security should be involved in this process, if determined necessary.
- Safe Work Procedure/Protocols
Written procedures or protocols must be developed and implemented prior to working alone. This part would be determined based on the Risk Assessment conducted by the Supervisor/Manager. Procedures/protocols must address emergency contacts, emergency situations and communication methods.
- Training
Individuals who are responsible to perform work by themselves, in isolation or assigned the responsibility to check on the individual working alone/isolation must be properly trained prior to any working alone/isolation begins. Training must cover the procedures/protocols on the alone work and the emergency response.

Working Alone is defined as: **Work in circumstances where assistance would not be readily available to the individual in case of an emergency, or in case the individual is injured or in ill health.**

Link: <http://www.sfu.ca/policies/gazette/general/gp39.html> (SFU GP 39 - Working Alone or In Isolation)
<https://www.sfu.ca/srs/ehs/resources.html> (Working Alone or in Isolation – A Guide for Risk Assessment and Safe Work Protocols)



Risk Assessment and Controls

Risk Assessment is a tool that can be used to assess a project or a work environment for its risks, which help in the determination of appropriate control measures. A Risk Assessment would aid Facilities Services on preventing or mitigating workplace incident, injury and illness by controlling the identified risks.

Risk Assessment should be conducted every time there is a new task or job. A Risk Assessment can be formally completed on the Risk Assessment form or conducted visually with the use of the Field Level Risk Assessment. Completed Risk Assessment should be communicated with all personnel in the work area to ensure workers are aware of the risks associated with the work, and the control measures to prevent injuries or illness.

To conduct a Risk Assessment, the following steps should be followed:

1. Identify the scope of work.
2. Observe and identify the potential or existing risks determined.
3. Evaluate the identified risks and determine the appropriate control measures to effectively eliminate or mitigate.
4. Evaluate the control measures in place to see if the control measures are effective and practicable. Make changes or adjustment on the control measures, as required or necessary.

Definition

The following definitions are used in this program:

- Risk
Chance of loss or gain, also a measure of potential loss that considers both the severity of a loss and its probability of occurring.
- Hazard
Any condition or circumstance which poses the risk of an incident.
- Assessment
A process of determining the likelihood of risks.
- Severity
The potential level of damage or injury that a hazard possesses should it cause an incident to occur.
- Frequency
The rate at which something occurs or is repeated over a particular period of time or in a given sample.
- Probability
The extent to which something is probable, the likelihood of something to happen.
- Most Certain
A risk that is almost certain to show-up during project or work execution. Risk that is more than 80% likely to cause problems.
- Likely
Risks that have 60-80% chances of occurrence can be grouped as likely.
- Possible
Risks which have a near 50/50 probability of occurrence.
- Unlikely
Risks that have a low probability of occurrence but still cannot be ruled out completely.
- Rare
Rare and exceptional risks which have a less than 10% chance of occurrence.

- Insignificant
Risks that will cause a near negligible amount of damage to the overall progress of the project.
- Minor
If a risk will result in some damage, but the extent of damage is not too significant and is not likely to make much of a difference to the overall progress of the project.
- Moderate
Risks which do not impose a great threat, but yet a sizable damage can be classified as moderate.
- Serious
Risks with significantly large consequences which can lead to a great amount of loss are classified as critical.
- Catastrophic
These are the risks which can make the project completely unproductive and unfruitful, and must be a top priority during risk management.
- High Risk
A risk that calls for immediate action or risk management strategies. In addition to thinking about eliminating the risk, substitution strategies may also work well. If these issues cannot be resolved immediately, strict timelines must be established to ensure that these issues get resolved before they create hurdles in the progress.
- Moderate Risk
A risk that is best to take some reasonable steps and develop risk management strategies in time, even though there is no hurry to have such risks sorted out early. Such risks do not require extensive resources; rather they can be handled with smart thinking and logical planning.
- Low Risk
A risk that can mostly be ignored as they usually do not pose any significant problem. However, if some reasonable steps can help in fighting these risks, such steps should be taken to improve overall performance of the project or work.

Risk Identification

There are various risks on SFU Campus that Facilities Services' staff may encounter during their day at work. When identifying risks, there are five (5) major factors that should be used to assess the risks:

- People.
The actions people take, or do not take, can create risks in the workplace. Knowledge of and training in appropriate procedures are critical to avoid unsafe behaviours. Appropriate administration, leadership and supervision help ensure procedures and practices are followed.
- Equipment.
The tools and equipment people use and work near can be hazardous. Look for unsafe or unhealthy conditions, such as:
 - Inadequate guarding or barriers,
 - Defective tools and equipment,
 - Incorrect tools and equipment for the job,
 - Inadequate warning systems, and
 - Etc.

- **Materials.**
The improper handling and wrong type of raw materials, products, and hazardous chemicals can result in explosion, fires and exposure to toxic chemicals and physical agents.
- **Environment.**
Some risks are created by the work environment, such as:
 - Condition of surfaces where people walk or where things are placed,
 - Overcrowding and inadequate ventilation,
 - Inadequate lighting, extreme temperatures and noise,
 - Inadequate housekeeping, and
 - Etc.
- **Process**
The combination of the four factors in any type of production is process. It involves the flow of work and includes design, organization, pace and type of work. By products such as heat, noise, dust, vapours, fumes and waste materials may be created by the process.

With the five (5) major factors identified, the evaluator should then determine the types of risks that can affect them or workers directly, such as:

Health Risks

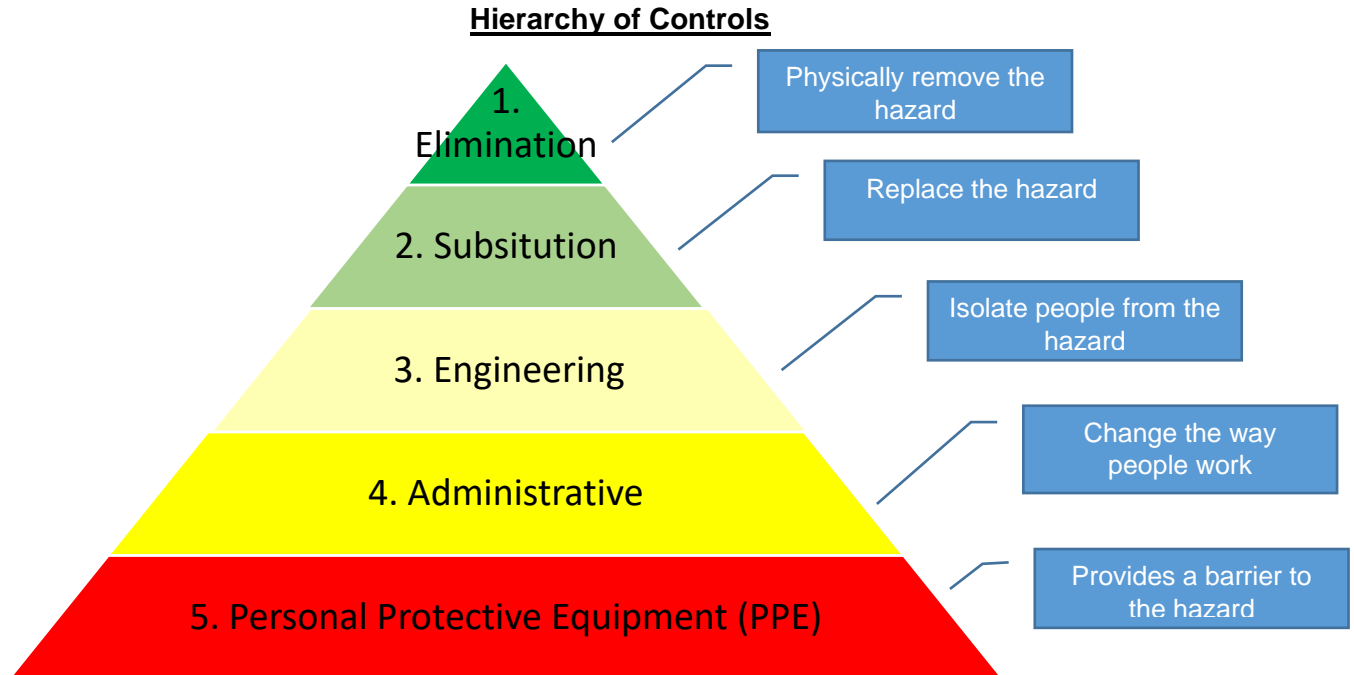
- Biological – bacteria, viruses, insects, plants, birds, animals and human
- Chemical – depend on the physical, chemical and toxic properties of the chemical
- Physical – radiation, magnetic fields, pressure extremes, temperatures, noise, etc.
- Ergonomic – Repetitive movements, improper set up of workstation, etc.
- Psychosocial – stress, violence, bullying, harassment, etc.

Safety Risks

- Machines – moving parts, rotating shafts, belts, pulleys, blades, saws, etc.
- Energy – pneumatics, hydraulics, steam, heat, electricity, kinetic, etc.
- Material Handling – manual and mechanical handling (hand carts, conveyors, forklifts)
- Work Practices – deviation from work specified practices and/or procedures.

Risk Controls

Risk must be controlled in a practicable and systematic manner with the requirement to eliminate the risk wherever possible. If elimination is not possible then the risk needs to be reduced through substitution or other control measures. Control selection should follow a hierarchy from the best choice to the last choice. When a primary control has been selected, other control measures can also be used to further reduce the risk to an acceptable or better level.



1) Elimination and Substitution

While mostly effective at reducing or eliminating hazards, it also tend to be the most difficult to implement in an existing process. If the process is still at the design or development stage, elimination and substitution of hazards may be inexpensive and simple to implement.

2) Engineering Controls

Engineering controls are favoured over administrative and personal protective equipment (PPE) for controlling existing worker exposures in the workplace, because they are designed to remove the hazard at the source, before it comes in contact with the worker. Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection. The initial cost of engineering controls can be higher than the cost of administrative controls or PPE, but over the longer term, operating costs are frequently lower, and in some instances, can provide a cost savings in other areas of the process.

3) Administrative Controls

Administrative controls are frequently used with existing processes where hazards are not particularly well controlled. Administrative controls may be relatively inexpensive to establish, but over the long term, can be very costly to sustain. These methods for protecting workers have also proven to be less effective than other measures, requiring significant effort by the affected workers.

4) Personal Protective Equipment (PPE)

The last and final control that will protect the user wearing the protective equipment. This control is the most commonly used in many workplaces, as it is the easiest and quickest solution. PPE are commonly selected because of the wide range of choices in the market and the least cost in the short term. However, this control does not remove the hazard, it simply just provides a short barrier from the user to the hazard.



Evaluation

Once controls have been implemented they must be evaluated to determine their effectiveness and to assess if the intent of the controls are being met. It is important that hazard control recommendations do not inadvertently introduce a subsequent risk while taking steps to eliminate, reduce or control another. It is also important to ensure that the controls implemented are effective for the hazards present and practicable to maintain work. Evaluation of controls can be conducted through:

- Asking workers for feedback and comments.
- Observation of the control used in the workplace.
- Comparing with previous controls to the new controls or to other industry practices.

Risk Assessment Tools

There are two risk assessment tools that can be used to assess and control hazards and risks. The risk assessment tools are:

1. Risk Assessment (form)

This tool is a form that will be typically and should be used by managers or supervisors to assess a large work area. The form will allow the user to identify each task, the hazards, control measures for the identified hazards and rate their risk level after implementing the controls. The rating level is determined by the user's evaluation of the hazard's severity, probability and frequency.

2. Field Level Risk Assessment (chart)

The Field Level Risk Assessment is a chart that allows personnel to use the chart, base off of observation in the workplace and their specific task. This tool is effective when used for straightforward tasks or jobs (i.e. painting a room or assembling furniture). The assessment creates a thinking process for the user to help determine the appropriate controls for existing and potential risks.

The Field Level Risk Assessment should be used daily by all workers, prior to their task on campus.

Note: Refer to the Appendix for the Field Level Risk Assessment and Risk Assessment forms.

Records

All training, risk assessment and any other related documentation are to be submitted to SFU Facilities Services for reference and record keeping. All records will be maintained and managed by the appropriate department's management.



Workplace Inspections

Inspections are an essential method of identifying existing and potential hazards/risks that may require corrective actions. Inspection can be used as a tool to help determine the organization's level of compliance with established standards, rules & requirements, best practices and regulatory requirements. Inspection is not only a regulatory requirement it is also a method to ensure quality assurance in an organization and help increase workplace awareness.

Definition

The following definitions are used in this program:

- Inspections
A detail evaluation of the workplace on a regular or schedule basis for the purpose of:
 - Identifying and recording existing and potential hazards associated with people, equipment, materials, environment and process.
 - Identifying any hazards which require immediate attention, whether they are unsafe conditions or acts.
 - Ensuring that existing control measures are effective and practicable.
 - Recommending actions, where appropriate.
- Informal Inspection
An inspection that is either documented or non-documented. This type of inspection is on an ongoing basis that is performed by all levels of employees and contractors.
- Formal Inspection
An inspection that is formally documented on an established or pre-developed form. This type of inspection is conducted on a scheduled basis or by regulatory requirement.
- Immediate
A risk ranking from the Facilities Services Inspection form that requires immediate action to correct the abnormalities.
- Urgent
A risk ranking from the Facilities Services Inspection form that requires abnormalities to be corrected as soon as possible.
- Scheduled
A risk ranking from the Facilities Services Inspection form that requires abnormalities to be corrected prior to the next scheduled inspection.

Informal Inspections

Supervisory Inspections

An inspection of the workplace or area conducted by managers or supervisors. This type of inspection is and on-going observation of the workplace and where deficiencies are found, they are communicated to employees in person or group. Deficiencies can then be corrected immediately or by a scheduled timeline.

Worker Inspections

An inspection of the workplace or work area conducted by workers and contractors. This type of inspection is an ongoing observation of the workplace and where deficiencies are found, the worker or contractor can either immediately take action to correct or report to his/her supervisor for additional guidance or reporting (i.e. the Field Level Hazard Assessment can be used).



Facilities Services

Formal Inspections

LJHSC Facilities Services Inspections

A formal inspection of the various shops, stores, storages and yards conducted by a team that consist of the following members:

- Management representative of the Facilities Services LJHSC Committee, and
- Worker representative of the Facilities Services LJHSC Committee,
- A representative from Environmental Health and Research Safety (EHRS).

The LJHSC Facilities Services Inspections are carried out twice a year by each department. Each department will run their own inspection with the coordination and help from EHRS. The inspections are documented in the LJHSC Facilities Services Safety Inspection form specific to their department. The inspections will document the workplaces proactive performances, deficiencies and provide recommendations. Completed inspection are posted by the appropriate department for all staff to review. Each department's managers are responsible to ensure the recommendation(s) are either implemented or dismissed (if required).

Special Inspections

A special inspection is a type of inspection that takes part when a malfunction or incident occur with an equipment, tool, or mechanical/electronic device. This inspection must be executed as soon as possible after the malfunction or incident occurs, and as per WorkSafe BC requirement. All special inspections must be documented through their specific inspection forms or other written format. Depending on the malfunction or incident, the types of special inspections can be documented on the following inspection forms:

- Forklift,
- Pallet Jacks,
- Vehicles,
- Powered Tools,
- General Workplace,
- Office Workspace,
- General Shop,
- Non-powered tools,
- Laboratory, and
- Etc.

Special inspections are to be conducted by a manager, supervisor and/or worker.

Equipment Inspections

SFU has many different types of equipment throughout the campus. At a minimum, each equipment must be managed, used and maintained in accordance to the manufacturer's and regulatory requirements. Equipment inspections are required to be conducted prior to their use. The equipment must also follow the manufacturer's inspection requirement, such as annual inspection by a manufacturer's authorized agency, regulatory agency or by a certified professional engineer/firm.



Facilities Services

Inspection Follow-Up

Deficiencies identified in any inspection report must be corrected in a timely and safe manner. It is vital that the recommendation(s)/corrective action(s) determined in the report are followed up by supervisors and/or managers. Follow-up is to ensure that the recommendation(s)/corrective action(s) have been fully implemented or reviewed for dismissal. Follow-up also ensures that management have reviewed the report for completeness, timeline, quality, condition of the workplace and that all measures have been taken to ensure the health and safety of the workplace. Follow-ups that identified recommendation(s)/corrective action(s) are not completed must be reported to the department's management. The department's management will then determine the necessary action to ensure the recommendation(s)/corrective action(s) are completed.

WorkSafe BC Inspections

WorkSafe BC is a regulatory body created by legislation to help eliminate workplace injury, disease and death. WorkSafe BC employs safety or hygiene officers who has the authorization to visit and inspect any workplace unannounced. The officers has the right to inspect the workplace by:

- Asking work process, activity, or tools and equipment used.
- Taking photos.
- Interviewing workers, supervisors and managers.
- Reviewing records and various health and safety related documentation.
- Removing items from the workplace for investigation.
- Stopping any unsafe work or activity.

No worker, supervisor, manager or employer can obstruct an officer from carrying out their duties.

WorkSafe BC inspections will generate an inspection report where it must be posted at the workplace for at least 7 days on inspections with no requirements. Any inspection requirements such as "Orders" or "Notice of Compliance" from the inspection report must be complied within the indicated timeline or within a reasonable time. Inspection reports with requirements must be left posted until they have been complied.

Training

Training individuals that are responsible to conduct inspections can be completed in the workplace with the supervisor, EHRS or through an external trainer. Training is provided base on regulatory requirement, manufacturer standards, risk assessments and best practices. Workplace training can be conducted in the workplace or formally through a class room setting.

Records

Completed inspection document must be submitted to SFU Facilities Services for reference and record keeping. All records will be maintained and managed by the appropriate department's management.

Note: Refer to the appropriate department managers for a copy of the inspection form.



Tools & Equipment Maintenance

Maintaining and servicing tools and equipment is an important part to reduce the risk of injury, environmental impact, property damage, and production loss. Tools and equipment that are used and maintained on SFU campus must meet manufacturer's specifications and regulatory standards. Tools and equipment that are determined unsafe or questionable must not be used and reported to SFU Facilities Services.

Definition

The following definitions are used in this program:

- Hand Held Tools
A portable tool or apparatus that is powered or non-powered and is operable by hand.
- Equipment
A machinery, device or tool that is powered by electricity or petroleum (i.e. gasoline or diesel) and can be operated by hand, by a portable control or inside a unit with the control.
- Defective Tools or Equipment
A tool, equipment, machinery, device or apparatus that is not in accordance to manufacturer standards and regulatory requirements.

Pre-Operational Check

Pre-operational check is a form of an informal inspection conducted prior to the initial use of the tool or equipment by the operator.

Hand Held Tools

Hand held tools are typically compact and easily transportable. Each user must check the tool, even if it was completed, prior to their use by another person. Pre-operational check is conducted by visually checking the condition of the tool and if applicable, by powering up the tool and testing its functions.

Equipment

Equipment are either mobile or non-mobile, as well in various sizes. Pre-operational check for equipment will depend on their specifics from regulatory requirements and manufacturer standards. Regulatory and manufacturer Pre-operational check must be formally documented through their appropriate forms or document. The Pre-operational check for equipment are visually checked without the equipment on and finally at the end of the inspection the equipment will be powered on to test its functions.



Pre-operational Guidelines

During a tool or equipment pre-operational check, the typical concerns or hazards that the user/operator must look for are as follows, but not limited to:

- Cracks.
- Deformation.
- Severe rust buildup.
- Heavy discoloration.
- Excessive wear and/or tear.
- Bends.
- Splits.
- Exposed wiring.
- Dents.
- Missing components.
- Chemical or heat burns.
- Vandalism.
- Inoperable (won't power or function).
- Breaks.
- Rips.
- Power and functions.

Defective Tools and Equipment

Tools and/or equipment that are defective, damaged, altered, tampered or unsafe should not be used until they are properly assessed by a qualified, trained and/or competent person. It is the responsibility of the operator to report the identified tool/equipment to their immediate supervisor. Any tools or equipment that are identified as unsafe must follow the below procedure:

1. If applicable, de-energize the tool or equipment and ensure its energy source has been isolated (refer to the Lockout Program/Procedure).
2. Inform others that may or potentially use the tool or equipment.
3. Place a tag or signage to indicate that the tool or equipment cannot be used, such as "Out of Service" or "Danger Do Not Use".
4. If possible, remove the tool or equipment out of the work area and relocate it to the appropriate Facilities' shop for service/repair.
5. Report the tool or equipment to the immediate supervisor.

All tools and equipment identified as unsafe must not be used, operated or brought into the workplace until they are adequately serviced/repared and inspected by the qualified, trained and/or competent person.

Service and Repair to Tools and Equipment

All tools and equipment must be serviced and repaired in accordance to the manufacturer standards and regulatory requirements. Tools or equipment that requires service or repair must be completed by a qualified, trained or competent person. Repairs and services can be completed by qualified or trained SFU staff or by a manufacturer authorized supplier/company.

Service or repairs to any tools and equipment must be completed in a timely manner to ensure the least impact in the workplace production and safety.

Records

Up to date records are an essential part of a Tools and Equipment Maintenance program. Copies or original documents of all related records are to be submitted and kept on file by Facilities Services' appropriate departments.



Personal Protective Equipment

Personal Protective Equipment (PPE) is the last control method in the hierarchy of controls. PPE should be the last choice to control any known or unknown hazards in the workplace. PPE does not minimize or eliminate the hazard(s) present, it simply acts as a barrier from the user to the hazard(s). Prior to using any PPE, a risk assessment must be completed in order to understand the workplace hazards, which then the most suitable and best control measures and PPE can be selected.

Definition

The following definitions are used in this program:

- American National Standard Institute (ANSI)
A private non-profit organization that oversees the development of voluntary consensus standards for products, services, processes, systems, and personnel in the United States.
- Canadian Standard Association (CSA)
A non-profit standards organization that compose of representatives from industry, government, and consumer groups to develop standards and to test/certify products, process and systems.
- European Standard (EN)
A non-profit association from the “European Committee for Standardization” (CEN), which the association provides a platform for the development of EN standards in relation to various products, materials, services and processes in Europe (European Union).
- Exposure
A regulatory upper limit of an acceptable concentration of a hazardous substance that can be absorbed through the body from inhalation, ingestion and skin absorption.
- Personal Protective Equipment (PPE)
Refers to protective clothing, helmets, goggles, or other garments or equipment designed to protect the user’s body from injury or illness.
- Life Jacket
A device that when worn correctly, provides a specified buoyancy that will turn the user face-up on entering in water, and will keep the user in this position.
- Personal Flotation Device (PFD)
A device that when worn correctly, provides a specified buoyancy to support a conscious person in an upright or backward leaning position, but is not designed to turn a person from a face-down to a face-up in the water.
- Flame Resistant
Properties of a material or as a result of treatment by a flame retardant, to slow, terminate or prevent flaming combustion.

General PPE

The most commonly used PPE by SFU and industry are defined as general PPE. These types of PPE are normally used in the workplace, are easily maintained and cost-effective.

General PPE provided by the SFU Facilities Services must be used, maintained and inspected in accordance to WorkSafe BC requirement and the manufacturer’s standards.



Head Protection

Protective head-wear is design to protect the head from various hazards that can cause injuries. Appropriate head protection must be worn when there is a risk of an injury to the head from falling objects, flying objects, thrown objects, bumps, splashes from chemical or harmful substances and energized objects. Chin straps or other effective means of retention must be used with the head protection when climbing, working from heights exceeding 10' or when conditions may cause the loss of the head protection.

Head protection must meet the requirements of:

- CSA-Z94.1-05, Industrial Protective Headwear, or
- ANSI Z89.1-2014, Industrial Head Protection.

Safety Toe Footwear

Safety toe footwear is designed to protect the feet from various hazards that can cause injuries. Appropriate foot protection must be worn when there is a risk of an injury from slipping, impact, compression, extreme temperature, electrical shock, corrosive substances and puncture wounds.

Foot protection must meet the requirements of:

- CSA Z195-14, Protective Footwear, or
- ANSI Z41- 1999, Protective Footwear.

Eye/Face Protection

Eye/Face protection is designed to protect the eyes or face from various hazards that can cause injuries or illness. Appropriate eye and/or face protection must be worn when there is a risk of an injury, illness or irritation from chemical, biological or physical hazards to the eyes/face. Other requirement to wear eye and/or face protection is when a worker has:

- 20/200 or less vision in either eye,
- Blind in either eye, or
- Working on or testing electrical equipment energized potentially greater than 30 volts.

Eye and or face protection must meet the requirements of:

- CSA Z94.3-02, Industrial Eye and Face Protectors, or
- ANSI Z87.1-2015, Practice for Occupational and Educational Eye and Face Protection.



Hand Protection

Hand protection is designed to protect the hands from various hazards that can cause injuries, illness or irritation. Appropriate hand protection must be worn when there is a risk of an injury, illness or irritation from puncture wounds, abrasion, laceration, burns (hot and cold), chemicals or biological hazards and any adverse effects to the hands.

Hand protection must not be used around rotating equipment, such as a lathe, drill or auger as they can be caught by the equipment and cause serious damage to the hands.

Hand protection must meet the requirements of:

- ANSI/ISEA 105-2016 Hand Protection Classification,
- EN 420:2003+A1:2009, Protective Gloves. General Requirements and Test Methods,
- EN 374-4:2013, Protective Gloves against Chemicals and Micro-Organisms. Determination of Resistance to Degradation by Chemicals,
- EN 388:2003, Protective Gloves against Mechanical Risks,
- Or any other standards acceptable to the Board.

High Visibility Apparel

High visibility apparel is design to help increase the visibility of a person that is around moving vehicles, mobile equipment or to be distinguishable. High visibility apparel must be worn where there are risks of injuries from vehicles, mobile equipment and for the purpose to identify a person's location or well-being. At a minimum, high visibility apparel must be worn around roadways, parking lots, operating vehicles and mobile equipment.

High visibility apparel must meet the requirement of:

- WCB Standard Personal Protective Equipment Standard 2-1997, High Visibility Garment,
 - Type 1 or 2 for vehicles and being distinguishable.
 - Type 3 for mobile equipment.
- CSA Z96-15, High-Visibility Safety Apparel, or
- ANSI/ISEA 107-2015, High Visibility Apparel and Accessories.
- Or any other standards acceptable to the Board.

Specialized PPE

Specialized PPE are considered to be equipment that are not commonly used by SFU and only used by specialized industries (i.e. working inside confined spaces). These types of PPE may have detail specific programs that addresses their uses, maintenance, training, limitations, inspection and etc.

Specialized PPE provided by the SFU Facilities Services must be used, maintained and inspected in accordance to WorkSafe BC requirement, manufacturer's standards and their SFU specific programs.



Respiratory Protection

Respiratory protection is design to protect the respiratory system from various air contaminate that exceeds the exposure limit, causes allergic reaction, respiratory irritation. Appropriate respiratory protection must be worn where there are risks of illness, exposure limit, allergic reaction or irritation from airbourne contaminate (vapours, fumes and hazardous airbourne particulates).

Respiratory protection must meet the requirement of:

- CSA Z94.4-11, Selection, Use and Care of Respirators
- CSA Z180.1-13, Compressed Breathing Air and Systems

Refer to the Respiratory Protection Program for further information

Fall Protection

Fall Protection is designed to protect a person from a fall. Appropriate fall protection must be implemented/used when there are risks of injury or death from a fall of:

- 10ft or more may occur, or
- Less than 10ft if the fall involves a risk of injury greater than the risk of injury from the impact on a flat surface.

Fall protection must meet the requirement of:

- CSA Z259.2.5-12, Fall Arresters and Vertical Lifelines,
- CSA Z259.11-05, Energy Absorbers and Lanyards,
- CSA Z259.10-12, Full Body Harnesses,
- CSA Z259.15-12, Anchorage Connectors,
- Or any other standards acceptable to the Board.

Refer to the Fall Protection Program for further information

Hearing Protection

Hearing protection is designed to reduce the amount of noise reaching to a person's ear. Appropriate hearing protection must be worn when there are risks of damage to the ear canal, irritation, or pain (i.e. headaches). Hearing protection must also be utilized when the exposure meets or exceeds:

- 85 dBA Lex daily noise exposure level, or
- 140 dBA peak sound level.

Hearing protection must meet the requirements of:

- CSA Z94.2-14, Hearing Protection Devices – Performance, Selection, Care and Use,
- ANSI S12.6-2016, Methods for Measuring the Real-Ear Attenuation of Hearing Protectors, or
- ANSI S3.19-1974, Method for Measurement of Real-Ear Protection of Hearing Protectors and Physical Attenuation of Earmuffs.
- Or any other standards acceptable to the Board.

Refer to the Hearing Conservation Program for further information



Buoyancy Protection

Life Jackets and Personal Flotation Devices (PFD) are designed to protect the user from drowning. Appropriate Life Jacket and PFD must be worn when there is a risk of drowning and other control methods to prevent drowning is not available (i.e. guardrails).

Life Jackets or PFD must meet the requirement of:

- CAN/CGSB-65.7-M88, Life Jackets, Inherently Buoyant Type with a minimum buoyancy of 93N (21lbs),
- CAN/CGSB-65.11-M88, Personal Flotation Devices with a minimum buoyancy of 69N (15.5lbs),
- CGSB Standard 65-GP-14<, Life Jackets, Inherently Buoyant, Standard Type with minimum buoyancy of 125N (28lbs), or
- British Safety Standard BS EN 396-1994, Life Jackets and Personal Buoyancy Aids – Life Jackets 150N (34lbs).

Body and Limb Protection

Body and limb protection is designed to protect the user from various hazards that can cause injuries, illness or irritation. Appropriate body and limb protection must be worn when there are risks of injuries, illnesses or irritations from puncture wounds, abrasion, laceration, burns (hot and cold), chemicals or biological hazards and any adverse effect to the body.

Body and limb protection must meet the requirements of:

- Chain Saws
 - WorkSafe BC Standard – Leg Protective Devices (Schedule 8-A),
 - ASTM F 1414-04 Standard Test Method for Measurement of Cut Resistance to Chain Saw in Lower Body Protective Clothing,
 - ISO 11393-2 Protective Clothing for Users of Hand-held Chain Saws, or
 - EN 381-5:1995 Protective Clothing for Users of Hand-held Chain Saws
- Flame Resistant
 - NFPA 2112: Standard on Flame Resistant Garments for Protection of Industrial Personnel Against Flash Fire,
 - NFPA 2113: Standard on Selection, Care, Use, and Maintenance of Flame-Resistant Garments for Protection of Industrial Personnel Against Short-Duration Thermal Exposures, or
 - ASTM F1506-15: Standard Performance Specification for Flame Resistant and Arc Rated Textile Materials for Wearing Apparel for Use by Electrical Workers Exposed to Momentary Electric Arc and Related Thermal Hazards.



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Selection of PPE

The correct PPE used is a key factor on ensuring the effectiveness of the equipment. When selecting PPE, the worker must consider the following:

- Application: what part of the body is being protected?
- Compatibility: will the material maintain its structural integrity and protective qualities?
- Strength: Is the material resistant to punctures, tears and abrasions?
- Flexibility: Is the material tough or soft? How will it affect my mobility and dexterity?
- Cleanable: Can the material be clean and reused or is it single use only?
- Durability: Will the material last from the wear and tear cycle?

For additional resources to ensure appropriate PPE is selected, consult with your Supervisor, LJHSC or EHRIS.

Training

Prior to using any PPE the worker or user must be adequately trained on the use, limitation and assigned maintenance duties for the equipment. The training will provide, but not limited to:

- When PPE is required,
- How to properly wear, remove and adjust the PPE,
- Limitation of the PPE,
- Care and maintenance of the PPE, and
- Proper disposal of the PPE.
- Manufacturer's and regulatory requirements

Note: For specialized PPE training, consult with the department management and EHRIS.

PPE Inspection

It is the responsibility of the user or worker to inspect their PPE on a daily basis or pre-use frequency. Inspection will be conducted visually to observe any concerns or hazards with the PPE. At a minimum PPE must be inspected in accordance to the manufacturer's standard, WorkSafe BC requirements. Any PPE that has been determined as poor condition or not safe for use, must not be used. Appropriate replacement or alternative PPE should be available and implemented, prior to continuing work.

For PPE supplies, request can be made through the direct supervisor, manager or Central Stores.



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Disposal and Out of Service PPE

Any PPE that has been assessed/inspected as poor condition, damaged, or not safe for use, must be disposed or repaired properly. PPE that require disposal must be reported to the direct supervisor, unless they are:

- General Work Gloves,
- Non-Prescription Safety Glasses,
- Disposable Hearing Protection, and
- Disposable Respirators (i.e. N95 masks).

When disposing any PPE the equipment must be destroyed in a manner that it will not be re-used by any other person. PPE must be disposed in their appropriate waste bins, through Central Stores. Contaminated PPE must be bagged in the hazardous waste designated bag or bin from their department. Once the bag or bin is full, the hazardous waste needs to be disposed by SFU hazardous waste contractor. Submit a hazardous waste removal request through SFU online system.

SFU Hazardous Waste Pick-up Request

Link: <https://www.sfu.ca/srs/ehs/research-safety/waste-management.html>

Records

All copies of training, PPE assessments, fit testing, certifications, licenses and any other related documentation are to be submitted to SFU Facilities Services for reference, tracking and record keeping. All records will be maintained and managed by the appropriate department's management.



Incident Investigations and Reporting

When workplace incident or near miss occurs, it is vital to report and investigate the event as soon as possible. The purpose of investigating these event is to determine the cause(s) of the event and ensure the necessary steps are taken to help prevent future reoccurrences. Investigation is not for the purpose of putting someone at fault or blaming someone, it is to find the gaps in the organization's safety management system so they can be corrected.

Definition

The following definitions are used in this program:

- Incident
An event that results in an injury, illness, disease, damage, death or loss.
- Near Miss
An event that had the potential, but did not cause any major or serious injury, illness, disease, damage, death or loss. A minor injury or irritation may have occurred.
- Investigation
An information gathering process that can be conducted internally or externally in an organization to establish the facts and circumstances relating to an incident, near miss or workplace report.
- Reporting
A communication process where a workplace incident, near miss, concern, event or vital information is provided to an organization's managing system (i.e. Supervisors or Managers).

Requirement

SFU

All health and safety incidents including near miss must be reported to the involved person's supervisor and complete the SFU Workplace Incident Report form within 24 hours of the incident occurring. If the involved or injured person is unable to complete the report, it may be filled out by the person's supervisor or another individual with knowledge of the incident.

WorkSafe BC & Worker Compensation Act

A preliminary investigation must be conducted immediately after the occurrence of an incident or near miss. The preliminary investigation must be completed within 48 hours. The full investigation must be completed within 30 days of the occurrence. The full investigation report must be submitted to WorkSafe BC, if the investigation was for the following:

1. Serious injury or death to a worker.
2. A major structural failure or collapse of a building, bridge, tower, crane, hoist, temporary construction support system or excavation.
3. Major release of a hazardous substance.
4. A fire or explosion that had potential for causing serious injury to a worker.
5. A blasting accident causing injury to a worker
6. Dangerous incident involving explosives, whether or not there is an injury to a worker.
7. Injury to a worker requiring medical treatment (i.e. hospital or clinic).
8. Incident that had potential for causing serious injury to a worker.

For the above list, item 1 - 6, WorkSafe BC must be notified immediately. Calling toll-free: 1-866-922-4357. The listed 6 items will be investigated by WorkSafe BC, therefore the scene must be left un-



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touched and un-altered. The scene can only be touched or altered for the purpose of emergencies, rescue or other lifesaving performances. Item 7 - 8 is not required to notify WorkSafe BC.

Submitting the required full workplace Incident Investigation Report to WorkSafe BC:

https://online.worksafebc.com/Anonymous/wcb.EIIRUpload.mvc/?_ga=1.138478960.214135421.1474660538

Reporting an Incident/Near Miss

Any workplace Incident and Near Miss (as defined in this program) that occurred must be reported to SFU as soon as possible. Reported Incident and Near Miss must be documented on the “Simon Fraser University Workplace Incident Report” form and then submitted to SFU management or through SFU online incident reporting system (see the below link).

In the event of a workplace Incident or Near Miss, the following general procedure must be followed:

On Burnaby Campus

1. Incident or Near Miss occurs in the workplace.
2. All work on that scene must stop immediately (shut down any tools, equipment or devices) and make the scene safe (if possible).
 - Depending on the incident or near miss, emergency responder may be required. If the incident or near miss is an emergency or motor vehicle related, immediately contact:
 - On Campus
Burnaby Campus Security: **778-782-4500**, and provide the following information:
 - i. Your full name and the affected personnel's full name.
 - ii. Total number of injured or affected personnel.
 - iii. Brief detail explanation of what happened and what is needed.
 - iv. Emergency location on campus.
 - Off Campus
Regional Emergency Services: 911, and provide the following information:
 - i. Your full name and the affected personnel's full name.
 - ii. Total number of injured or affected personnel.
 - iii. Brief detail explanation of what happened and what is needed.
 - iv. Emergency location/address off campus.

Note: Steps 4 does not apply for incidents or near miss off campus.

3. When safe and possible, immediately notify the direct supervisor or manager (contractor or SFU employee).
4. Supervisor or manager attend the scene and ensure that all employees are safe and that the incident or near miss scene has been isolated for investigation purposes.
5. Supervisor or manager will arrange a meeting with the affected personnel to review the incident/near miss event and complete together the “SFU Workplace Incident Report” form or through the online submittal system.

SFU Workplace Incident Report:

Link: <https://www.sfu.ca/srs/ehs/safety-management/incident-reporting.html>



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Investigating an Incident/Near Miss

Any workplace Incident and Near Miss will be investigated by SFU or their contractors. Investigations must be carried out as soon as possible and completed in accordance to the jurisdiction's regulation/legislation.

Workplace Incident and Near Miss investigation will follow the general procedures outlined below:

1. Investigator receives the call or document (paper or online) of an incident or near miss report.
2. Investigator reviews the report and determine what steps needs to be taken and who needs to be contacted. Actions includes, but not limited to:
 - Does WorkSafe BC or other regulatory agencies need to be contacted or reported?
 - Attend and review the incident or near miss scene.
 - Take photos of the scene, equipment, tools, devices, and etc or sketch a detail diagram.
 - Interview and/or obtain statements from the affected parties (i.e. employees, contractors, visitors, public, etc).
 - Sample or evidence taking (i.e. unknown spills, debris, tools, equipment, devices, documentations, etc).
 - Any other resources required to successfully investigate the event.
3. Investigators begin and complete the Preliminary Incident Investigation Report.
4. Investigator arranges a follow-up meeting with the **affected personnel**, their **direct Manager or Supervisor** and a **Worker representative**. The following are discussed in the follow-up meeting, but not limited to:
 - Discussion on the findings from the investigation or further investigate the event with the group.
 - Discussion on the recommendations from the internal investigation, WorkSafe BC or other applicable sources (i.e. manufacturer). An action plan will be discussed and issued.
5. Investigator begin and complete the full Incident Investigation Report.
6. The completed full Incident Investigation Report will then be distributed to the follow-up meeting attendees for review and comment.
7. If no comment or feedback is provided then the report will be submitted to SFU online system.

SFU Incident Investigation Report:

Link: <https://www.sfu.ca/srs/ehs/safety-management/incident-investigations.html>

Communicating an Incident/Near Miss

Once a full investigation report has been completed and reviewed, it is important to communicate the investigation outcome to SFU employees and if required, the contractors or other applicable parties.

- Facilities Services LJHSC
At the end of each month the LJHSC from the local area will meet to hold their monthly committee meeting. At this meeting investigation that occurred in their local area will be discussed and presented with the recommendation(s). Committee members are free to evaluate the report(s) further, if required during this meeting. The members are to communicate this back to their departments so they can communicate these investigation report/outcome to their department employees or workers.



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- **Department Management**
Each department has various levels of management. When management obtain copies of the full investigation report, they will review and provide comments, if required. The department management will summarize the report including the recommendation and present the information to their department's meeting (i.e. morning meetings, toolbox, etc).
- **Toolbox Talk**
Toolbox Talks are held monthly by each department at Facilities Services (normally 1 week prior to the LJHSC meeting). The Toolbox Talk meeting is a formal documented meeting that will review general safety concerns, documents, investigation reports and any other related health and safety discussion. The chair of this meeting will present the investigation report in a summary, including the recommendations provided.
- **Bulletin Board Posting**
Depending on the type of investigation, posting may be required. The typical internal investigation are not required to be posted. However, department management may summarize the investigation report and posted in the department's bulletin board for their employees to review. This is an excellent communication format that allows individuals to read and understand the investigation at their own pace. If required by regulation or other regulatory parties to post the investigation report, then the department managers will ensure they are posted and left on the board as per the required period.

Note:

- The LJHSC, Toolbox Talk and any other group meetings should also assigned any duties indicated on the recommendation to ensure the appropriate parties are aware what they need to do. Completed assign duties must be reported to the department management and to EHRS.
- Investigation Report must be provided in a summary and to exclude any confidential information (i.e. name, address, and etc.) or information that will clearly identify the affected personnel.

Records

All training, investigation reports, incident reports and any other related documentation are to be submitted to SFU Facilities Services for reference and record keeping. All records will be maintained and managed by the appropriate department's management. A copy of all documents related to this program must also be provided to SFU EHRS department.



Orientation, Training and Instructions

An effective method to ensure the health and safety of all SFU employees and contractors is to provide them the knowledge and skills to perform their duties by training, instructing and educating.

Definition

The following definitions are used in this program:

- New Worker
Any worker who is new to the workplace, returning to a workplace where the hazards in that workplace have changed during the worker's absence, affect by a change in the hazards of the workplace, or relocated to a new workplace if the hazards in that workplace are different from the hazards in the worker's previous workplace.
- Young Worker
Any worker who is at or under the age of 25 years old.
- Contractor
A company, organization or individual hired by the university to perform a specified duty, task, project, work or service for a financial cost and in a contract. This includes the contractor's subcontractors and consultants.
- Supervisor
An individual who undertakes, or has the authority, to direct how another person or group do work or perform a task.
- Canvas
SFU online system for developing, implementing, tracking and monitoring training/education for the overall university.

SFU New Employee Orientation

As a new and permanent/full time employee, SFU Human Resource department has a mandatory new employee orientation that is required to be completed. The SFU New Employee Orientation reviews the overall campus structure, pension, benefits, policies, general procedures, security, safety and various other topics. This orientation is held once a month and presented by SFU Human Resource department.

New and Young Worker Orientation

As required by WorkSafe BC and SFU, all new and young workers/employees must go through and complete SFU New and Young Worker orientation. There are two orientation that new and young workers/employees at Facilities Service need to complete:

- New and Young Worker Orientation (on Canvas)
Link: <https://canvas.sfu.ca/enroll/RR8WDW> . A 20 – 30 minute orientation.
- Facilities Services New and Young Worker Orientation.
Provided by EHRS. The orientation is approximately 30 – 45 minutes orientation.



Facilities Services

Contractor Safety Orientation

Contractors or consultants performing work at SFU are required to attend a SFU Contractor Safety orientation, where SFU safety expectations are outlined and potential/existing safety hazards are identified and addressed. Depending on the classification of the contractors, different orientation requirements apply. The orientation will tailor to the risk and work the contractor/consultant will encounter at SFU. Contractors/consultants are required to attend SFU Contractor Safety Orientation annually, if they are performing work for SFU. The orientation duration varies depending on the hazard and risk the contractor/consultant faces at SFU.

Supervisor Safety Training

All employees in a supervisory or managerial position are required to complete SFU supervisor training courses. There are two SFU supervisor training course. The first training is through Canvas, which includes information on supervisor responsibilities, due diligence, hazard recognition, risk assessment, controlling hazards and safety culture. Guidance on completing the Job-Specific Safety Orientation with new hires is also provided. The second training is through EHRS in a lecture format, which includes information on SFU policy, overview of the WorkSafe BC regulation and the Worker Compensation Act of BC, responsibilities, the definition of Due Diligence and contractor health and safety management.

Supervisory Training (Canvas)

Link: <https://www.sfu.ca/srs/ehs/training-orientation.html#Supervisor>

On the Job Training/Instructions

Training that is taken place informally while on the job is defined as “On the Job Training”. This type of training is typically one on one, where someone who knows how to do a task shows another person how to perform it. In antiquity, the work performed by most people did not rely on abstract thinking or academic education. It may not be the most effective or the most efficient method at times, but it is normally the easiest to arrange and manage. This type of training takes place on the job, it can be highly realistic and no transfer of learning is required. This type of training is recognized at SFU and provided regularly on campus by various department.

LJHSC Training

In order to have an effective and knowledgeable safety committee, training and education must be provided to all members. At SFU, safety committee members are encouraged to participate on safety training and education. There are various ways to obtain training/education, such as through an external organization, association, manufacturer or internally. SFU has developed and implemented safety committee training that is required to be completed by all members, they include, but not limited to:

- Fundamental of Safety Committees.
- Inspection Training for Safety Committees.
- Incident Investigation Training for Safety Committees.

Contact EHRS for availability and scheduling on any safety committee specific training.



Facilities Services

Specialized Training

Employees and contractors that perform work at SFU will be exposed to various hazards and risks. There are various training available base on the existing hazards/risks. Prior to conducting any work, a risk assessment must be completed in order to identify the training/education requirement for a worker to obtain before performing a job/task. Some of the training that is recognized and required on campus includes, but not limited to:

- Asbestos Training/Awareness:
Any employee or contractor that works around or with asbestos containing materials.
- Mould Training/Awareness:
Where work is performed around or with mould, or materials with mould.
- Lead Training/Awareness:
Where work is performed around or with lead or lead containing materials.
- Fall Protection:
Where work is performed at heights of 10' or greater that needs specialized fall protection PPE.
- Mobile Equipment (Forklift, Scissor Lift, Manlift, Rough Terrain, Backhoe, and etc):
Where work requires the operation of an electric or petroleum machinery that is portable and mobile.
- Confined Space:
Where work is performed in a space that is: enclosed or partially enclosed, not designed or intended for continuous human occupancy, limited or restricted means for entry or exit that may complicate the provision of first aid/evacuation/rescue/emergency response services, and large enough and so configured that a worker could enter to perform assigned work.
- Respiratory Use & Fit Testing:
Where work exposes workers with airbourne contaminates and requires the worker to correctly wear respiratory protection equipment.
- Workplace Hazardous Information System (WHMIS 2015):
Any work that is performed around or with controlled products (i.e. chemicals) in a workplace.
- Ergonomics:
Any work that has or has the potential to expose workers to musculoskeletal injuries.
- Laboratory Safety:
Any work that will be performed inside or on the roof of laboratories.
- Radioisotope Safety:
Any work that will be performed around or with radioisotope or radiation generating equipment.
- Transportation of Dangerous Goods Certification:
Workers that will ship, transport, receive or prepare paperwork for dangerous goods, regularly or sporadically.

Contact your Supervisor or Manager for any training request, requirement or inquires.

Records

All training, risk assessment and any other related documentation are to be submitted to SFU Facilities Services for reference and record keeping. All records will be maintained and managed by the appropriate department's management.



Emergency Preparedness and First Aid

In order to ensure the health and safety of SFU employees and contractors during and after an emergency situation, an emergency and response plan must be established and maintained. With the unique location of the university, procedures, policies and programs are in place to ensure the continuity of the university is maintained, if an emergency ever arises.

Definition

The following definitions are used in this program:

- Emergency
A sudden, urgent, usually unexpected occurrence or occasion requiring immediate action to prevent or mitigate the loss of property or life.
- Evacuation
An act or process of removing life or property from an endangered area to a designated safe location.
- Assembly Area
A pre-established, designated and safe area that in an emergency life and/or property can be safely located and preserved.
- First Aid
The act or process of providing treatment to a sick or injured person or life until/required full qualified medical treatment is available.
- First Aid Attendant
A person who holds a valid first aid certificate issued by the Board or by a person recognized by the Board and who is designated as a first aid attendant by the university.
- Building Evacuation Coordinator
A university representative that is designed to a specific area on campus, responsible to manage the evacuation of personnel in a building during an emergency to a designated assembly area.
- Fire Warden
A university representative that is designed to a specific area on campus, responsible to manage the evacuation of people from a fire emergency to a designated assembly area.
- Emergency Services
Any services that is an emergency, provided by the federal, provincial or municipal government, such as Police, Ambulance, Fire Department, RCMP, the City or District and any other government Emergency Responders.
- Refuge Area
An area or location in a building designed to hold occupants during a fire or other emergency, when evacuation may not be safe or possible. Occupants can wait there until rescued or relieved by emergency services.

Training and Education

In the event of an emergency various people will be effected. In order to mitigate the situation, it is important to have well trained and/or educated employees to assist in the emergency. Depending on the emergency and the role that the employee is responsible for, training can vary. The following training will be established and maintained by the university:



Facilities Services

First Aid

All First Aid request, summoning and treatment is provided by the campus security. For emergency first aid contact: **778-782-4500**. For all non-emergency first aid contact: 778-782-3100.

Emergency

When an emergency occurs, there are employees that will safely help occupants to evacuate the premises safely or help provide guidance/information. These responsibilities can be assigned by each department's management or by volunteering (providing a service at no financial cost). The roles are as follow:

Building Evacuation Coordinator (BCV) or Fire Warden (FW)

Individuals who volunteer or assign the duties to assist in evacuating the work area during an emergency receive information on monitoring their work area to ensure fire egress routes remain clear, in evacuation procedures and their role in conveying critical information to Emergency First Responders. The training also includes fire extinguisher use.

Emergency Volunteer Team (EVT)

Groups who shares information about an emerging situation, situation updates, information about dining services, lodging, first aid and other specialized needs within the SFU community in a time of emergency. The group also provides public education about emergencies at events around campus such as:

- New Student Orientation
- Week of Welcome
- Earthquake Drills
- Winterfest

For more information on Emergency or First Aid training, refer to the Safety and Risk Services' webpage or WorkSafe BC:

Link: <https://www.sfu.ca/srs/emergency.html>

Link: <https://www.worksafebc.com>

Emergency Drills/Mock-Ups

Emergency drill is an effective test to evaluate the implemented emergency procedure at the university. Emergency drills are used to find gaps in the procedure or to help further improve the system. At a minimum the university will conduct annual drills on Fire/Evacuation and Earthquake emergency. The drills will be evaluated and documented by the university's Emergency & Continuity Planning department. Participation in these drills are mandatory for all employees and contractors.

Emergency Supplies

To ensure that the university's emergency plans are properly functioning in an actual emergency, there must be adequate amount of resources. Emergency supplies will be provided by the university during an emergency to preserve or save life. Emergency supplies include the following, but not limited to:

- First Aid supplies,
- Emergency blankets,
- Emergency food and water,
- Medical supplies (if required),
- Emergency equipment (i.e. medical transportation).
- Emergency communication systems (i.e. radios),
- Training and education for the university, and
- Any other emergency supplies that is required by the university's Emergency Management Plan and Regulation/Legislation.



Facilities Services

Emergency Reporting

In the event of any type of emergency the university recommends calling the Campus Security immediately.

Campus Security Emergency: [778-782-4500](tel:778-782-4500)

Available 24 hours a day, 7 days a week, 365 days a year.

When Campus Security has been informed of the emergency, the individual can call 911 or have security to call 911.

Emergency Procedures

The university has developed, implemented and maintained a list of procedures for various emergencies. The following emergency procedures are to be followed by all employees and contractors that work for the university:

Medical Emergency

Medical emergency can be, heart attack, serious falls, signs of illness, exposure to hazardous materials, burns, strokes, death, and any other serious injury or illness.

1. If safe to do so, shut off all devices, tools and equipment.
2. Immediately shout or call for help, if required.
3. Call Campus Security immediately:
 - **778-782-4500**
 - Provide as much information as possible:
 - **Incident location**
 - **Number of injured, ill or affected personnel.**
 - **Nature of the injury, illness, symptoms, etc.**
 - **Indicate whether an ambulance or other emergency services is required. (Campus security will call emergency services.)**
4. If possible, help the person(s) requiring medical attention/help until Campus Security or Emergency Services arrives/take over

Fire

Fire can be identified by spotting a minor or major fire, smoke or a strong burning smell.

1. If safe to do so, shut off all devices, tools and equipment.
2. Pull the nearest fire alarm
3. If trained and assessed possible to extinguish the fire, grab the closest fire extinguisher and attempt to extinguish the fire. If not, proceed to step 3.
4. Close the door and leave the area, while informing others around you.
5. Evacuate to the nearest exit, do not use elevators. Head toward the designated assembly area.
6. Relay information to the Fire Wardens or Building Evacuation Coordinator and listen to their directions.

If you hear the fire alarm.

1. If safe to do so, shut off all devices, tools and equipment.
2. Evacuate to the nearest exist, do not use the elevators.
3. Close all doors behind you.



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4. Ensure others around you are aware of the fire and if possible get people out of the immediate danger and close the door to the room or area.
5. Go to the assembly area for your building, relay information to the Fire Wardens or Building Evacuation Coordinator and listen to their directions.

Note: Do not re-enter the building or endangered area until authorized by the Fire Department or Campus Security.

Mobility challenges during a fire emergency:

On the ground floor/floor with emergency exit outside:

- Exit via the nearest emergency exit and proceed to the assembly area for your building

All other floors:

- Proceed to the nearest exit route. Take refuge in stair wells or designated refuge areas if available. Ensure that Fire Wardens or the Fire Department is aware of your location and wait for rescue.
- SFU staff and faculty who are mobility impaired ensure that you are listed with your Building Evacuation Coordinator or Fire Warden.

Hazardous Materials/Spills

Any material that, because of its quantity, concentration, physical or chemical characteristics, may adversely affect human or environmental health.

1. If safe to do so, shut off all devices, tools and equipment.
2. Immediately notify surrounding occupants of the spill and evacuate the area, close the doors behind you.
3. Notify your Supervisor and if applicable the lab coordinator/manager of the spill.
4. Provide detail information such as quantity spilled and chemical/material name.
5. Once the area is evacuated, conduct an initial risk assessment to determine:
 - a. Does the building need to be evacuated? If yes, exit the area, close the doors, pull the fire alarm and immediately contact Campus Security.
 - b. Is it a major or minor spill?
 - c. Are you trained in spill cleanup, and do you have the necessary equipment to clean it up?

Link:

https://www.sfu.ca/content/dam/sfu/srs/ehs/emergency_planning/Hazardous%20material%20Plan_Jan_08.pdf



Severe Weather

Weather conditions that creates high winds, hail, excessive precipitation, floods, wildfires, thunderstorms, downbursts, lightning, tornados, waterspouts, cyclones, blizzards, snowstorms, ice storms and etc.

Before coming to campus:

- Know the weather forecast, the conditions of your route and transportation.
- Check SFU Road Report to find out the status of roads on and leading up to the Burnaby campus.
- Check the public transit alerts
- Check SFU emergency alerts
- If safe to head up to the Burnaby campus, ensure to dress appropriately for the weather.

During a severe weather event on campus:

- The best option is to wait on campus for the weather to subside and for our crews to plow and sand roads for safe travel.
- When walking on campus use indoor routes and main access paths.
- Hold on to railings when using stairs
- Follow directions from traffic control staff that may be operating parking lot gates
- Stay where you are until conditions improve.
- Don't put yourself or others at risk by walking down the mountain or calling someone to pick you up
- Look for SFU Emergency Volunteer Team for current information on conditions and services
- Delay your commute and to find one of the many warm, comfortable places on campus to wait for conditions to improve
- Should conditions dictate that individuals will need to remain on campus overnight, or for prolonged periods, basic needs and essential functions such as dining services will be available

For more information refer to the below webpage:

Link: <https://www.sfu.ca/srs/emergency/response/severe-weather.html>



Earthquake

Also known as a quake, tremor or temblor, it is a perceptible shaking of the surface of the Earth, resulting from the sudden release of energy in the Earth's crust that creates seismic waves.

Before an Earthquake:

- Avoid storing heavy objects on high shelves
- Secure bookcases, cabinets and equipment
- Be familiar with emergency plans and procedures
- Have an emergency kit.
- Practice earthquake response often and participate in earthquake drills

During an Earthquake:

- Inside a Building
 1. If safe to do so, shut off all devices, tools and equipment.
 2. Drop down and low.
 3. Cover under a table, desk, or other sturdy piece of furniture.
 4. Hold on and remain covered until the shaking stops.
 - Stay away from windows and shelves with heavy objects.
 - If you can't get under something, flatten yourself or crouch against an interior wall.
 - Stay inside, remain calm, stay where you are and protect yourself.
- Outside
 1. If safe to do so, shut off all devices, tools and equipment.
 2. Stay Outside.
 3. Go to an open area away from buildings, glass and power lines.
 - Do not enter any buildings until they have been approved for re-entry
- In a Vehicle
 1. If you are inside your car, pull over. Avoid overhead structures such as bridges and overpasses.
 2. Set the parking brake and stay inside the car.
 1. If you are on the bus, stay seated until the bus stops.
 2. Drop, Cover and Hold until the Shaking Stops. Stay inside if it is safe to do so.

Mobility Challenges

- If you can, follow the drop, cover, hold-on procedure
- If you are in a wheel chair, move to an inner wall if safe to do so. Lock the brakes and cover your head with your arms.
- If available use a blanket to shield your face from falling debris/glass
- If you have other mobility concerns, arrange your usual seating areas away from windows so you can stay seated. Use seat cushions or pillows to shield yourself from falling debris and broken glass
- When the shaking stops move to refuge areas





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After an Earthquake:

- After the shaking stops count to 60 and then move cautiously outside to an open area and gather with others to wait for further information
- Things may have shifted in the shaking so move carefully and be aware of your surroundings
- Expect aftershocks
- Avoid broken glass and debris
- Do not use elevators
- Do not re-enter buildings until they have been inspected and approved for re-entry by a professional
- Check yourself and others nearby for injuries
- Do not leave SFU until you have checked in with a Fire Warden, Building Evacuation Coordinator or your Supervisor to let them know you are safe. If you don't check in they may think you are injured somewhere and responders will be looking for you.

Power Outage

The sudden and unexpected loss of electricity to the campus's building(s).

1. Remain calm.
2. If safe to do so, secure any equipment or materials you are working with before leaving the area, unplug electrical equipment and turn off computers.
3. Look for emergency lighting to guide you to the exits
4. Elevators will be unavailable, use stairs carefully.
5. Head to the designated assembly area, if required.
6. Once safe, immediately report the power outage to **Facilities Service Desk: 778-782-3582** during regular hours and after hours to **Campus Security: 778-782-4500**. Monitor SFU , SFU  and watch for SFU Alerts.



Bomb Threat

A phone call, letter or any other form of communication that puts the safety of life at risk from a threat to place an explosive device on campus and to activate it.

Response:

- If you receive a bomb threat by telephone, try to gather as much information as possible from the caller by asking such questions as:
 - When is the bomb going to explode?
 - Where is the bomb? What does it look like?
 - Did you place the bomb? Why?
 - Who are you and where do you live?
- Be aware of the caller's:
 - Voice
 - Estimated age
 - State of mind (are they calm? agitated? angry? crying?)
 - Any accent or distinguishing characteristics
- Listen for any background sounds
- Contact Campus Security (**778-782-4500**) as soon as the call is completed or the form of communication has been received. They may make the decision to evacuate the building, the fire alarm may be sounded and procedures will follow the building's evacuation plan.

Suspicious Person or Object

A person that exhibit questionable behaviours and doing something not normal in the university environment. An object or item that is defined as anything out of place and cannot be accounted for or any item suspected of a dangerous device that threatens the preservation of life and property.

Suspicious Person:

- Immediately contact Campus Security: **778-782-4500**.
- Do not physically confront the person.
- Do not let anyone into a locked office.
- Note the location and description of the person to provide that information to campus security.
- Be prepared to evacuate.

Suspicious Object:

- Immediately contact Campus Security: **778-782-4500**.
- Do not touch or disturb the object.
- Note the location and description of the object and provide that information to campus security.
- Be prepared to evacuate.



Active Threat

An individual or group actively engaged in killing or attempting to kill people in a confined or populated area, in most cases, the threat will use firearm(s) or any other form of weapon(s) to kill, with no pattern or method to their selection of victims.

Response:

1. Seek and Share Shelter
 - Seek rooms that can be locked from the inside.
 - Away from windows and avoid rooms with windows that cannot be secured or sealed.
 - Increase distance from the hazard (i.e. if the hazard is outside, move to the building's interior).
2. Secure and Seal the Room
 - Lock exterior doors.
 - Secure the space you are in. If there are no locks do your best to barricade doors.
 - Close and lock windows.
 - Pull blinds shut.
 - In some cases, the ventilation system may be shut off.
 - Do not open doors to anyone unless you can confirm identity.
3. Silence
 - Keep phones ON, but turn to silent.
 - Minimize noise.
 - Listen and be aware of unusual sounds, hazards and smells.
 - Turn out lights.
4. Stay
 - Remain in the secure location until additional information is provided by emergency services.

For more information refer to the below university information:

Emergency Management Plan

Link: <http://www.sfu.ca/content/dam/sfu/srs/emergency/2013.12.20%20CEMP-%20Web%20Version.pdf>

SFU Emergency & Continuity Planning

Link: <https://www.sfu.ca/srs/emergency.html>

SFU "What to Do in an Emergency"

Link: <https://www.sfu.ca/srs/emergency/response.html>

SFU Alerts

Link: https://www.sfu.ca/srs/emergency/sfu-alerts.html#main_content_title



Facilities Services

Records

All training, risk assessment and any other related documentation are to be submitted to SFU Facilities Services for reference and record keeping. All records will be maintained and managed by the appropriate department's management.



Facilities Services' Local Joint Health and Safety Committee

To ensure the University's health and safety management system is maintained in accordance to regulatory requirements and best practices, the University has implemented a Joint Health and Safety Committee to help ensure compliance and continuous improvement. The Joint Health and Safety Committee is to identify workplace hazards related to machinery, substances, processes, working conditions, work procedures and practices or other factors that can endanger the health and safety of workers, and help ensure that appropriate controls are in place to protect employees, contractors, students, faculty and the public.

Definition

The following definitions are used in this program:

- Local Joint Health and Safety Committee (LJHSC)
A group of employees appointed (at least half are worker representatives) for the purpose to help develop, implement and maintain the Health and Safety program/system in the university with 20 or more employees.
- Central University Health and Safety Committee (CUHSC)
A group of employees from the LJHSC Co-Chairs appointed for the purpose to address safety policies and safety issues arising in the public areas. It also promotes communication and information sharing among the various LJHSC. This group reports directly to SFU Chief Safety Officer.
- Terms of Reference (TOR)
A document that is established to define a structure and purpose of a committee who have agreed to work together to accomplish a shared common goal/objective.

Facilities Services LJHSC

The Facilities Services LJHSC is mandated to review occupational health and safety procedures, programs and policies, and to assist in issues relating to health and safety, including personal safety and emergency response, within Facilities Services. The committee promotes the implementation of health and safety programs, monitor programs for effectiveness, review arising health and safety concerns and recommend appropriate action to Facilities Services' Supervisors and Managers. The committee must perform their duties and abide by the responsibilities outlined in the "Local Joint Health and Safety Committees Terms of Reference".

LJHSC Terms of Reference:

Link: <http://www.sfu.ca/srs/ehs/safety-management/safety-committees/ljhsc.html>

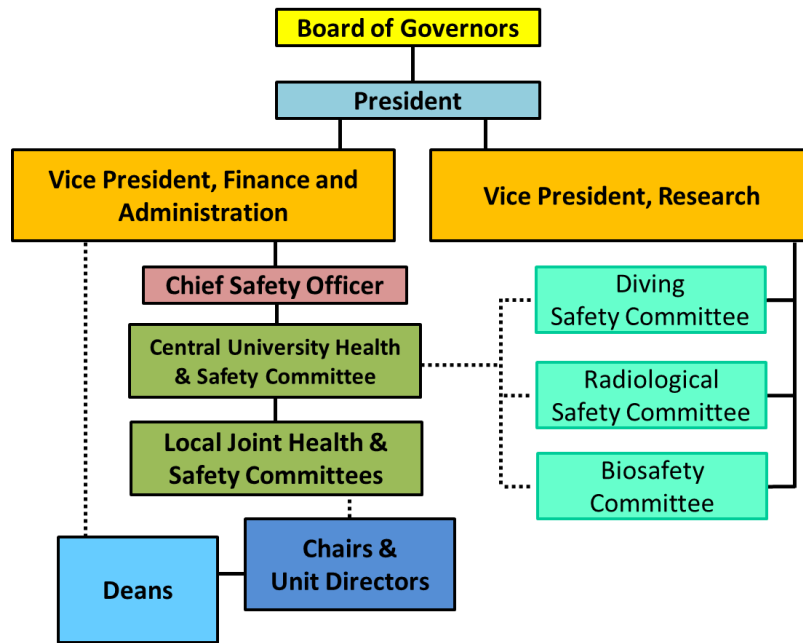
Central University Health and Safety Committee

The CUHSC is mandated to review the university's occupational health and safety policies and programs, address safety issues with the university-wide implications, and safety issues arising in public spaces, including personal safety and emergency response. In addition, this committee will oversee the implementation of local joint health and safety committees (LJHSC) and review operation of these committees.

CUHSC Terms of Reference:

Link: <http://www.sfu.ca/srs/ehs/safety-management/safety-committees/cuhsc.html>

SFU Joint Health and Safety Committee Structure



In order to maintain the University' health and safety committee structure, a member from both the CUHSC and LJHSC must be available to attend the LJHSC meetings. This will allow information from LJHSC to pass to the CUHSC and vice-versa, which will create an open communication with the local areas to the entire university.

Records

Meeting minutes from the LJHSC and CUHSC and any other related documentation are to be submitted to SFU Facilities Services for reference and record keeping. All records will be maintained and managed by the appropriate department's management.



Communications and Meetings

To ensure the effectiveness of any safety management system there must be a format to pass information within an organization. An open line of communication from management to employees/contractors and employees/contractors to management must be maintained at all times. Effective communication will lead to better work performance and the prevention or mitigation of workplace incidents.

Definition

The following definitions are used in this program:

- Toolbox Talk
A monthly or more frequent formal and documented meeting that each department holds for the purpose to discuss, review or bring up any concerns that is related to health and safety.
- Facilities Services Managers Meeting
A meeting that is held every Thursday by the Director of Facilities Services for the purpose of communicating information to all levels of management at Facilities Services.

Safety Board / Bulletin Board

Posting information and documentation are used for internal communication and to meet regulatory requirements. Information that is posted on these boards should be relevant to health and safety in the workplace. The safety boards or bulletin boards should be used and maintained regularly, as it is one of SFU form of communicating information to the front line employees. The following are some of the required and recommended posting that should be maintained by each department management and worker representative, but not limited to:

Internal Board Posting (Recommended)

- Safe work practices and procedures.
- Workplace specific risk/hazard assessments
- Health and safety contacts and information.
- Incident or Near Miss investigation report summary.
- Emergency reporting procedures.
- Upcoming training and training schedules.
- General university important contacts and information.
- LJHSC and CUHSC members and contacts.
- Health and Safety programs availability and information.
- Workplace specific hazards and awareness.
- University's emergency and first aid contacts and information.
- Workplace inspections.
- Incident and Near Miss reporting procedures.
- University's Health and Safety Policy.
- Safety Data Sheet availability and location.
- Standards and Policies.
- Any other health and safety related internal information.

Regulatory Board Posting (Required)

- Notice of Project, Asbestos and Lead (if applicable).
- Notice of Compliance (posted until compliance is met).
- Access to WorkSafe BC Regulation and the Worker Compensation Act of BC.
- WorkSafe BC inspection report (posted for 7 days or until complied).
- Notice to Workers.
- Any other regulatory required or related posting.



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Workplace Posting

Where there are hazards, risks or regulatory requirements that are important to communicate to various groups or parties, posting signs or information can help inform them prior to entering a space/area or starting a task. The posted signs must be followed by everyone to ensure their health and safety and the public.

There are many signs that can be posted around the university to inform or bring an awareness to people. Prior to posting signs, a risk assessment should be completed to ensure that regulatory requirements are met and that the correct information is provided. The following signs are posted throughout the university, but it is not limited to:

<ul style="list-style-type: none"> • Hearing Protection. • Fall Protection. • Safety Toe Footwear. • Chemical Hazards. • Bloodborne Pathogen Hazards. • Speed limit. • Confined Space. • First Aid. • Slippery Hazards or Wet Surfaces • No Smoking. 	<ul style="list-style-type: none"> • Asbestos Warning. • Lead Warning. • Radiation Warning. • Biological Hazards. • Overhead Warning. • Emergency contacts. • Laboratory contacts. • Any other workplace related or regulatory required postings.
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Toolbox Talk

Toolbox Talks can be held every month or more frequently depending, on the needs from each department. These meetings must be documented and should typically run for about 15 – 30 minutes long, if required the meeting can be longer. These meetings must be focus on the occupational health and safety topics, matters and/or concerns.

For general information on construction toolbox talk topics, refer to the below link:

Link: <https://www.bccsa.ca/Toolbox-Talks-.html>

Facilities Services Managers Meeting

A meeting that typically discuss the operation of Facilities Services with all levels of management. This meeting primarily focuses on projects, customer satisfaction/concerns, department changes and various operational matters. However, health and safety related concerns or subjects that are important to inform and involve all or majority of managers are discussed in this meeting. Any University or Facilities Services health and safety items that needs the attention or approval from various management shall be reviewed or brought up in this meeting.

Records

Toolbox talk records, postings and any other related documentation are to be submitted to SFU Facilities Services for reference and record keeping. All records will be maintained and managed by the appropriate department's management.



Program Review

SFU Facilities Services will ensure the continuous improvement and maintenance of the Health and Safety program. A review of the program will be conducted by the Facilities Services LJHSC, department management, and with the assistance of EHRS as needed. The review will be conducted as a whole or in parts of the Health and Safety program. This review will help find any potential missing components or areas of improvement within Facilities Services' Health and Safety program.

Definition

The following definitions are used in this program:

- Program Review
A review and evaluation of the organization's Health and Safety program that analysis in detail for each element/component in the program. This process will identify existing or potential strength and weakness of the program, where the appropriate recommendations/solutions can be provided and then implemented.

Review Process

The following process from starting a review to the final stage of a review shall be followed in order to formally review the Health and Safety program:

1. Facilities Services LJHSC raises and schedule for the program review of the Health and Safety program. Scheduling should also determine review parts/components of the program and deadlines for comments/feedback.
 - Documents are sent out to the appropriate committee members for review.
 - Committee members will review and input their comments or feedback to the documents.
 - Review can also look into the actual process of the program element as a whole to evaluate further (i.e. inspection reports, assessments, training documents, etc).
 - Toolbox talk meeting can be conducted by each department to include worker's comments, or conduct individual interviews.
2. Facilities Services LJHSC reviews the component/part and bring the feedback/comments to the next LJHSC meeting. Changes or comments to the component/part are documented on a draft and logged in the committee's meeting minutes.
 - An action plan can be created in this part to ensure items are addressed in an appropriate timeline.
 - Determine if further research, review or development is required for the comments provided.
 - Determine if external sources are required (i.e. consultant for developing a plan or conduct a survey).
3. Once the component/part of the Health and Safety program has been reviewed, updated and approved by the LJHSC and EHRS, submit the approve document to Faculties Services' Management for final approval (if required).
 - At this stage, the LJHSC, Department's Management and EHRS will monitor the implemented component/part/program to ensure it is practicable and effective.
 - Concerns or comments on the implementation will be brought up in the next LJHSC meeting in regards of the implementation (if required).



Facilities Services

Records

All documentation related to the program review of the Health and Safety program must be submitted to SFU Facilities Services for record keeping. All records will be maintained and managed by the appropriate departments.



Facilities Services

Appendix

Risk Assessment

See below pages.

Field Level Risk Assessment

See below pages.



Assessment Completed By

<u>Name (First, Last):</u>	<u>Date (yyyy.mm.dd):</u>	<u>Signature:</u>
<u>Position:</u>	<u>Department:</u>	

Assessment Location

<u>Campus Location:</u>	<input type="checkbox"/> Burnaby	<input type="checkbox"/> Vancouver	<input type="checkbox"/> Surrey	<input type="checkbox"/> Great Northern Way
<input type="checkbox"/> Indoor	Building		Floor	Room
<input type="checkbox"/> Outdoor	Location (description of area, building, streets, laneways, etc)			

Assessment Application

<input type="checkbox"/> Carpenters	<input type="checkbox"/> Central Stores Staff	<input type="checkbox"/> Painters	<input type="checkbox"/> HVAC
<input type="checkbox"/> Plumbers	<input type="checkbox"/> Labourers	<input type="checkbox"/> Electricians/Re-Lamper	<input type="checkbox"/> Auto Mechanics
<input type="checkbox"/> Mechanics	<input type="checkbox"/> Welders	<input type="checkbox"/> Security	<input type="checkbox"/> Office Staff
<input type="checkbox"/> Contractors	<input type="checkbox"/> Consultants	<input type="checkbox"/> Others (please indicate):	

Workplace Assessment

In this section, review all the task/work that will occur in the workplace. For each task/work listed, identify and list all the existing and potential hazard/risk. Then on the next column, list all the possible controls you can implement for that specific task/work. Finally, when all the controls are implemented for the specific task/work, rank the potential risk for injury, illness, damage, loss, etc? Use the table on the last page to help determine the risk rating of each task/work.

<u>List all Possible Tasks</u>	<u>What are the existing or potential hazards or risks?</u>	<u>What are the possible control measures?</u>	<u>When all control measures are in place, how would you rate the risk? (low, moderate, high)?</u>

Risk Ranking Table

Low	Controls are more than adequate for the task/work. Injuries or illness will be minor to none. Impact is low to the environment, people, property, equipment, etc.
Moderate	Controls are sufficient for the task/work. Injuries or illness are minor to medium, and possible. Impact is medium to the environment, people, property, equipment, etc.
High	PPE is the main control and very little administrative and engineering controls in place. Injuries or illness can be serious to fatal. Impact is high if an incident were to occur to the environment, people, property, equipment, etc.

What is the risk of injury/illness/loss for the work that will be performed?

		Risk				
		Insignificant	Minor	Moderate	Serious	Catastrophic
Probability	Rare	Very Low	Very Low	Low	Low	Moderate
	Unlikely	Very Low	Very Low	Low	Moderate	Moderate
	Possible	Very Low	Low	Moderate	Moderate	High
	Likely	Low	Moderate	Moderate	High	High
	Most Certain	Low	Moderate	High	High	High

Very Low	Work can proceed with no complication or repercussion.
Low	Work can proceed with additional minor control measures (i.e. safety glasses, operating power tools, etc).
Moderate	Work must inform Supervisor with reasonably more control measures, prior to starting (i.e. review procedures, use of fall protection under 25').
High	Work cannot start until Supervisor/Manager and EHRS has developed site specific safety documentations and training (i.e. fall protection plan, confined space entry, high voltage work, etc)

Example of Risk Criteria

	Insignificant	Minor	Moderate	Serious	Catastrophic
People	Minor to no injury or illness	Minor to moderate injury or illness	Significant injury or illness that results in medical aid or modified work.	Permanent or severe injury, illness or impairment.	Death of 1 or more life
Property	Under \$500	Under \$1000	Over \$1000 and up to \$5000	Over \$5000 up to \$20,000	Over \$20,000
Environment	No impact	Minor impact	Spills with minor to moderate impact	Moderate to severe spill with significant impact that is reversible.	Severe spill with long or permanent impact
Public	None or individual	Individual to less than 5 with supervisor intervention	Management, Supervisor and small Community/Local intervention	Directors, Senior Management and municipal government intervention	President, Vice President, Provincial or Federal Government Intervention

Example of Probability

The chance that a negative outcome will occur.	
Rare	1 in 15,000
Unlikely	1 in 2000
Possible	1 in 400
Likely	1 in 20
Most Certain	1 in 3