SAFE WORK PROCEDURE: HAZARD MANAGEMENT

Preamble

A hazard is a situation, activity, or substance with potential to cause harm to the health or safety (may cause an injury, illness, or loss) of employees, students, volunteers, and visitors. Hazards can include substances, equipment, machines, and methods of work or the work environment. Hazards can be grouped into four categories: physical, psychological, chemical and biological.

Hazard management strategies help build safe and healthy workplaces through a proactive and preventative approach to workplace hazards. They are at the core of Mount Royal University's occupational health and safety management system.

Mount Royal University is responsible for identifying and evaluating hazards in the work area. If a hazard cannot be eliminated, it must be controlled to reduce the risk of injury or incident to as low as reasonably possible.

The goal of hazard management is to organize and control work activities so that hazards are eliminated or reduced, and the related risks to the employees, public, and organizational assets minimized.

Organizational assets at risk of loss include:

- **People** – examples of loss in this category are injury or illness to personnel; short- or long-term disability due to injury; financial loss incurred in compensation payments; payments for replacement personnel; extra workload for co-workers, etc.
- **Equipment/Property** – loss may range from minor damage requiring repair to major damage where total replacement or rebuilding may be necessary;
- **Business Process / Reputation** – examples are loss of product resulting from a process interruption or loss of project time due to damage to personnel, equipment, or materials.
- **Environment -** environmental pollution and impact result in long- or short-term damage, reversible and irreversible effects, as well as adverse publicity.

Scope

This procedure applies to all MRU employees performing tasks on behalf of the University.

Prime contractors performing work on MRU property and their subcontractors shall follow their own procedures for hazard identification that meets or exceeds legislated requirements. Where MRU is retaining prime contractor status, contractors shall follow the MRU procedure unless their company has a comparable system in place.

Legislation

Alberta's Occupational Health and Safety Code outlines the requirements for hazard management in Part 2. This legislation requires employers to assess the various hazards inherent in workplace operations by carrying out a systematic, general examination of the work activities, recording significant findings, and taking action to eliminate or reduce the risk of incidents.

Additional information on the rights of workers pertaining to hazards and the responsibility of MRU to inform workers of hazards they may encounter at the worksite can be found in the AB OHS Act.

Responsibilities

Executive (President, Vice-Presidents):

- Provide management support and leadership necessary to provide a safe and healthy working environment for employees and students, in compliance with the Mount Royal Environmental, Health and Safety Policy.
- Ensure that adequate resources are available to implement appropriate controls.

Associate Vice-Presidents / Deans / Directors / Department Managers:

- Ensure that this safety procedure is communicated to employees.
- Ensure that this procedure is understood and followed by employees.
- Work with EH&S to develop Position Hazard Assessments (PHAs) for roles within their department.
- Ensure that employees review the appropriate PHA upon hire, when roles, tasks or hazards change, and frequently enough to understand the hazards they may encounter and appropriate controls to apply.
- Ensure that employees are trained in performing Field Level Hazard Assessments (FLHAs), if applicable.

Supervisors / Chairs:

- Lead by example.
- Assist Management in maintaining and reviewing PHAs for the department.
- Train employees on controls needed.
- Train employees on how to conduct FLHAs, if appropriate for their role, and perform spot checks to ensure the process is understood.
- Initiate controls and corrective actions in response to incidents and identified hazards.
- Communicate updates in hazard controls to employees and provide training and coaching as required.
- Discuss updates to common hazards and controls with employees in regular meetings to encourage engagement with hazard management.

MRU Employees (Staff, Faculty, or Volunteers):

- Review applicable PHA upon hire; when roles, tasks or hazards change; and frequently enough to understand hazards you may encounter and appropriate controls to apply.
- Provide feedback on PHA to Management so that updates can be made when necessary.
- Perform informal hazard assessments when working in variable spaces on campus, and control or report any uncontrolled hazards to the appropriate personnel (as outlined in this document).
- If required for position, complete FLHA training and perform FLHAs as needed.
- Participate in hazard assessments, ask questions for clarification and provide suggestions for controls and corrective actions, based on your knowledge of the work scope.

Contractors:

- Maintain a safe and low risk work environment during the duration of the work within MRU facilities;
- Perform FLHAs (or equivalent) as per contractor company policy and apply effective hazard controls.
- Submit copies of the FLHAs to the MRU Project Manager once per week or at the end of the project.
- Participate in the MRU Health & Safety Orientation and follow MRU safety procedures where applicable (e.g. Hot Work Program).

Environmental, Health & Safety (EH&S):

- Maintain library of PHAs and coordinate with Management to maintain and develop PHAs as needed.
- Assess the risks of workplace hazard identified by PHAs and FLHAs.
- Provide safety training on hazard identification, assessment and control to employees.
- Review and provide recommendations for hazard management and corrective actions.
- Perform Contractor Health & Safety orientations and work with MRU Project Managers to ensure contractors are qualified and that tasks are performed as safely as possible.
- Provide safety guidance to employees, contractors and students, and assist in interpreting legislative requirements when required.

Joint Occupational Health and Safety Committee (JOHSC)

- Educate on and promote awareness around legislated requirements.
- Review and provide recommendations regarding the hazard management program, including incident follow up.
- Support workers in the identification, assessment and control of hazards and make recommendations to Management on when required.
- Participate in routine workplace inspections, when required.
- Participate in investigations of dangerous work refusals.
- Promote safe work practices on campus, including safety training and procedures to control hazards.

Procedure

Managing hazards is a critical element of the MRU Environmental Health & Safety Management System. Identification and control of hazards is considered a proactive approach to health and safety and necessary to prevent injury and incidents like property or equipment damage, hazardous material spills or exposure, and security incidents.

Hazard identification is a systematic approach that involves;

- Assessment of each area and department.
- Preparation and review of schedules of job tasks, activities, or work operations;
- Discussions with employees about hazard management.
- Reference to incident reports, pre-job meetings, incident investigation reports, safety meeting minutes, and worksite inspections.
- Review of applicable legislation, codes of practice and industry practices to assist with identification of hazards associated with particular equipment and processes.
- Consideration of hazards arising from reasonably foreseeable changes in processes, equipment, circumstances or work conditions.
- Documentation of identified hazards.
- Identification of risks associated with tasks.
- Identification of other people in the work area (e.g. visitors, the general public, etc.) who are potentially at risk.

Types of Workplace Hazards

A hazard is any source of potential damage, harm, or adverse health effects on something or someone. They are situations, conditions or things that could cause an injury or illness. Examples include sharp edges, a patch of ice, or the act of working on a ladder. Hazards can be grouped into four common categories:

- **Biological Hazards**
  - Biological substances that may pose a health threat. Also known as “biohazards”.
  - Examples include bacteria, viruses, insects, plants, animals, mold, and bodily fluids or sewage.
- **Chemical Hazards**
  - Materials that may cause acute or chronic (long-term) health impacts. The impact depends on the physical, chemical and toxic properties of the chemical.
  - Examples include lab chemicals, cleaning supplies, paint and maintenance products, and any fumes, vapours, gases and waste by-products associated with them.
- **Physical Hazards**
  - Substances or activities that threaten physical health or safety.
  - Includes ergonomic hazards, radiation (ionizing or non-ionizing), noise and extreme temperatures.

  - Examples include sharp edges, pinch or crush points, x-ray devices, lasers, UV radiation, lifting, pulling / pushing, repetitive motions, awkward or static postures, working with tools or equipment, working at heights and working alone.
- **Psychological Hazards**
  - Behaviours, conditions or situations that affect the psychological wellbeing of workers.
  - Examples include stress, fatigue, and harassment or bullying.

Some hazards may be a combination of more than one category, and more than one category of hazard may be present in any single task.

Hazard Management Processes

Hazard management can be formal or informal. Formal hazard management processes used at the University include Position Hazard Assessments, Field Level Hazard Assessments, and the Master Position Hazard Assessment.

Workplace inspections are another effective way to identify and assess hazards at the work site. More information on MRU inspection processes can be found in the Workplace Safety Inspections Safety Program.

Daily hazard management

Daily hazard management is an informal hazard management process of simply “looking out for hazards” as you perform a task. Examples include looking ahead for hazards as you walk across campus or scanning a room to ensure that it’s safe to enter. Whenever possible, identified hazards should be addressed before proceeding with work, e.g. wiping up a small spill that could lead to a slip or fall. Where the hazard cannot be easily mended, it should be reported to the appropriate group:

- **Building concerns** (e.g. lighting, temperature, air quality, plumbing, ground conditions, non-hazardous spills): report to Frontline or 403-440-6417.
- **Security concerns** (e.g. suspicious behavior, speeding vehicles, damaged door locks): report to Security at 403-440-5900.
- **Safety concerns** (e.g. unsafe working behavior, unsecured worksites or equipment, hazardous materials spills): report to EH&S at 403-440-6038 or ehs@mtroyal.ca.

Position Hazard Assessments

A Position Hazard Assessment (PHA) is a detailed list of a job position’s common tasks, the hazards associated with each task, and descriptions of controls for each hazard that should be put in place to reduce the risk of incident or injury.

Controls include engineering and administrative controls, as well as personal protective equipment (see Controls).

Some controls are mandated requirements (such as certified training courses or required personal protective equipment). Mandated requirements may also include legislative requirements that must be

met. For lower risk tasks, controls may include recommendations (such as wearing slip-resistant shoes in winter) rather than requirements. The specific controls to be applied when performing the task will depend on an assessment of the hazard at the time of the task.

Supervisors must ensure their direct reports review and sign their applicable PHA when hired, and review their PHA at least annually to ensure the information is still current. PHAs should also be reviewed anytime there are significant changes to the employee's role, to the tasks being completed, or to related hazards or controls. Supervisors must also make sure that employees moving into a different position review their newly applicable PHA. If supervisors have questions about PHAs or would like to create or update them, please contact EHS@mtroyal.ca.

Employees starting a new role should be sure to ask their Supervisor for the PHA if it isn't offered to them.

Field Level Hazard Assessments

Field Level Hazard Assessments (FLHAs) are completed before work begins at a new site or when new hazards are introduced to a familiar work site. At MRU, FLHAs are most commonly performed by employees that perform higher risk or non-routine tasks, work in varying locations around campus, or perform tasks that are subject to variable conditions. They should also be completed by contractors coming to perform work on University property.

Examples of times when an FLHA should be performed:

- When performing high risk work such as working at heights over 3 m or working on electrical systems
- When working outside in variable conditions
- When working with new or unfamiliar equipment
- When performing a task that is not part of your normal routine
- When working in a public area where access to the work area must be controlled
- When responding to an emergency situation

An FLHA checks for the introduction of any unexpected hazards and confirms if the hazard controls identified in the PHA are adequate for the situation. Any hazards identified during an FLHA must be addressed before work begins at the location.

An FLHA can be completed by an individual or by a group of employees completing a task together. If more than one employee is completing the FLHA, all of them must understand the hazards and controls identified during the process and must sign the FLHA form.

FLHA forms can be obtained from your department Supervisor.

Supervisors (or a competent delegate) shall train employees on completing FLHAs for their role. Supervisors should perform spot-checks of FLHAs on a monthly basis to ensure they are being completed correctly. EH&S may also ask to view FLHAs when inspecting work sites around campus.

Contractors performing work for MRU must complete their company's version of an FLHA and provide copies to their MRU Project Manager. These should be submitted at the end of the project for projects lasting less than a week, or on a weekly basis for longer duration projects.

Master Hazard Assessment

The Master Hazard Assessment (MHA) is a health and safety assessment of all positions at MRU. Like PHAs, the MHA includes a list of tasks for each position along with associated hazards and applicable controls. The document also includes pre- and post-control assessments of the risk of injury or incident. This risk assessment helps us to identify high risk tasks and positions on campus and prioritize the hazards and controls accordingly. It's critical that the applied controls reduce the risk of incident to as low as reasonably possible; if not, additional controls must be put into place.

The MHA is developed and maintained by EH&S, based in part on feedback on PHAs provided by the employees. The MHA is reviewed annually and updated any time there is a significant change in tasks, hazards, or controls. The controls and risk levels are also reassessed after incidents and updated as needed.

When a new position or task is added to the MHA, the following steps are followed:

1. Identify all the tasks performed by the position.
2. Identify the hazards of each task.
3. Determine the initial risk level due to each hazard (before any controls are applied).
4. List the controls to put in place to eliminate or control the hazards.
5. Identify if specific training is required to safely complete the task and ensure the employee/worker is trained and competent.
6. Reassess the risk of the hazard with all controls applied effectively to determine the residual risk.
7. Add the task, hazards, and controls to the PHA and send to employee and their direct supervisor for review and feedback.
8. Update as necessary, based on feedback in initial or annual reviews, or as part of an incident review.

Controls

Controls are actions taken to reduce the risk of incident or injury presented by an identified hazard. The hierarchy of controls below lists the five main methods of controlling a hazard, ranked from most to least effective. The most effective controls/safeguards are the ones that don't rely on human action to succeed.

Image 1: Hierarchy of Controls

- **Elimination**: Physically remove the hazard from the workplace. E.g. wiping up a spill or removing damaged equipment from service.
- **Substitution**: Replace hazardous materials or equipment with less hazardous ones. E.g. replacing cleaning materials with less corrosive alternatives or replacing older tools with newer ones that have integrated machine guards.
- **Engineering Controls**: Isolating people from the hazard by controlling it at the source. Engineering controls don't rely on worker action to provide protection. E.g. automated ventilation systems or equipment guards.
- **Administrative Controls**: Change how the work is done to control the hazard along the path. Administrative controls rely on worker action to provide protection. E.g. safe work practices and procedures, good housekeeping, warning and alarm systems, signage, training, or task rotation.
- **Personal Protective Equipment (PPE)**: Control the hazard at the worker. Personal protective equipment often won't prevent an incident from occurring, but will reduce the potential consequences to the worker. E.g. lab coats, safety toed footwear, safety glasses or goggles, cut or chemical resistant gloves, reflective / high visibility clothing, hearing protection, and respiratory protection.

To apply adequate controls/safeguards, ask the following questions:

- Can the hazard be eliminated? Is there a different way to do a task that would remove the hazard completely?
- Can a substitution be made to lower the hazard risk? Can we change the tools, material, equipment, layout or location to reduce the hazard?
- Can physical barriers or safety equipment be used to isolate workers from the hazard?
- Can the chance of human error be reduced?
- Can warning devices be implemented?
- Can protective procedures such as safe work procedures, guidelines or permits be used to minimize the risk of human error?
- Can we reduce the frequency of the task to reduce frequency of exposure to the hazards?
- Are the workers involved competent, motivated and properly supervised?

Hazard controls bring change. It is important to remember that workers will require some assistance and training when the work environment, job task or hazard controls change.

Hazard control solutions should clearly state what to do and how to do it. A good recommendation explains both "what" and "how" to do the task.

If a hazard cannot be eliminated, a combination of controls may be applied to provide a greater level of protection for workers.

Reporting Unsafe Conditions / Uncontrolled Hazards

Workers will sometimes identify a hazard that they cannot control on their own. These unsafe conditions shall be reported immediately to the employee's direct supervisor and to other groups that may be able to assist in hazard control. If an imminent danger exists due to unsafe conditions, work must be halted immediately and the area secured until the hazard is removed or controlled.

Remember that workers have a right to refuse dangerous work, as outlined in the Alberta Occupational Health & Safety Act. Dangerous work is defined as work that a worker reasonably believes may pose a threat to the health and safety of the worker or others in the area. In the event of a dangerous work refusal, the worker shall report the hazardous condition to their supervisor and follow the steps outlined in the Safe Work Procedure: Unsafe Work Refusal.

Emergency safety concerns should be reported immediately to Security Services, 403.440.5900.

Non-emergency safety concerns or unsafe conditions can be reported quickly and easily using the MRU Now app. Alternatively, you can contact one of the departments below. Examples of the types of concerns each department addresses are also listed.

Department	Contact	Examples of What to Report
Security Services	403-440-5900	• First aid assistance • Suspicious activity • Broken door locks
Facilities	Submit a Frontline request MRUFrontline@mtroyal.ca 403.440.6417	• Water leaks • Clogged toilets • Burnt out lighting • Slip / ice hazards • Broken furniture
EH&S	Injury / Incident Report Form EHS@mtroyal.ca 403.440.6038	• Workers performing work unsafely (e.g. working without protective equipment) • Non-CSA approved electronics or extension cords used as permanent plug-ins • General safety concerns • Other safety concerns not listed in this table, especially if you are unsure of who to contact

Definitions

Close Call: An incident in which injury did not occur but which could have caused an injury or loss under slightly different circumstances. Also known as a “near miss”.

Contractor: An independent legal entity that is engaged in the business of providing work in exchange for payment. An independent legal entity includes an individual, sole proprietorship, partnership or a corporation.

CSA: Canadian Standards Association

Dangerous Work: is defined as work that a worker reasonably believes may pose a threat to the health and safety of the worker or others in the area.

Employee: Volunteers or individuals who are engaged to work for the University under an employment or apprenticeship contract, including Faculty, Staff, exempt Employees, Management Employees, and Undergraduate, Graduate or Postgraduate students carrying out work for the University.

Employer: A person who employees one or more workers, including volunteers, or a person designated by an employer to be the employer’s representative. At MRU, this includes all Management Employees as defined herein.

Hazard: A situation, activity, or thing that may be dangerous to the health or safety (may cause an injury, illness, or loss) of employees/workers, students, volunteers, and visitors.

Hazard Controls: Procedures and/or processes and/or mechanized equipment intentionally used to protect the worker from hazards in the workplace. Common hazard controls fall under engineering controls (e.g. ventilation), administrative controls (e.g. training, signage), and personal protective equipment (e.g. safety glasses).

Hierarchy of Controls: The order control methods are to be considered/ applied, as outlined in Alberta’s Occupational Health and Safety Code, Part 2, Section 9(1–5).

Incident: An unplanned, undesired event that resulted in or had the potential to cause physical injury or illness to a person, damage to property, or damage to the environment. Includes events that result in injury or damage and close calls, where injury or damage could have occurred but is avoided.

Job: The position a person has in an organization (e.g. electrician, chef, truck driver, computer technician, administrative assistant).

Management Employee: The President, Vice-Presidents, Associate Vice-Presidents, Deans, Directors, Managers, Supervisors, Chairs, Team Leads and all Employees classified as management Employees by Human Resources.

Prime Contractor: A contractor that has been assigned health and safety responsibility for a defined work zone, as outlined in the Alberta Occupational Health and Safety Code.

Project Manager: An employee of MRU who has hired a third party contractor to perform work at the University.

Residual Risk: The remaining chance of injury, damage or loss occurring after controls have been put in place.

Risk: The chance of injury, damage or loss. At MRU, risk is determined by estimating the likelihood of an undesirable event occurring and the potential consequences if it does occur.

Safe Work Procedure (SWP): A written, step-by-step instruction for how to safely perform a task from beginning to end.

Subcontractor: A form of contractor that is hired by another contractor (usually the prime contractor) to perform work. Responsibility for the safety of subcontractors lies with the prime contractor for the project.

Supervisor: A person who has charge of a workplace, or authority over a worker. Depending on the particular reporting relationship, a Supervisor includes, but is not limited to any of the following: Manager, Associate Dean, Director, Vice President or President.

Task: An activity that a worker does as a part of their job.

Volunteer: Unpaid individual working under the direction of an Employee of the University. Volunteers do not receive course credits or grades, and the work is not a requirement of graduation.

Worker: Any paid or unpaid Employee or a volunteer.

REVISION HISTORY

Date	Revision	Notes
January 2021	01	Creation of Safe Work Procedure