



Fire Safety Plan

2014

University of Saskatchewan

EMERGENCY NUMBERS

Emergency Services	9-911 (from a campus telephone)
	911 (from a pay telephone or mobile telephone)
Protective Services	306-966-5555

SAFETY RESOURCES

General Inquiries	306-966-4675
Fire Safety	306-966-8512
Spill Response	306-966-8497
Hazardous Waste Management	306-966-8497
Chemical and Environmental Safety	306-966-8512
Biosafety	306-966-8496
Radiation Safety	306-966-8494

OTHER ESSENTIAL SERVICES

Facilities Management Division	306-966-4700
Wellness Resources	306-966-4580

Contents

1	Purpose	1
2	Scope	1
3	Emergency Preparedness and Response	1
4	Roles and Responsibilities	1
4.1	Faculty, Staff, Students and Visitors	1
4.2	Supervisors.....	2
4.3	Fire Wardens	2
4.4	Protective Services	2
4.5	Safety Resources	3
4.6	Facilities Management Division.....	3
4.7	Saskatoon Fire and Protective Services.....	3
5	Fire Protection Equipment and Life Safety Systems.....	4
5.1	Maintenance and Inspection	4
5.2	Fire Drills	4
6	Building Evacuation Plan	4
7	Fire Warden System	5
7.1	Introduction.....	5
7.2	Roles and Responsibilities	5
8	Fire Alarm Response	7
8.1	Institutional Response.....	7
8.2	Action in Case of Fire.....	7
9	Fire Prevention	9
9.1	General.....	9
9.2	Building Exits	9
9.3	Smoking.....	9
9.4	Hot Work.....	9
9.1	Building Exits	10
9.2	Hydrants	10
9.3	Use and Storage of Hazardous Materials.....	10
9.3.1	Inventory Management	10
9.3.2	Ordinary Combustibles	11

9.3.3	Flammable Liquids and Hazardous Chemicals	11
9.3.4	Drums	12
9.3.5	High Pressure Cylinders	12
9.3.6	Explosives	13
9.3.7	Laboratories.....	13
9.3.8	Disposal of Hazardous Materials.....	14
9.4	Electrical Equipment	14
9.4.1	General.....	14
9.4.2	Electrical Appliances.....	14
9.5	Facility Decommissioning.....	15
10	Training	15
11	Plan Review	16
12	References.....	16

1 Purpose

The *Fire Safety Plan* outlines measures and processes for the control of fire hazards, the orderly evacuation of university buildings in the event of a fire alarm, and the effective utilization of fire protection systems and equipment in university buildings.

2 Scope

The *Fire Safety Plan* summarizes institutional requirements on fire prevention and emergency evacuation processes in the event of a potential or real fire emergency. The *Fire Safety Plan* is intended to support college and administrative unit local emergency response plans.

The *Fire Safety Plan*, in conjunction with local emergency plan, aligns with civic and national fire safety requirements for fire safety plans.

The *Fire Safety Plan* applies to all faculty, staff, students and visitors to the University of Saskatchewan.

3 Emergency Preparedness and Response

The University of Saskatchewan maintains an emergency management plan to guide an effective institutional response to major emergencies. The plan is based on the principles of the Canadian Emergency Management Framework, and recognized best practices in emergency management.

In concert with the institutional emergency management plan, university colleges and units have local emergency plans which provide institutional and location/activity specific response requirements for various emergency situations including for fire safety and building evacuation processes in the event of a fire emergency.

4 Roles and Responsibilities

4.1 Faculty, Staff, Students and Visitors

Faculty, staff, students and visitors are responsible to:

- Be familiar with the hazards in the workplace, and the controls, procedures and rules that must be followed to minimize risk of fire.
- Be familiar with emergency procedures and building evacuation procedures for the building(s) or area(s) they occupy.
- Know the people in their building with assigned responsibilities under the Fire Warden System (Fire Wardens, Door/Corridor Guards).
- When a fire alarm sounds for more than 10 seconds, proceed with evacuating the building in accordance with the evacuation plan.

- Follow the directions of building personnel, and emergency response personnel (university and civic) charged with coordinating the building evacuation.
- Do not re-enter a building where a fire alarm has sounded until directed to do so by emergency response personnel.
- Report fire safety or other concerns to a supervisor and/or to Safety Resources.

4.2 Supervisors

Supervisors are responsible to:

- Ensure workplaces are regularly inspected for fire safety and other occupational health and safety hazards and that identified hazards are appropriately controlled.
- Be familiar with emergency and evacuation procedures for the building(s) or area(s) they occupy.
- Ensure faculty, staff and students under their supervision understand the hazards (fire and other hazards) in their work area, and receive appropriate training on hazard controls, work, and procedures including for emergencies.
- When a fire alarm sounds for more than 10 seconds, support the safe evacuation of the building in accordance with the evacuation plan for the building and/or areas occupied.
- Report fire safety or other concerns to Safety Resources.

4.3 Fire Wardens

In accordance with the Fire Warden System, designated personnel within each building shall be charged with coordinating and controlling the safe evacuation of persons within the building when a fire alarm is initiated. Specific roles and responsibilities of said personnel are presented in the section, Fire Warden System.

4.4 Protective Services

Protective Services is responsible to:

- Support the development and implementation of programs supporting emergency preparedness and response.
- Respond to emergencies on campus.
- Coordinate emergency measures services response.
- Assist with building evacuations.
- Control access to emergency areas.
- Assist with crowd control.
- Liaise with Saskatoon Fire and Protective Services (SFPS).
- Assist in the investigation into fires, fire alarms and other emergency events.

4.5 Safety Resources

Safety Resources is responsible to:

- Support the development and implementation of programs supporting fire safety and emergency preparedness and response.
- Respond to fire alarms and other emergencies on campus.
- Provide consultation and advice to the campus community and contractors on fire safety.
- Assist in the development of building evacuation plans for all occupied buildings on campus.
- Provide training on fire safety, building evacuation, and emergency preparedness and response.
- Provide fire extinguisher training.
- Test and maintain fire extinguishers in university buildings.
- Coordinate annual fire (building evacuation) drills in all alarmed buildings on campus.
- Issue hot work permits.
- Conduct fire safety inspections.
- Investigate fires and false fire alarms on campus.
- Support fire safety regulatory and code compliance.
- Liaise with Saskatoon Fire and Protective Services (SFPS).

4.6 Facilities Management Division

The Facilities Management Division (FMD) is responsible to:

- Monitor fire alarm systems on campus.
- Respond to fire alarms.
- Silence fire alarms and reset building annunciator panels and main fire alarm panels, as directed by emergency response personnel.
- Maintain buildings, building infrastructure.
- Maintain and test as appropriate fire protection equipment and life safety systems.
- Investigate fires and false fire alarms on campus.
- Support fire safety regulatory and code compliance.

4.7 Saskatoon Fire and Protective Services

Saskatoon Fire and Protective Services (SFPS) will respond to fire alarms and other emergencies at the University of Saskatchewan. SFPS has overall authority over emergency response measures for fires on campus. Protective Services, Safety Resources, and FMD shall provide guidance and assistance to SFPS as required.

In coordination with Safety Resources, SFPS also conducts routine inspections of university buildings for compliance with fire safety codes and applicable regulations.

SFPS also provides advice to the university on fire safety.

5 Fire Protection Equipment and Life Safety Systems

5.1 Maintenance and Inspection

Fire protection equipment and life safety systems (e.g. emergency power, emergency lighting, smoke alarms, fire alarm systems, sprinkler systems, fire extinguishers) in University of Saskatchewan buildings vary depending on the era of the buildings, use and occupancy type.

Building fire protection equipment and life safety systems shall be installed, inspected, maintained, and tested in accordance with manufacturer requirements, the National Building Code, the National Fire Code, civic bylaws, and applicable regulations. Records of all fire protection equipment and life safety systems, technical information and drawings, inspections, maintenance and testing shall be maintained by the university through FMD.

5.2 Fire Drills

Fire drills shall be carried out at a frequency not greater than every 12 months for all university buildings equipped with fire alarm systems. Fire drills shall be coordinated by Safety Resources in consultation with the colleges, administrative units, FMD, Protective Services and SFPS. Safety Resources shall maintain records of all fire drills.

6 Building Evacuation Plan

As an integral part of local emergency plans, all occupied buildings at the University of Saskatchewan shall have a plan in place for the orderly evacuation of the building in the event of a fire alarm, or other emergency.

Building evacuation plans shall include the following information:

- Names and contact information for building personnel (Fire Wardens) supporting building evacuation.
- Roles and responsibilities for building personnel supporting building evacuation.
- Procedures to follow in the event of a fire.
- Procedures for the orderly evacuation of the building including provisions for safely evacuating persons with special needs.
- Training of fire safety and evacuation procedures.
- Building diagrams showing fire extinguishers, fire alarm pull stations, exits, evacuation routes and marshalling areas.
- Frequency of fire drills.

Safety Resources, in collaboration with Protective Services, shall assist colleges and administrative units with the development, implementation, and maintenance of building

evacuation plans. Safety Resources together with Protective Services shall maintain copies of all local emergency response plans for the university.

Building evacuation plans shall be posted in their respective building and/or be available through the college/division website or intranet site. A floor plan indicating locations of exits from applicable floors and marshaling area locations shall be posted in a prominent location on each floor of every building. A list of the names of Fire Wardens for the building should also be displayed with the floor plans of each floor on local occupational health and safety bulletin boards.

Local emergency plans and building evacuation plans shall be reviewed by each college/division at regular intervals not greater than 12 months to ensure the plans remain current.

7 Fire Warden System

7.1 Introduction

All occupied buildings at the university shall have an organized Fire Warden System to control the evacuation of persons during a fire, or other emergency. Under the Fire Warden System, designated university employees within a building are charged with supporting the safe and orderly evacuation of the building in the event of a fire alarm or other emergency. A typical Fire Warden System will include the following positions:

- Chief Fire Warden
- Deputy Chief Fire Warden
- Floor Wardens and Assistant Floor Wardens
- Door/Corridor Guards

7.2 Roles and Responsibilities

Chief Fire Warden

The Chief Fire Warden is responsible for recruiting all wardens and door/corridor guards, for coordinating training, and for maintaining records associated with the building evacuation plan.

When a fire alarm is initiated, the Chief Fire Warden shall,

- Go immediately to the building annunciator panel to determine the location of the emergency. Safety Resources and FMD personnel will also assemble at the building annunciator panel.
- If safe to do so, go to the area where alarm was initiated and assess the situation.
- Assist, or seek assistance for individuals that are injured.
- Notify Floor Wardens and provide information on the alarm situation.
- Supervise the orderly evacuation of personnel from the building.

- Notify Protective Services and SFPS of any special hazards in the building or area.
- When evacuation is complete, receive reports from all Floor Wardens regarding the accounting of personnel.
- When authorized by SFPS, Protective Services, or Safety Resources, notify Floor Wardens in the marshaling areas that the building is safe to re-occupy.

Deputy Chief Fire Warden

When a fire alarm is initiated, the Deputy Chief Fire Warden shall,

- Go immediately to the building annunciator panel to determine the location of the emergency.
- Remain at the entrance by the annunciator panel to direct Protective Services and SFPS to the location of the alarm.
- Assist the Chief Fire Warden.

The Deputy Chief Fire Warden shall act as the Chief Fire Warden in his/her absence.

Floor Wardens and Assistant Floor Wardens

When a fire alarm is initiated, Floor Wardens and designated Assistant Floor Wardens shall,

- If the fire alarm was initiated in the Floor Warden's designated area(s), assess the situation, and take appropriate action to ensure the safety of those in the area. Notify the Chief Fire Warden, Protective Services and SFPS of any special hazards in the area.
- Assist, or seek assistance for individuals that are injured.
- Direct personnel in their designated area(s) to evacuate the building through pre-determined exits to the marshaling area(s).
- Assistant Wardens or other individuals may be assigned to assist persons with special needs to exit the building. If a person with special needs cannot easily be guided out of the building, two or more assistants should be assigned to stay with the person in a safe place (preferably close to a stairwell or a room with a window) until rescue personnel arrive. A person with special needs should not be left to wait alone during a building evacuation.
- Search their designated area(s), including washrooms and elevators to ensure that all personnel are out and that all doors are closed.
- Ensure Door/Corridor Guards are posted at each exit.
- Report to the Chief Fire Warden on the state of their area(s) and stand by for any further instructions. Report on any individuals with special needs that are still in the building.
- At the marshaling area, confirm with Chief Floor Wardens the safe evacuation of personnel from the designated area(s).
- Assist the Chief and/or Deputy Chief Fire Warden as directed.

Door/Corridor Guards

When a fire alarm is initiated, Door/Corridor Guards shall,

- Immediately proceed to their designated door, corridor or building link.
- Direct personnel exiting through their door/corridor/link to the designated marshaling area.
- Keep the area around the door clear for emergency response personnel.
- Prevent individuals from re-entry to the building or individuals attempting to enter the building via corridors or building links.
- When authorized by the Chief Fire Warden, Safety Resources or Protective Service, permit people to re-occupy the building.
- Assist the Chief, Deputy Chief Fire Warden and Floor Wardens as directed.

8 Fire Alarm Response

8.1 Institutional Response

When a fire alarm is initiated,

- The building in alarm is to be evacuated in accordance with the local evacuation plan.
- Upon receipt of the alarm (via the campus central monitoring system), FMD issues an “all call” announcement on the radio system of the fire alarm and building in alarm.
- SFPS, Protective Services, Safety Resources and FMD Electrical are called to respond to the building in alarm.

FMD electrical personnel are responsible for clearing and resetting the alarm once alarm conditions (false or real) have been resolved.

8.2 Action in Case of Fire

In the event of a fire, the following general steps are to be followed. Additional procedures may be incorporated into local emergency plans commensurate with building type, activities, and identified hazards.

Step 1: ASSESS THE SEVERITY OF THE FIRE

- Activate the nearest fire alarm (fire alarm pull station).
- If you can do so safely, extinguish the fire using an appropriate fire extinguisher.
- If the fire is too large, or cannot be extinguished, or if you feel uncomfortable attempting to extinguish the fire, commence with evacuating the building.

Step 2: EVACUATE THE BUILDING

Occupants must evacuate a building when a fire alarm sounds for more than 10 seconds continuously.

- Notify individuals in the area that a fire has occurred.
- If possible, electrical equipment should be turned off and doors closed (but not locked) during the evacuation.
- The Chief Fire Warden, Floor Wardens and Door Guards will direct the general evacuation as quickly as possible in a safe and controlled manner to the designated marshaling area(s).
- Instructors are responsible for the orderly evacuation of students in their class during an evacuation.
- Do not use elevators during a fire evacuation. Any persons in an elevator at the time of a fire alarm shall exit the elevator at the next floor, and follow the instructions of the Floor Warden to exit the building.
- If there is a special needs person(s), notify the Chief Fire Warden or a Floor Warden. One or two individuals should be assigned to assist the special needs person(s) to evacuate or to stay with them in a safe place until SFPS arrives. Do not leave special needs person(s) alone.

Step 3: CALL PROTECTIVE SERVICES

- Call 9-911 from a campus telephone, or 911 from a mobile telephone. Call Protective Services at 306-966-5555.
- Be prepared to provide the nature of the fire, exact location including the building, room number and closest entrance, your name and the phone number at which you can be reached.

Step 4: BUILDING RE-ENTRY

No person is to re-enter the building following a fire or fire drill until permission has been given by SFPS, Protective Services, the Chief Fire Warden or a Safety Resources representative.

Step 5: REPORT THE FIRE

Complete a university incident report using the Safety Resources online incident reporting system, www.usask.ca/safetyresources/. Based on the nature of the incident, Safety Resources will provide direction as to who should complete an incident report.

9 Fire Prevention

9.1 General

Faculty, staff and students shall adhere to the requirements of the National Fire Code of Canada and applicable provincial and federal regulations pertaining to fire safety. This includes, but is not limited to,

- Building design and occupancy and fire emergency systems
- Storage (indoor and outdoor) of hazardous materials
- The use and storage of flammable and combustible liquids
- Hazardous processes and operations
- Fire protection equipment

For information or assistance on fire safety and associated code/regulatory requirements, please contact FMD at 306-966-4700, or Safety Resources at 306-966-4675.

9.2 Building Exits

All exit doors, ramps, corridors, passageways, stairs, and fire escapes shall be clearly marked, kept clear and unobstructed at all times. No posters, signs, screens, mirrors, or any other object may be placed on an exit door.

In any building no person shall close, fasten or allow to be fastened any exit or entrance doors, or any other door used for an emergency except with an approved moveable lock or bolt which may be easily opened from the inside without the aid of a key or similar device. The method of operation must be obvious even in darkness.

9.3 Smoking

In accordance with the University of Saskatchewan *Smoking Policy*, smoking is prohibited in all university buildings, parts of buildings, enclosed spaces, leased spaces, university owned or leased vehicles and outdoor seating areas that are part of a restaurant or licensed facility. Smoking is also prohibited at Griffiths Stadium except in designated areas. Smoking is prohibited within a ten meter perimeter of any university building or ventilation air intake and other outdoor areas where posted. The policy applies to all university employees, students and visitors.

Further, smoking is not allowed in outdoor areas specified for storage of flammable liquids or hazardous chemicals.

9.4 Hot Work

Hot work is any temporary operation involving open flames or producing heat or sparks including, but not limited to, welding (gas or arc), cutting, grinding, brazing, soldering, thawing,

torch-applied roofing or other membranes, use of open flame heaters in buildings, and hot tar operations.

In accordance with the *Contractor Hot Work Policy* and supporting procedures, a Hot Work Permit shall be obtained by university personnel or contractors prior to performing any hot work on university property. The FMD trades group adhere to a similar hot work permit system.

For further information on Hot Work Permits, or assistance with obtaining a Hot Work Permit, contact FMD Safety at 306-966-4700, Safety Resources at 306-966-4675.

9.1 Building Exits

All exit doors, ramps, corridors, passageways, stairs, and fire escapes shall be clearly marked, kept clear and unobstructed at all times. No posters, signs, screens, mirrors, or any other object may be placed on an exit door.

In any building no person shall close, fasten or allow to be fastened any exit or entrance doors, or any other door used for an emergency except with an approved moveable lock or bolt which may be easily opened from the inside without the aid of a key or similar device. The method of operation must be obvious even in darkness.

9.2 Hydrants

Fire hydrants on campus shall be kept clear and unobstructed at all times. No parking shall be vehicle permitted within 3 m of any hydrant.

9.3 Use and Storage of Hazardous Materials

9.3.1 Inventory Management

The *Saskatchewan Occupational Health and Safety Regulations* require that an employer develop and maintain an up-to-date list of all substances (chemical, biohazardous, nuclear) that may be hazardous (or of concern) to the health and safety of workers at the place of employment and that this list be made available for inspections or emergency situations as well as to the workers for their use. This inventory must also identify Workplace Hazardous Materials Information System (WHMIS) controlled products.

Inventories should be reviewed at least annually (or more frequently, if hazards dictate) to confirm inventories and to determine if substances have expired, or are no longer being actively used. Contact the Waste Management Facility at 306-966-8497 for the collection and disposal of hazardous materials.

9.3.2 Ordinary Combustibles

Ordinary combustibles shall:

- Be stored in approved storage areas.
- Not be piled in exit corridors, passageways or stairwells leading to exits.
- Not be piled in front of fire alarm boxes, hose cabinets, or any pieces for firefighting equipment.
- Not be piled in such a manner as to block from view any alarm box, firefighting equipment or exit doors.
- Waste, particularly oily rags, is not permitted to accumulate in closets or hallways, as it is often combustible.

9.3.3 Flammable Liquids and Hazardous Chemicals

- Qualified personnel familiar with the materials handled are responsible for the safe handling and dispensing of hazardous chemicals and flammable liquids in each department. Such persons must be familiar with WHMIS. Material Safety Data Sheets (MSDS) should be available on all the hazardous agents in each laboratory.
- Supervisors and department heads are responsible for ensuring that persons working with hazardous chemicals are made aware of all safe practices and are informed of the location of firefighting equipment and other protective equipment available in the area including the location of all exits from their area and procedures to follow in case of fire or other emergency.
- Smoking is not allowed in areas specified for storage of flammable liquids or hazardous chemicals.
- For handling small quantities of flammable liquids inside the building, open containers shall not be used. Only standard safety cans of various sizes and design, constructed to avoid leakage, spillage, or rupture under fire conditions must be used.
- Quantities of flammable liquids of less than 200 litres used in laboratories should be stored in an approved flammable storage cabinet. Cabinets shall be constructed of 18-gauge sheet iron or steel with tight fitting joints. The door should be equipped with a three-point lock and the sill raised at least two inches from the bottom of the cabinet. The door of the cabinet should have a sign to read "FLAMMABLE LIQUIDS KEEP FIRE AWAY."
- Any quantity of flammable liquids in excess of 200 litres shall be stored in a fireproof vault having a fire restrictive rating of not less than three hours and door openings with sills raised six inches above floor level.
- Flammable liquids shall not be stored in stairwells, corridors, aisles or passageways leading to exits.
- Hazardous chemicals and flammable liquids shall be stored in approved storage areas as specified for each building.
- Containers of hazardous chemicals and substances must be labeled, showing date of receipt and expiry date before they are placed in storage.

- Material shall not be piled in such a manner as to obstruct the effective operation of any automatic extinguishing system installed for protection of a flammable liquid or hazardous chemical storage.
- Chemicals and hazardous materials that may become dangerous from prolonged storage must be purchased in limited quantities and disposed of at the termination of shelf life.
- When research involving hazardous or potentially hazardous chemicals is conducted, labels showing the name of the contents, date of issue and date of expiry are required to identify the containers.
- Fume Hoods and storage cupboards in laboratories are not to be used for storage of leftover chemicals or other flammable materials.
- Hazardous chemicals and flammable liquids shall not be stored in stairwells or in an area that personnel would traverse to reach an exit.
- Supervisors are to inspect their areas of responsibility frequently for fire and safety hazards, and to ensure hazardous chemicals are not accumulating. Supervisors should watch for chemical surpluses, which result from finished research projects.

9.3.4 Drums

- Drum storage of flammable liquids shall be so located as to reduce the spread of fire to other materials in storage. Areas used for drum storage must be kept free of ordinary combustibles and open flame.
- The method of dispensing liquids from a drum shall be by means of an approved hand-operated pump. Approved hand-operated pumps are safer than faucets because the hazards of leakage are reduced.
- All drums shall be appropriately grounded.
- Smoking is prohibited in drum storage areas.

9.3.5 High Pressure Cylinders

High pressure cylinders, whether or not they contain flammable or explosive gasses, are potentially dangerous. Rupture or sudden discharge can make these cylinders extremely dangerous.

- Cylinders shall be stored with the valve end up and handled according to directions recommended by the manufacturer or distributor.
- In transporting cylinders of a compressed gas, a trussed handcart should be used.
- Never move two cylinders at the same time unless they are securely bound together. Never roll a cylinder on its bottom or handle a cylinder by the valve. Prevent jostling and bouncing as much as possible.
- One person should not handle large cylinders of chlorine or hydrogen sulfide; assistance should be obtained.
- Immediately after they are positioned for use, cylinders will be clamped tightly in place with an approved clamp. They must remain securely clamped until the working head is removed and safety cap replaced.

For further information, refer to the document, *Compressed Gas Cylinder Safe Handling, Use and Storage*.

9.3.6 Explosives

- Explosives shall be stored in an approved location.
- Rooms used for the storage of explosives must be clearly marked, as to the type of explosives.
- Explosives must not be stored with flammable liquids, volatile liquids or other combustible substances.
- Detonators must be stored in metal containers separate from bulk explosives.
- Smoking is prohibited in explosive storage areas.

9.3.7 Laboratories

Following are general guidelines for the safe storage of chemicals in laboratories:

- Do not store chemicals alphabetically.
- Adhere to manufacturer recommendations for the storage of chemicals.
- Flammable or combustible liquids, toxic chemicals, explosive chemicals, oxidizing agents, corrosive chemicals, water-sensitive chemicals, and compressed gases should be segregated from each other.
- Volatile liquids must be kept away from heat sources, sunlight, and electric switches.
- Keep health toxins and other especially dangerous items under added security.
- Chemicals must be stored in such a way that they will not mix with each other if a container leaks or breaks.
- Individual containers shall not exceed 5 litres capacity.
- Not more than a total of 20 litres of flammable liquids (Flashpoint (Fp) $<37^{\circ}\text{C}$ and $>20^{\circ}\text{C}$) will be maintained on a bench in a laboratory unless stored in an approved storage cabinet. There shall not be more than 0.5 litres of extremely flammable chemicals in a laboratory which have an Fp of $<20^{\circ}\text{C}$ and a boiling point $>20^{\circ}\text{C}$.
- Glass bottles of flammable liquids, oxidizing agents and acids should be stored with spill control large enough to contain the entire volume in event of breakage.
- Chemicals containing inhibiting agents and corrosive chemicals, and vessels having vent caps or other means of control over possible internal deterioration, are to be accessible for daily inspection and should be inspected daily by laboratory personnel.
- Flammable liquids shall be carried in a safety can, or in the case of reagent grade chemicals, the bottles should be protected by a "carrier".
- Glass bottles of hazardous product shall not be carried by their necks with one hand. This will help prevent breaking them on the table edges or other dangerous corners in a laboratory
- A bottle carrier should be used when moving bottles of acids, alkalis, and solvents as it guards against breakage and retains the liquid if breakage occurs. The bottles are much easier to handle in carriers.

- If exact handling and storage information is not available when a shipment or new or unfamiliar chemicals is received, the manufacturer should be requested to furnish MSDS and their recommendations before any employee proceeds with their use.

Further information on laboratory safety is provided in the university's *Laboratory Safety Manual*.

9.3.8 Disposal of Hazardous Materials

Hazardous waste generated through research, academic or other activities on campus shall be collected and disposed of in accordance with the university's *Hazardous Waste Disposal Standard*.

9.4 Electrical Equipment

9.4.1 General

Following, are general electrical safety requirements at the University of Saskatchewan.

- All electrical fixtures and equipment used in any building shall be subject to the provisions of the Canadian Electrical Code.
- Only university FMD qualified electrical personnel are permitted to carry out modifications or to connect or disconnect any electrical circuit or device not of a manual plug-in nature.
- Personnel observing unsafe conditions of any electrical apparatus, such as the tripping of circuit breakers, damaged cords, etc., will immediately report such conditions to FMD at 306-966-4700.
- Explosion-proof electrical equipment shall be installed and used in areas where flammable vapors present an explosion hazard.
- Extension cords shall not be used as permanent extensions of building electrical services. Extension cords must not be concealed under rugs, or run through walls, partitions, doorways or windows. Extension cords must not be spliced, tied in knots, draped over pipes, or wrapped around metal fixtures.

Further information on electrical safety is provided in the university's *Electrical Safety Guide*.

9.4.2 Electrical Appliances

All electrical appliances will bear an approval label from the Canadian Standards Association, Underwriters Laboratories or other recognized authority.

Refrigerators – Only explosion-proof refrigerators will be used in laboratories or other areas for the storage of flammable or volatile liquids. Any such refrigerator shall be connected directly to the wall or floor receptacle. No extension cords are permitted.

Hot Plates, Coffee Makers, Electric Kettles, etc. – The appliances will be mounted on a firm surface, and protected by flammable resistant boards. The appliances shall be away from sinks unless a ground fault protector is installed. The service cord should be unplugged if left unattended.

Heavy Appliances – All heavy appliances must be connected and checked by FMD before being used.

Emergency Lighting – Emergency lighting should be provided in stairways, floors, and corridors below grade level, exit corridors, lecture and other theaters, public auditoriums, machine rooms and other areas where power failure will create a hazard to life or affect the operation of essential services.

Outlets – Multiple use of one outlet for office equipment by means of an ‘octopus’ or similar device should be avoided. A circuit protected power bar should be used.

9.5 Facility Decommissioning

Facility decommissioning of spaces on campus is required when:

- The individual (faculty, staff, students, visitors) is no longer working in the space(s);
- The individual is leaving the university;
- The individual is ceasing to use hazardous materials in the space(s);
- The individual is relocating instruments or equipment that pose hazards, or that have been used for research, academics, storage or other activities involving hazardous materials;
- The individual is cancelling a university issued biosafety and/or nuclear substance permit(s);
- The individual is cancelling a licence, permit or certification granted by a federal or provincial regulatory body;
- The individual is relocating to another space on campus; or
- The space is being renovated, or is to be demolished.

The processes and minimum requirements for the decommissioning of spaces at the University of Saskatchewan are specified in the university’s *Facility Decommissioning Standard*.

10 Training

University faculty and staff shall receive the following training as applicable:

- University general safety orientation.
- Work specific safety orientation provided by the department/unit.
- Supervisor safety orientation.
- Workplace Hazardous Material Information System (WHMIS) training.
- Laboratory Safety.

- Biosafety.
- Radiation Safety.
- Transportation of Dangerous Goods.
- Fire Extinguisher training.
- Emergency response plan training.

Safety Resources offers occupational health and safety training to the campus community. For further information on available training, contact Safety Resources at 306-966-4675.

11 Plan Review

The Fire Safety Plan shall be reviewed by Safety Resources at least once every 12 months. The plan may, however, be reviewed by Safety Resources at any time, to correct errors or to make procedural changes.

12 References

- *Emergency Management Plan*, University of Saskatchewan.
- *Local Emergency Response Plan Template*, University of Saskatchewan.
- *National Building Code of Canada*, Government of Canada.
- *National Fire Code of Canada*, Government of Canada.
- *Fire Safety Plan*, Fire Prevention and Investigation Division, Saskatoon.
- *Smoking Policy*, University of Saskatchewan.
- *Contractor Hot Work Policy*, University of Saskatchewan.
- *Compressed Gas Cylinder Safe Handling, Use and Storage*, University of Saskatchewan.
- *Laboratory Safety Manual*, University of Saskatchewan.
- *Hazardous Waste Disposal Standard*, University of Saskatchewan.
- *Electrical Safety Guide*, University of Saskatchewan.
- *Facility Decommissioning Standard*, University of Saskatchewan.